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10

Customers Working for Customers: Collaborative Web 2.0 Services

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The development of web 2.0 technologies since the mid-1990s has given a powerful new impetus to the growing trend of customers participating in the creation of services. Not only has it enabled this participation on a larger scale, it has also stimulated the development of a new type of service – one that integrates customers in the service creation process in ways never seen before. Customer service is now provided not by service providers alone but also by customers. Large numbers of customers are working for customers in a collaborative effort or, to be more precise, in large-scale collective action.

The phenomenon of user-generated services on the web is widespread and steadily growing. In the broad field of IT products, there is hardly a manufacturer today who can afford *not* to offer a user forum or user support website. In other areas, online communities form in which users support one another in the pursuit of specific, shared interests or activities, such as sports or travel. Customers who have purchased a certain type of equipment, play a certain sport, or have traveled to a certain area, report on their experiences in a user forum on that topic and, in doing so, help other customers by sharing the specialized knowledge gained from the activity or from the use of the product.

User forums and user-generated platforms do not necessarily involve firms. The two famous examples of user-generated services on the Internet, open source software development and Wikipedia, are produced and managed exclusively by user communities. This demonstrates that such work can be done without firms (von Hippel, 2005b). Operating a large, successful web platform, however, requires sophisticated infrastructure and well-organized management. In the case of Wikipedia, the not-for-profit Wikimedia Foundation was established for this purpose,

and similar organizations have been established for large open source projects like, for example, Mozilla (O'Mahony, 2007).

But if the platform content revolves around a commercial product or service, frequently a firm is involved. Because in this case a relationship between the customer and the company already exists, it stands to reason that the firm would operate the platform, as does the navigational device manufacturer Garmin, which we analyze below. In other cases, the participating firm is an intermediate service provider, such as TripAdvisor, a platform where travelers share their experiences involving hotels, restaurants, or other providers of travel services. All in all, the number of user communities centered around products and services is constantly growing and a very broad spectrum of different operator-user constellations is emerging.

In this chapter, we take a closer look at exactly how customers are working for customers – or more precisely, how these user-generated, web-based service platforms actually work. We begin by characterizing user-generated web 2.0 services. In the second section we present two successful platforms: the Garmin Forum and TripAdvisor. Based on these examples, we analyze in the third section how these customers are cooperating with one another and how this leads to large and widely used service platforms. In the fourth section we examine the role of firms in user-generated web platforms, again on the basis of our two sample websites, as well as the relationship between company and user community. In conclusion, we argue that these user-generated web 2.0 platforms represent a new type of service. Our thesis is that the combination of different coordination mechanisms – the collective logic of the customers on the one hand and firms' logic of production on the other – results in a new form of mixed governance. The challenge with this type of service is how these contradictory coordination mechanisms can be linked with one another.

1. Customers working for customers: A new type of service

The division of labor in user-generated, web-based service platforms contrasts starkly to the division of labor typical of conventional supplier-customer relationships. The actual service is performed almost entirely by customers, while the task of the participating firms is more or less reduced to providing the web platform. Rather than being merely the recipients of services, customers also act as producers of services for their fellow customers. As illustrated by the examples below, the creation of the content by customers or users implies that the process of service

production is taken out of the companies' hands. The customers decide themselves what they can and wish to contribute to advise or help other customers; their contributions in forums or other user communities are voluntary and self-organized. This autonomy within the framework of the shared goal is a basic principle of participation. Although it would seem to be in a company's interest to control contributions or even to 'buy' contributions with content favorable to company interests, doing so would undermine the nature of this service and the interests of active customers, and ultimately it would deprive this production model of its very foundation.

A fundamental characteristic of this new type of service – and the one that makes it highly attractive to users – is the authentic, unembellished, and unfiltered nature of the contributions from large numbers of customers sharing their experience and practical knowledge with other customers. The key to generating this special form of *content* lies in the self-determination of the customers concerning their own contribution: the customers decide what they want to tell other customers about the product or service. The participating company, by contrast, limits itself to providing the infrastructure and organizing the platform.

