SOCIAL MEDIA IN MODERN BUSINESS

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Abstract

Social media help companies to reach new customers. New areas where companies can use social media include web-based training, team-based projects, distribution of updates about plans and activities to employees, search for new offers and verification of information during staff recruitment. The purpose of this article is to identify possible trends in the use of social media for enhancing the performance of modern business ventures. This paper compares selected classifications of the Internet development phases. The rule of content co-creation and sharing, typical of Web 2.0, remains valid during the subsequent stage of development, i.e. Web 3.0. A qualitative difference consists in adding a new function of using semantic analysis of messages posted in the virtual space, most notably in the social media. Semantic analysis is applied primarily in order to adjust the products offered to consumers' needs. Application of semantic tools may also be associated with information exclusion. This paper also analyzes the implications of semantic web in the new context, the effect of information extraction from the social media.

Keywords: Social media, semantic web, information exclusion, web personality

Introduction

Although initially treated as a tool for social communication, social media are increasingly common in other domains of socio-economic life. In the public sphere, they made quite a spectacular appearance in times of unrest in the Middle East and North Africa and the protests against ACTA. In politics, social media gained full recognition with the success of Barack Obama's election campaign already at the beginning of his first term in office.

In the business world, social media sneaked in unnoticed, initially enabling companies to set up fanpages and post news, photos, and videos, mainly for image-building purposes. Over time, however, companies began to appreciate the special advantages of web communication with customers as well as the application of this tool to enhance their product/service range and to engage customers in new product/service development and testing.

Social media help companies to reach new customers (especially young ones) more easily as this communication channel is increasingly popular with the young generation. New areas where companies can use social media include web-based training, team-based projects, distribution of updates about plans and activities to employees, search for new offers and verification of information during staff recruitment.

The purpose of this article is to identify likely trends in the use of social media for enhancing the performance of modern business ventures.

This paper analyzes the implications of semantic web in the new context and the effects of information extraction from the social media. The issue that seems particularly important is that of violating privacy of users of Internet services which require registration (and the provision of many personal details). Another important consequence of semantic analysis is information exclusion. Semantic tools through which data streams are profiles

may subjectively restrain access to information which falls beyond the scope of users' key areas of interests. For instance, an avid angler will not learn anything about Kalevala, the Scandinavian saga, if none of his/her previous online activities concerned literature, Scandinavia or, somewhat surprisingly, jewellery.[27] Therefore, it is important to distinguish between the different functions of personalised messaging, which desirably narrows down the stream of marketing information but also limits the inflow of other kinds of information.

History before our eyes

The Internet era in Poland dates back to November 1990, when the first ever e-mail message reached our country [Malik, 2011]. Wikipedia, which is currently the most popular source of information and, at the same time, the largest collaborative project worldwide, came into being in 2001. The first social media in today's meaning of the term, with LinkedIn and MySpace among them, began to emerge in 2003. Further on, 2004 saw the launch of Grono.net (no longer in operation) yet the main limitation and a barrier for rapid expansion of that website lied in the elitist character intended by the creators of that site. Looking back, the principle of referrals which was introduced at the launch (i.e. new users were unable to register on Grono.net unless they had received an invitation from a member) obviously contradicted the essential rule of network goods, whereby each new individual joining the network boosts the network utility. One might venture to say that the real 'avalanche' of social media solutions started with the arrival of Facebook in 2004 and YouTube in 2005. The majority of Polish Internet users began their adventure with social networks at NaszaKlasa.pl (currently: Nk.pl), launched in November 2006. The Polish fraction of Facebook made its first steps in about the same time. Starting from September 2011, the number of Polish Facebook users began to outweigh the user community gathered around Nk.pl (with many people holding profiles on both those sites in parallel). Facebook enables users to maintain contacts in multiple languages and to use all new solutions offered to all users worldwide at the same time, thus becoming a medium for both global and local communication. This increasingly popular global site was embraced by many Polish users as a destination which offered no barriers in international communication while retaining the benefits of a local social micro-network.

