

The reference for this paper is:

Repo, P., M. Pantzar, P. Timonen & K. Hyvönen (2006): Blueprint for Consumer 2.0. In P. Walden, R. Fullér & J. Carlsson (Eds.): Expanding the Limits of the Possible, pp. 94-100. IAMSIR: Åbo.

Blueprint for Consumer 2.0

Petteri Repo, Mika Pantzar, Päivi Timonen, Kaarina Hyvönen
National Consumer Research Centre

Abstract

Consumer 2.0 represents a new mode of consumption which is expected to become more prevailing along with the wider use of knowledge-based support systems for consumption purposes.

Consumers themselves are at the center of this trend. They are the producers of information on consumption and also the users of this peer-produced information once it is aggregated and published in real time. Consumer 2.0 builds on the interactional dynamics between individual forerunners and ordinary consumers, and emphasizes the collective nature of consumption.

Today much of this activity takes place on websites run by enthusiasts and global e-traders. Consumer 2.0 is, in essence, an implementation of Web 2.0 tools and services. A review of six Consumer 2.0 services shows that user input can be an essential feature of a supplied service also in the sphere of consumption.

Introduction

In the 1990s the Internet was considered an enormous database that would shift the balance of power between consumers and producers. Consumers were to be empowered once they got hold of the immense amount of information and product supply on the web. They were then to make more reasoned consumption choices and find lower prices. Such consumer-driven markets did not emerge in a large scale, however.

At the advent of Web 2.0 – a collection of participatory web tools and services – these visions are once again becoming topical, albeit in a different way than expected. It now seems that consumer empowerment needs to be accompanied by consumer participation. Web 2.0, the second coming of the Internet, reorganizes the relationships between consumers and producers (cf. O'Reilly, 2005).

Amidst the hype of new web technologies it is easy to forget that consumers today are facing basically the same problems they have faced since the Second World War. In his notorious speech on consumer rights in 1962, U.S. President John F. Kennedy described how the rapid development of technology, enormous variety of supply, and impersonality of marketing led to problems for consumers (Kennedy, 1963). This is still very much the case.

What is different, however, is that consumers now have access to much better knowledge-based support systems. Indeed, the Internet is an enormous databank that can be used for purposes of consumption. Much of the data stem from other consumers who face similar problems and propose practical solutions. This could not take place without new information technologies that in essence have created new “freedoms” extending the limits of the possible (Keen, 2001; Braudel, 1992; Carlsson et al., 2005).

A number technologies and theories make up the building blocks of this new potential form of consumer empowerment. The Internet and its online communities are an increasingly significant part of everyday life. In particular we see the evolution of knowledge-based support systems to promote the new consumer, which we call Consumer 2.0. Consumer 2.0 is a vital element of the production system instead of “merely” an end user. This paper studies how consumers produce information on consumption and how they use this information. We view this dynamics as the hard core of Consumer 2.0.

Consumer 2.0 is a consumption-oriented feature of tomorrow's ubiquitous society. We daringly argue that consumers will be better off in the potentially ever more complex world of the future. Consumer empowerment goes beyond the acceptance of new technologies and into active production, distribution, and consumption of information.

The following sections of this article sketch a blueprint of Consumer 2.0. We start off with "professional amateurism" and aggregation of input from masses of consumers, which we regard as the foundations for the reasoning, interest and social character of the blueprint. We then proceed to evaluate existing Consumer 2.0 services. Based on this we draw conclusions about the essential features of Consumer 2.0 and finalize our blueprint.

From one to many

Professional consumerism has long traditions and manifests itself in numerous ways (Mayer, 1989). Never before, however, has the input of individual consumers into information systems or their use of these systems been as widespread as in information networks today. Consumer 2.0 mediates such individual consumer expertise on to a collective level through the use of knowledge-based support systems.

Consumer 2.0 relies on two kinds of expertise. Firstly, there are the professional amateurs, who provide the depth of knowledge. Secondly, masses of "ordinary" consumers provide the breadth of knowledge by having their input aggregated. The interplay between these two kinds of expertise is fundamental for the success of Consumer 2.0.

Enthusiasts: sharing the wisdom of professional amateurs

Consumers are by nature "amateurs" in consumption because nobody can be an expert in all the major discourses of consumption. This is not to say that they could not be experts in specific consumption fields, as is indeed the case. Ultimately each consumer is an expert in his or her particular sphere of consumption. So there is a case for professional consumerism also at the individual level.

Charles Leadbeater and Paul Miller describe professional amateurs in their book *The Pro-Am Revolution* (2004). The book itself is an example of how enthusiasts are changing economy and society. Amateurs rather than professionals are actually the innovative makers of the future. Accordingly, the book challenges the common notions of the motives, expertise and modes of reasoning regarding innovations.