Generations of the Web

The arrival of the Internet was a breakthrough in the history of mankind. Today, this claim is no longer debatable. However, in its early days, the Internet seemed, at best, an easier way to communicate for the 'chosen few' who were initiated into that mode of exchange. The development of a protocol which allowed people to build websites and move from one to another (www) marked the beginning of the Internet in the technical and utilitarian sense, and that early phase was later labelled as Web 1.0. This name meant to indicate a separate and static character of websites available back in those years. On the other hand, the opportunity to co-create and share online content is a feature of another, improved version of the Internet, commonly referred to as Web 2.0. This label became a symbol of this mode of online communication and also of a new, different understanding of intellectual property and access to information. The Web 2.0 culture has brought us initiatives such as Wiki, blogs and social networking services. The notion of Web 3.0 signposts a new phase in the history of the world wide web, i.e. semantic webs, with computers generating new information based on accumulated highly personalised data. Those data are largely sourced from the social media. The principle of content co-creation and sharing, originating from

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[27]The descriptions of ancient jewellery found in Kalevala were used as a basis to design its modern equivalents made of bronze, silver and gold. Therefore, 'jewellery' is one of the tags associated with 'Kalevala'.

Web 2.0, remains valid whereas the next stage adds personalised semantic analyses of messages posted in the virtual space (Web 3.0). While the final shape of Web 3.0 is fairly easy to imagine, the next one, Web 4.0, still remains in the sphere of guesses, based on our contemporary technical solutions and vague user expectations. We can predict that Web 4.0 will be followed by the arrival of another stage, based on a universal 'web personality' of each user, and the information flow will be highly personalised. However, it is difficult to foresee the technological solutions that might be used for that purpose [Fig. 1].
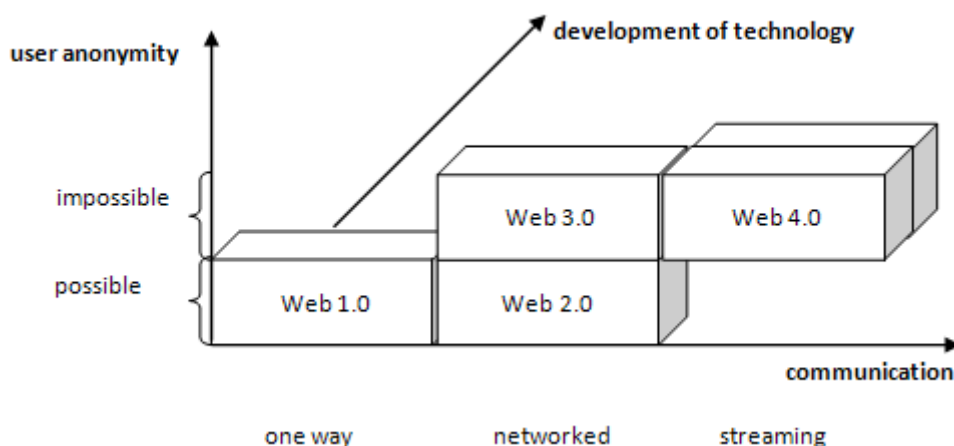
Figure 1. Internet evolution stages.
Source: Author's own analysis.

The most crucial difference between Web 3.0 and Web 4.0 seems to lie in the sanctioning of users' web personalities. More precisely, content will become available only after users have logged onto a popular social networking service using their login name and password. Such a universal solution for online identification has been gaining more and more support among Internet users who feel increasingly tired and annoyed by the need to register at one portal after another. Portals make their content available in exchange for users' personal details and information on their shopping preferences, all of which are subjected to multi-faceted semantic analyses. Users pay for the seemingly free content with their easy identification and online invigilation.

Not surprisingly, views on the subsequent stages of the Internet vary among authors who write on the subject. Table 1 contains a summary of selected three classifications, all of which include a subdivision into four stages that are foreseeable from today's technological perspective.

The classification proposed by Aghaei, Nematbakhsh and Farsani [Aghaei et al. 2012] identifies four generations of websites, adopting the potential connections as a differentiation criterion, namely: Web 1.0 – the web of information connections, Web 2.0 – the web of people connections, Web 3.0 – the web of knowledge connections and Web 4.0 – the web of intelligence connections.

On the other hand, Pileggi, Fernandez-Llatas and Traver [Pileggi 2012, p. 853] applied the criterion of functions fulfilled by a website to identify subsequent stages of Internet evolution. While four stages of website evolution were identified, the current stage of semantic social networks was labelled as Web 2.5. The authors probably intended to single out an interim phase between the stage of advanced social networking solutions and a stage of developed semantic tools, "yet-to-be-realized for the most part" [Pileggi et al. 2012, p. 861].

Table 1. Comparison of selected classifications of Internet evolution phases

	Internet evolution phases			
	Web 1.0	**Web 2.0**	**Web 3.0**	**Web 4.0**
S. Aghaei, M. A. Nematbakhsh, H. K. Farsani [Aghaei et al. 2012]	web of information connections	web of people connections	web of knowledge connections	web of intelligence connections
S. F. Pileggi, C. Fernandez-Llatas, V. Traver [Pileggi et al. 2012, p. 853]	world wide web	social web	semantic web	web OS[28]
K. Polańska [a modified version of Polańska 2013, p. 104-5]	anonymous users download content	registered users download and upload content	authorised users assess and improve content – a defined profile in social networks	personalised data streams to and from users who have a universal network personality

Source: Author's own analysis.

In the last classification (in Table 1), subsequent phases of Internet evolution were identified on the basis of types and conditions of online activity offered to users. That last classification highlights the fact that as technologies evolve, Internet users become increasingly identifiable and their involvement in the creation and consumption of content becomes more intensive. While losing their anonymity, users gain targeted access to relevant information through semantic technologies. Their activity on the web and, particularly, in the social media, provides the input for building a profile. On this basis, content that may be potentially of interest to them is suggested.

Social media

'Social media' stand for an information stream which takes the shape of multimedia-based, multi-channel networked communication for specific social or business purposes within various types of sites, each of which builds a user community.

Social media differ from traditional news media mostly in that messages travel not only from the sender to the recipient but also vice versa (Table 2). This offers an opportunity to co-create and share the news and information via publicly accessible channels that enable uploading and downloading information, photos and videos, including e-mailing, texting or multimedia messaging. Anyone can publish any content and verification is performed directly by recipients, without any go-betweens such an editor-in-chief, a publisher or a censor. While some view this as a token of genuine freedom, others talk of anarchy. In fact, this kind of communication contains elements of both.

Table 2. The differences between the use of traditional media and social media in business

	Traditional media	**Social media**
Information content	homogeneous for all	personalised
Interactions with consumers	one-way to the customer	two-way dialogue
Building a product range	company	company and online communities
Product or service offered	mass scale	niche, using Long Tail
A group for market research	focus group	brand community

Source: Author's own analysis.

Another major difference between traditional and social media lies in the fact that products may be both more diverse and tailored to individual needs (low costs of

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[28]Including, for instance, the mechanisms to explore resources, a selection of global names, remote process control, resources management, authorisation and security.

personalisation for orders placed online), as well as created by the community as niche products.

In modern marketing theory, social media comprise: online communities and forums/bulletin boards, blogs and social networking sites [Kotler et al., 2012, p. 586]. Hence, the notion of 'social media' refers to various forms of interactions on forums and within online communities, on blogs and social networking sites. However, that classification is highly relative: for instance, a 'wall' on a social networking site may also serve as a discussion forum, and microblogs may complement traditional blogs. Social networking sites are the broadest group of portals classified as social media.