For Pro-Ams, leisure is active and participatory rather than passive consumerism (Leadbeater & Miller, 2004). Pro-Ams are innovative, committed and networked amateurs who work according to professional standards. A commitment to meeting professional standards, even exceeding them, is not something traditionally attributed to consumption.

Modern amateurs share a serious, dedicated relationship to activities such as science, sport, entertainment, and art. Robert Stebbins (1979) studied a variety of amateur activities, defining amateurs as members of a public system consisting of both professionals and amateurs and their interdependent relationships. Amateurs are often able to create non-standard products or establish non-standard connections between products (cf. Repo et al., 2006; Pantzar & Shove, 2005). They can provide services similar to those provided by professionals. In doing so they develop knowledge that is relevant for professionals as well.

Of course, relying on amateurs and enthusiasts also has its drawbacks. The study by Nikolaus Franke and Sonali K. Shah (2003) suggests that those most active in generating innovations (in their examples, snowboarding, sailing, cycling) are also most likely to defect in pursuit of new experiences. Similarly, Jana Bowden and David Corkindale (2005) have demonstrated that experts and heavy users are typically the most conservative when it comes to adopting new practices and adapting to radical innovations.

We may conclude that although professional amateurs are important contributors to new forms of knowledge, there is a dire need to convert their contribution for use by the vast masses of consumers. Indeed, the future power of Pro-Ams is in the collective intelligence of the networked members. Social groups play a great role in determining which brand to buy and which shop to avoid. Internet traders such as Amazon.com make extensive use of collaborative filtering, user-recommendation engines, and shared judgments of quality. Within these systems Consumer 2.0s form communities of shared interests and rely on cooperative forms of interaction.

Ordinary people: aggregating input from masses of consumers

There is a Finnish proverb which boldly states that stupidity condenses in a group, i.e. the masses are ignorant. This has been dominant thinking for centuries: the masses necessarily behave irrationally. Enlightenment philosophers, for instance, argued for various institutional regimes to protect the masses from the irrational consequences of their own behavior. In contrast, we refer to Consumer 2.0 and argue that new, potentially relevant knowledge emerges when hundreds or billions of choices are aggregated. Aggregation obviously calls for new forms of abstractions, already found in contemporary electronic commerce.

Aggregating the input of masses of users rests on many arbitrary choices. The depicted truth will always be relative. First of all, we need to determine appropriate sensors. Assuming that we wanted to know how pleased customers were with certain consumption items, for instance, we could ambitiously imagine aggregating the customers' heartbeats, or maybe conservatively collect aggregate data on their purchases. We might even conceive a system of brain-imaging devices that would connect through Bluetooth to mobile phones, and further on to Internet sites.

The next step involves aggregating and presenting individual data. Nobel laureates Kenneth Arrow and Amartya Sen have convincingly shown in their impossibility theory that it is impossible to deduce a collective preference order from individual preferences. We have to understand – what geographers know so well – that various projections yield a different picture of the same landscape. Aggregated preferences cannot be presented unequivocally. Rather, they portray the fuzzy world from which they stem.

Once the questions of sensors and aggregation have been solved, we need to learn to trust the masses of consumers and utilize the data generated by them. It is here that the Internet has already had a major impact. The idea of democratizing innovations (von Hippel, 2005) draws on the recent upsurge of the networked society and the open-source movement (Shah, 2005). Journalists, educators and professional amateurs are already contributing to the democratization movement. In the field of consumption, the crucial step is for the masses of ordinary consumers to join in.

James Surowiecki (2004) compellingly argues that the wisdom of crowds could be the next boom in business literature. There is a growing potential for Consumer 2.0, as the ubiquity of information systems facilitates networking (e.g. Kennedy & Wellman, 2007). In the next section we argue that

Consumer 2.0's features can be observed in the activities of contemporary online enthusiasts ranging from simple comparisons of prices and products to the discovery of new consumption practices.

Consumer 2.0 services

Global e-traders are forerunners in the use of Consumer 2.0 features. They have created, facilitated, and uniformed participatory online practices, thus making consumer participation an essential element of the service rather than just a forum for complaining about sold services. Amazon, eBay and iTunes are examples of international players that have successfully turned user participation into a commercial success. They aggregate reported consumer experiences and views and share these with their customers. Similar methods are replicated by a great number of e-traders.

Consumer input is typically built on reviews – reviewing issues such as products, contents, and sellers. Automatically collected information on consumer behavior can similarly be conveyed back to consumers. Information on ease of use, charges, personal experience, and individual expression obviously precedes successful consumer participation.