Considering the nature of communication links between users, social networking sites can be subdivided into the following groups:
1. socialising (e.g. Facebook, Myspace),
2. professional (e.g. GoldenLine, Profeo),
3. posting/publication (e.g. YouTube, Picasa, Flickr),
4. microblogs (e.g. Twitter, Blip),
5. related to collective consumer activity: group shopping (e.g. Groupon, CityDeal) or claims (e.g. Pozywamy-zbiorowo),
6. crowdfunding: donations (e.g. Flatter), investments (e.g. MegaTotal) or lending (e.g. Kokos, Ducatto),
7. platforms for social co-creation and social sharing of content (Wiki initiatives such as Wikipedia, Wi-enzyklopaedie[29]).

Creativity in establishing new sites is usually inspired by user observations (things that can be offered to attract a large group of users who would be willing to visit the site regularly and recommend it to friends), as well as business needs since companies may consider online communities as interesting target groups for their purposes. However, the new web-based business ideas that work best in Poland are those which have previously proven to work in the U.S. and which make concessions to special characteristics of Polish users and incorporate local cultural memes.

Using social media for business

The most obvious application of social media in business is to use them for various kinds of promotional activities. Initially, those activities consisted in maintaining good customer relations and promoting brands, companies or products. Further on, marketers began to appreciate another feature of social media, i.e. the possibility to engage customers in developing/shaping new products. Information about customer preferences sourced from such media turned out to be invaluable for designing personalised advertising. It also created new opportunities for products and services on the basis of needs identified through semantic analysis of users' postings.

Therefore, it seems obvious that social media can be used in public relations and marketing (notably word-of-mouth marketing), yet many Polish companies adopt a very cautious approach here [Miłkowski, 2012]. The results of a relatively small qualitative study among 22 major Polish companies, published in 2012, indicate that few companies engage in communication with social media users outside Facebook [Sumara et al., 2012].

In 2012 Social Media Examiner carried out a study on the use of social media by marketers. A total of 3,813 responses to a web survey were received, with a half of them coming from the U.S. The study suggests that social media are considered important for business by 83% of the respondents [Stelzner, 2012, p. 10]. The researchers found that social media marketing offered the following benefits [Stelzner, 2012, p. 15]: increased exposure

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[29] Enzyklopädie der Wirtschaftsinformatik – Online Encyclopaedia Business Information Systems in German.

(85 %), increased traffic (69 %), provided marketplace insight (65 %), generated leads (58 %), developed loyal fans (58 %), improved search rankings (55 %), grew business partnerships (51 %), reduced marketing expenses (46 %), and improved sales (40 %).

The costs involved in social media activity do not easily translate into sales growth. To measure the impact of such efforts, analysts usually refer to ROI(Return on Investment). However, this ratio is criticised for being focused on maximising short-term benefits for the brand, without taking account of customers' engagement and long-term effects [Hoffman et al., 2010, p. 49]. In the ideal situation, social media activities should be part of a coherent marketing strategy and should contain cross-references to ongoing advertising campaigns. Marketing efforts in the social media may be outsourced to specialised providers or entrusted to a dedicated unit in companies' marketing departments. However, those activities should not be viewed as a 'hobby' for a staff member. Many managers perceive social media as a free advertising channel because it uses a publicly accessible medium i.e. the Internet. However, social media will not become effective until they are used creatively, with systematic, day-to-day efforts to build confidence in the brand and a loyal user community.

Customer expectations

The question asked today by business leaders is not whether to communicate with customers but, rather, how to communicate with them through social media, considering the singularities of their industry, products offers and characteristics of target consumers. An indirect answer to this question comes from identifying user expectations towards social media. In 2006–2010, a global social media study, sponsored by Universal McCann, was conducted among active Internet users [Hutton et al., 2011, p. 564]. The study showed that social networks were perceived as very useful, especially for meeting new people and staying in touch with friends [Hutton et al., 2011, p. 566]. The same survey pointed out the key reasons why users would join online brand communities. In all the studied regions, the most important factors were: 'to get advance news of products' and 'to learn more about it'. The remaining drivers were more varied, depending on the region. In Europe, the following reasons for liking a brand fanpage were mentioned: 'to support a cause I like', 'to get free content', 'to feel part of like-minded community' and 'to share my appreciation with others' [Hutton et al., 2011, p. 569].

A pilot study about the use of Facebook by first-year students, conducted in early 2012 at the Warsaw School of Economics, found that only 10 out of 167 respondents were not fans of any brand fanpage [Polańska, 2013]. The key motivations for joining a Facebook fanpage included: 'a sense of community with people who like the same thing', 'access to news updates', 'contests', 'news on upcoming events', 'a sense of influence' and 'an opportunity to express my views'.

The way social media are used by members of online communities depends on many factors. For his study on a group of 656 YouTube users, Yeo developed psychographic consumer profiles. Statistical analysis confirmed his supposition that relationship-oriented consumers were more likely than individualists to engage in word-of-mouth marketing. As a rule, only a small proportion of consumers take an active part in social media initiatives. For this reason, it is crucial for any campaign relying on user engagement to engage mostly those users who are oriented towards relations with others [Yeo, 2012, p. 307] since it is those users who would encourage their friends to explore a product or a brand, and to take part in promotional activities. Therefore, it is important to attract active users who have wide social networks. This fact is particularly important when designing the mechanics of contests with prizes. Customers who are happy with their wins will become brand ambassadors among their friends.

False identities in the social media

The greatest hazard for a company in the social media is when a false account is set up in a social networking site [Polańska, 2011, p. 85]. Few social media offer an account verification functionality to establish authenticity (for instance, Twitter offers the Verified Badge option for that purpose). A false profile is a powerful tool to harm a company (this applies also to fanpages of celebrities as well as private individuals). A false account may only be effectively removed by a web administrator or through protracted litigation where litigants need to provide evidence to prove that content of such a false fanpage was actually detrimental. For this reason, it is highly rational for companies to set up their official profiles in all social media available. Additionally, by including an icon of the social site and a link to the corporate profile on a corporate website, companies may authenticate their account. It is best for companies to define their own official communication channels with customers and indicate that they feel responsible for such channels. Considering the potential perils of false brand identities, it makes more sense to keep even a 'dead' fanpage than to have none. Nevertheless, business life is never one-dimensional. Once a decision about setting up a corporate account in the social media has been made, the account needs to be supported on an ongoing basis: a lack of response to customer messages may be interpreted as ignoring those customers, and this may undermine the brand showing that it has not mastered modern-day consumer communication technologies. Another reason behind social media presence of brands is to boost awareness, yet this task should be viewed in a long-term perspective. Moreover, it is important to remember that a customer who becomes a fan in social media is no longer anonymous. For a social media user, setting up a profile means that they create a web personality, authenticated by their friend network. And what is the point of companies knowing users' web identities? Well, above all, it allows them to accumulate information about consumer preferences, typical needs and niche interests. Semantic analysis of a fan's postings helps companies to offer products that would address needs that the fan has not even managed to express.

Semantic web in the social media

Most data found online are not ordered or structured. They are sometimes understandable only for those who are able to analyse highly complicated logic structures and derive specific knowledge on this basis. However, the amount of information available online is so enormous that only specifically programmed computers may be effective in comprehensive processing [Sivakumar et al., 2013, p. 186]. The large sets of data, commonly referred to as 'Big Data', constantly being fed into the world wide web, turn out to be more relevant, pertinent and useful for predicting the near future than complex economic models based on historical data from official statistics [Brynjolfsson, 2013, p. 46].