We argue that there are two features which especially distinguish this type of consumer-generated information from conventional information on consumption, like advertising, consumer education, consumer legislation, etc. Consumer-generated information is produced, firstly, in real time and, secondly, by peers. These two features are the distinctive building blocks of Consumer 2.0. The third building block is the aggregation of information on consumption. Although there is nothing new in this, the very idea of feedbacking aggregated information to consumers to promote self-realization bears a new twist in commercial settings.

Real time here means that the information is available at the time of purchase or preparations for purchase. Conventional consumer education and research typically cannot give situated information for consumers and so they have to rely on general guidelines. Even advertising suffers from similar shortcomings.

Peers are other consumers in a similar situation, i.e. in a similar position in relation to the seller. They represent the masses of consumers involved in the democratization of the production of information. Information shared by peers usually stems from their own individual experience.

Aggregation is the abstract summation of individually produced information, and its outcome is a knowledge-based support system. All or parts of the aggregation can be automatically updated. This lifts Consumer 2.0 to a social level by enabling consumers to see themselves as a collective.

We back up our argument by a review of these features in a number of Consumer 2.0 services (Table 1). Some of these are run by corporations, others by professional amateurs. In all cases one party functions as the information broker and obviously needs to be considered reliable by the participants.

Table 1. Examples of Consumer 2.0 services

| Type of service | Example | Real time | Peer to peer | Aggregation |
|-------------------|---|--|--|--|
| Price comparison | Polttoaine.net reports on retail prices of fuel. | Supplies average price for the day before. | Users report prices. | Variation of daily price and variation of monthly average price are shown. |
| Product review | VideoHelp.com is a website for video enthusiasts. One section of the website reports functionalities of different DVD players and compatibility issues. | New players are presented first. | Users test their own DVD players. | Two kinds of averages representing functionality are calculated for each DVD player. |
| Content review | Mikseri.net distributes free music. | A top40 list is created each week. | Music is rated through listening practices and user reviews. | An algorithm calculates popularity based on downloads, online listening, comments, reviews, reviews of comments and weeks on the top40 list. |
| Preference review | Liveplasma (beta) is a discovery engine. It visualizes buyers' music and movie maps according to data from Amazon.com sales. | Information is updated automatically. | Consumers may make use of others' preferences. | The relations of preferences are visualized as a self organizing map. |
| Seller review | Huuto.net is an online auction site, where buyers rate sellers in order to build trust. | Seller ratings are dependent on time. | Buyers rate sellers. | Positive, neutral and negative ratings are calculated as a rating. |
| Reviewing reviews | Amazon.com allows users to rate the helpfulness of other users' reviews. | Information is updated automatically. | Users rate the helpfulness of each other's reviews. | The number of positive ratings is compared with the overall number of ratings. |

All of the Consumer 2.0 services shown in Table 1 have developed ways to provide participatory elements in their web services. They achieve real time, peer-generated information, and aggregation through different methods. These services are less formal and more decentralized than they would be if produced conventionally.

Categorizing a service according to how ordinary consumers take part in its production says much about its nature. The more effort such participation requires, the more pronounced is the role of enthusiasts. Services such as Polttoaine.net and VideoHelp.com require strong user commitment and clearly depend on input from enthusiasts. Ordinary consumers also benefit from these services, but similar services for them could well be produced with information provided only by professionals. Currently these services rely largely on professional amateurs and do not primarily aim at broad audiences.

Mikseri.net and Huuto.net are participatorily looser services. Ordinary consumers can take part in them without excessive effort. Nonetheless, both are built around communities, so there is still an element of exclusion rather than inclusion.

Amazon.com and Liveplasma (beta) take a step away from community formation. Instead, they make it possible for users to find others who are similarly minded. They provide an infrastructure for processing of consumer-generated information. These information processes are effortless for consumers and they promote an opportunity for self-reflection in relation to other peers.

Liveplasma (beta) represents a new step in the direction of collective intelligence. Visualizing complex information in ways that users find appropriate enhances both ease of use and understanding. It also highlights the inexact nature of aggregated information (cf. Tufte 1997).

The reviewed Consumer 2.0 services offer information generated by consumers for use by a wider consumer audience. Actually, this is the ultimate test for any Consumer 2.0 service. Although it is difficult to evaluate the relevance of such information for consumer purchases, there is definitely a connection. For example, as much as 84% of Finnish web surfers looked for information on products and services on the Internet in 2004. This figure is remarkably high, as only the use of e-mail surpassed it with a corresponding figure of 88% (Sirkiä et al., 2004). Consumer advocates can barely dream of such masses of visitors to their websites. It is also highly unlikely that

consumers would look for this kind of information in a similar scale on conservative corporate web sites (cf. Yared, 2006). In this respect, Consumer 2.0 has already established itself.