Web 2.0 tools can be instrumental in gathering data to identify users, to create user group segmentations and to define target groups, e.g. to plan marketing activities [Breslin et al., 2009, p. 31]. Information obtained from various sources (using data bases, customer relationship management tools or data mining) is extracted in order to customise and personalise products and services in response to customers' expectations [Garrigos-Simon et al., 2012, p. 1883]. For this reason, social media are also used to download and archive seemingly unrelated data which, when subjected to semantic analysis, can help to personalise advertising messages, analyse their impact and engage users in the suggested endeavours. Social media are a source of current factual news but also a source of comments and opinions which emerge in response to various events. Eye witnesses accounts are as believable as reports by emergency services and journalists arriving on the spot. However, the former are delivered instantly and are rapidly communicated online, and their reliability may be subsequently verified through reports from other sources. Users of social media have "an

important desire to share experience and emotions" [Sumara et al., 2012, p. R3]. Oftentimes, members of a community want to inform their social network about their experience and they want to do it instantly. In order to do that, they publish comments, photos, and even films on unexpected events (disasters, comments from influential people, weather phenomena etc.), and also share they everyday experience (e.g. road congestion, blooming shrubs in the neighbourhood, favourite cafés, recommended products). Social media receive a gigantic information flow which, if properly utilised, may be a source of knowledge, even specialised one, without resorting to sophisticated analytical tools.

As a rule, when semantic analysis is used for business purposes [Ebersbach et al., 2011, p. 273], it is expected to target the right consumers and offer specific products. This kind of analysis is also used for day-to-day monitoring of the political and economic situation. Signals about a potential peril, natural disaster or economic decisions are analysed using heuristic algorithms and may provide an impulse for stock exchange behaviours (leading to sell orders or buy orders for specific stocks, securities or commodities). False information or erroneous interpretations of signals may lead to a rapid collapse on world stock markets.[30]

Companies have most influence on the content as well as promotional and marketing activities on their own corporate websites and corporate blogs. Given companies' wide opportunities to influence the content of such websites and blogs, such tools are referred to as 'controlled own media'. In order to view them, users may register on such websites or, increasingly often, log onto them through a popular social networking site.

'Managed own media' [Back et al., 2012, p. 160] is a term that describes corporate subaccounts in social media such as a Facebook fanpage, a Twitter account, a You Tube channel or a Flikr account. Instead of building a dedicated community of its own, companies utilise access to social networks and build micro-communities there, based on technical solutions and practices of the host medium. In this way, companies also gain access to their fans' personal information and, upon request, also to their account activity statistics.

Corcoran has suggested a subdivision into three domains of online media:

1. "owned media: a message delivered from a company to consumers through channels controlled by the company;

2. paid media: a message delivered from a company to consumers by paying to leverage a channel not controlled by the company;

3. earned media: a message about a company passed between consumers as a result of an experience with the brand" [Corcoran 2009].

In fact, owned media are the only ones which allow two-way communication with consumers and offer an opportunity to respond promptly to signals received from customers. This helps companies to build and maintain good customer relations, whereas customers cease to be anonymous. Managed own media are used mostly to motivate and encourage purchases but rarely to effect transactions, even though direct selling of products is also enabled. On the other hand, Facebook is considered to be a relatively unfavourable environment for conducting sale-purchase transactions. This is evidenced by the fact that there are still no examples of such activities on Facebook [Ebersbach et al., 2011, p. 113]. Attempts to apply the so-called 'f-commerce' are being made by telecom operators (e.g. they offer mobile phone top-ups), and by financial institutions which increasingly offer the functionality of small money transfers via banks' fanpages (e.g. 'Przelewy Getin Bank', an app available from inside Facebook). However, f-commerce does not seem to be the right

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[30] For instance, as a result of a hacker attack in April 2013 news about alleged explosions in the White House were posted online. This impulse, sent to computers which steered New York stock exchange orders, caused a slump in many stock prices. Once the confusion was clarified, the prices bounced back and reached their previous levels, albeit with losses to original holders.

business model for everyone. To date, it has played a marginal role, producing results only if the goods or services offered are embedded in the context of socialising

The outcomes of using the semantic web

Users sacrifice their privacy in order to get access to information. Their online behaviours and published content, shopping preferences and even consumer likes and dislikes are recorded, extracted and potentially used afterwards as part of a knowledge database related to specific Internet users or groups of users (identified on the basis of selected online personality characteristics) for the purposes of media profiling. To some extent, this is helpful and useful whenever Internet users experience an unmet need. Prompts based on the analysis of previous searches and messages posted online, potentially reflecting individual preferences, may prove useful and help to satisfy such a need. For instance, Allegro.pl (the major Polish auction site) uses the *Liker* application to collect data on things that users marked as 'liked'. It also uses *Gifter*, which builds a list of potentially desirable gifts for a particular user, based on analysing the *Liker* data, and makes it available to friends of the person concerned [Sumara et al., 2012, p. R9]. However, when tools which explore user-related knowledge are applied to create unconscious needs, this begs a question on the ethics of online media personalisation. Appearance of simple personal details (e.g. first name, date of birth, location) sourced from a social networking profile in an advert targeted directly at a particular person is not particularly disturbing. However, if the content of an advertising message implies that it is based on information originating from the monitoring of that user's online comments and behaviours (e.g. messages addressed only to friends, description of events concerning a particular person, his/her mood or views), this may generate a sense of threat to privacy and a suspicion of online invigilation. This also poses a question on the boundaries of privacy in the social media and its safeguards. Should online privacy be guarded by companies which use semantic tools, or perhaps by users themselves? Users would be more effective but in order for such privacy guards to work well they would need to exercise a lot of self-control over everything they publish online. In that case, they could no longer respond spontaneously to various outside events and would have to build their image consciously, consistently multiplying it throughout all social media.

Information exclusion is another issue that deserves a mention. Such exclusion may be provoked by semantic analysis which is too sophisticated and, as a result, prevents access to many areas of knowledge. Semantic tools, designed for the profiling of data streams, take account of data in the context of specific utterances and other online activities. Information that lies beyond users' main areas of online interest may never reach them. Given the information overload on the Internet, it is impossible to have access to everything. While data stream profiling does help users to stay updated on areas of interest, it aggravates the knowledge gap in other areas, in which case we can talk about information exclusion brought about by the semantic web.

Conclusion

There is no doubt that social media cannot be ignored as a channel for information exchange and marketing efforts, especially with respect to the young generation of consumers: for them, social media are a natural environment for sourcing, creating and exchanging information.

Social media are not confined to social networking sites such as Facebook but they also include the ever more popular microblogs (e.g. Twitter), traditional blogs (operated by corporations, industries, opinion leaders) as well as online forums and communities. In order to support them, companies need to take account of special characteristics of interactions with communities and show professional commitment while performing this task.

In all likelihood, activities in social media are needed not only to reap benefits from this new channel of communication with customers but also to protect companies against web-originated risks. A false corporate profile in social media may lead to costs and inflict serious, hard-to-assess damage to image/reputation. Well, if companies cannot eliminate a phenomenon, it is reasonable for them to set it to serve their own purposes. For companies, social media presence offers an opportunity not only to control the audience of their messages but also to receive feedback which they can plough into further business, such as designing products/services, and personalising them to meet consumers' needs. A creative use of social media represents business potential that is worth leveraging to outpace competitors.

As for the sources of customer information it is extracted, from various corners of the Internet, as long as users have engaged in any traceable activity such as comments, photos, key words searches etc. Social media, with an opportunity to publish various materials, opinions and recommendations for friends, are a particularly rich source of information on consumer preferences. Semantic tools are used to delineate users' areas of interests in order to personalise the range of products and services offered. On the one hand, this helps companies to take their products to potential buyers and give answers to consumers' questions (even before such questions are actually asked). On the other hand, the results of semantic analysis may constrain access to information which goes beyond the circle of already disclosed areas of interest. As a consequence, this might lead to information exclusion, caused by lack of access to information streams identified and disabled by semantic tools.

Most social applications are already available for mobile devices. The trend to use mobile communication in social media stems from the fact that users are now able to stay in touch with their communities on an ongoing basis, anywhere and at any time. Mobile devices allow easy geolocation of their users, and, as such, become a source of extra information about users' potential needs.

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