Conclusion

The second coming of the Internet – Web 2.0 – is changing the way we view information networks. Information used to be produced and distributed by professionals for others to adopt, but these times are past. Non-professionals are now increasingly participating in the production of information. Furthermore, in knowledge-based information systems the production and consumption of information are closely related. We could speak of a sort of hyper interaction between the producers and consumers of information.

We foresee the coming of a new consumer. Consumer 2.0 incorporates both individual motives to produce information and the collective motive to consume that knowledge. Were we to choose between these two features we would choose the collective as more important. Individual professional amateurs got the movement going, but it is the collective that keeps it going.

This article has proposed educated guesses of what is actually taking place in information networks. We definitely know that the Internet is an important source of information for consumers, but its effects on consumption have not been studied extensively. We cannot say much about the dynamics of Web 2.0 on consumption. Aside from a technical description we are only taking the first steps: Consumer 2.0 has reached a comfortable beta stage.

References

Bowden, J., & Corkindale, D. (2005). Identifying the initial target consumer for innovations: an integrative approach. *Marketing Intelligence & Planning*, 23, 6, 562-573.

Braudel, F. (1992). *Civilization and capitalism, 15th-18th Century, Vol. I: The structure of everyday life*. Berkeley: University of California Press.

- Carlsson, C., Hyvönen, K., Repo, P., & Walden, P. (2005). Asynchronous adoption patterns of mobile services. *Proceedings of the Thirty-Eighth Annual Hawaii International Conference on System Sciences*.
- Franke, N., & Shah, S. (2003). How communities support innovative activities: an exploration of assistance and sharing among end-users. *Research Policy*, 32, 157-178
- Keen, P. G. W., & Mackintosh, R. (2001). *The freedom economy. gaining the mCommerce edge in the era of the wireless Internet*. New York: Osborne/McGraw-Hill.
- Kennedy, J. F. (1963). Special message to the congress on protecting the consumer interest. March 15, 1962. In *Public papers of the presidents of the United States: John F. Kennedy, 1962* (pp. 235-243). Washington: United States Government Printing Office.
- Kennedy, T., & Wellman, B. (2007). The networked household. Forthcoming in *Information, Communication and Society*.
- Leadbeater, C., & Miller, P. (2004). *The Pro-Am revolution*. London: Demos.
- Mayer, R.N. (1989). *The consumer movement: guardians of the marketplace*. Boston: Twayne Publishers.
- O'Reilly, T. (2005). *What Is Web 2.0? Design patterns and Business Models for the Next Generation of Software*. Retrieved 10 August 2006, from <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
- Pantzar, M., & Shove, E. (2005). Introduction. In M. Pantzar & E. Shove (Eds.), *Manufacturing leisure: innovations in happiness, well-being and fun*. Helsinki: National Consumer Research Centre. Available at www.ncrc.fi.
- Repo, P., Koskinen, I., & Grönman, H. (Eds.) (2006). *Innovaatioiden kotiutuminen* (The domestication of innovations). Helsinki: National Consumer Research Centre. Available at www.ncrc.fi.

- Shah, S. (2005). Open beyond software. In D. Cooper, C. DiBona & M. Stone (Eds.), *Open Sources*. Sebastopol, Ca: O'Reilly Media.
- Sirkiä, T., Nurmela, J., & Mustonen, L. (2004). Verkkokauppa saanut vakioasiakkaita (E-commerce has gained regular customers). Retrieved 10 August 2006, from http://www.stat.fi/tup/tietoaika/tilaajat/ta_08_04_verkkokauppa.html
- Stebbins, R. (1979). *Amateurs: on the margin between work and leisure*. Beverly Hills: Sociological Observations.
- Surowiecki, J. (2004). *The wisdom of crowds. Why the many are smarter than the few*. London: Abacus.
- Tufte, E. R. (1997). *Visual explanations*. Cheshire (Conn.): Graphics Press.
- von Hippel, E. (2005). *Democratizing innovation*. Cambridge (Mass.): MIT Press.
- Yared, P. (2006). Why corporate web sites stink. *Business Week Online*. Retrieved 10 August 2006, from http://www.businessweek.com/technology/content/jun2006/tc20060613_924682.htm

Appendix 1: Links to reviewed examples of Consumer 2.0 services

- Amazon.com: <http://amazon.com/>
- Huuto.net: <http://huuto.net>
- Liveplasma: <http://liveplasma.com/>
- Mikseri.net: <http://mikseri.net>
- Polttoaine.net: <http://polttoaine.net/>
- VideoHelp.com: <http://www.videohelp.com/>