The second fundamental characteristic is the manner in which content is contributed by customers. The service they provide is made up of a large number of generally uncomplicated contributions from a large number of customers. The threshold for participating is thus relatively low: each individual contribution can be very small. When a large number of such contributions is amassed, a very useful and practical collection of information and advice is the result.

The main difference, however, between the user-provided services described here and conventional customer co-production in services is that here, customers are creating services *for other customers*. Up to now, the paradigm of co-production held that customers participate in the production of services that they use themselves. On the one hand, it was taken for granted that the willingness to participate grew out of self-interest in using the service, and on the other hand, specifying their own needs was seen as a generic task of customer co-production. In conventional service constellations, customers are systematically involved as co-producers in the creation of the service (Gross and Badura, 1977; Gross, 1983; Gutek, 2000; Kleinaltenkamp, 2001; Jacobsen and Voswinkel, 2005). In travel services, for example, customers must be involved, because without their co-presence the trip does not take place. Of course this also applies to personal services such as hairdressing and elder care, in which customers may be more or less

passive but are very much involved (in the sense of being affected). It is also true, moreover, of *self-service*, where the customer usually takes over a significant part of the production of the service in return for a lower price, for example, or a larger selection of variants or design options in (industrially pre-fabricated) mass-use products. However, in conventional service customers participate for their own benefit and not for that of other customers.

This conventional paradigm of co-production is not applicable to user-generated services on the web because the customers are participating – systematically and extensively – in the co-production of services *for other customers*. User-generated service platforms thrive on the fact that specific user knowledge and experience is made available and utilizable by customers for other customers. Users have specific knowledge that has grown out of their own experience, their particular situation, their familiarity with a certain place, and from their particular interest in a given topic (von Hippel, 2005; Piller et al., 2011). This gives them an exceptional capability in helping or exchanging information with other customers. But that raises a question that did not arise in connection with conventional service. *Why* do customers work for other customers? This is a typical ‘collective action’ problem in which the willingness of a given customer to contribute is dependent on whether other customers are contributing as well.

Another consequence of customers working for customers is the way it alters the relationship between firms and customers. Conventional co-production typically involves a one-to-one relationship between company and customer: a relationship of exchange and cooperation, with the supplier and its personnel on one side and the individual customer on the other. User-generated, web-based services, by contrast, grow out of cooperation between a large number of users on one side and the company on the other (Wittke and Hanekop, 2010). Collaboration is found between customers who are working for one another, but there is also a relationship between the user community as a whole and the company. In the following, we examine both the implications of this new type of service and the prerequisites for this new type of web 2.0 production model.

2. The cases

This section presents qualitative analyses of two successful user-generated, web-based service platforms: the Garmin user forum

and TripAdvisor. We specifically chose to analyze successful user communities, because we are interested in how this new type of service functions. The two web sites represent two different kinds of operator constellations. The method applied thus involves contrasting case studies. In the first case, the Garmin user forum, the website operator is linked to the role of device manufacturer. In the second case, the TripAdvisor travel information site, the web platform is operated by an intermediary whose primary task is to gather a large number of authentic and often critical user reviews. This is a kind of review that one does not usually get from a conventional travel agent, for example, because it would negatively affect their own sales and that of the hotels they book for.

It has been pointed out elsewhere in the literature that users have special experience and expert knowledge (von Hippel, 2005; von Hippel and von Krogh, 2006; Piller et al., 2011), which enables them to provide highly competent advice and recommendations for other users. The particular attraction of these user reviews is that they provide public access to authentic user reports on products or services. The advantage over information from travel businesses is authenticity: criticism and problems are not sugarcoated or glossed over, nor tinged by commercial interests or marketing strategies. The specific qualities of the knowledge contributed by users for other users can differ. The Garmin forum accentuates the bundling of highly specialized user knowledge, while at TripAdvisor, the extensive collection of authentic experiences of customers and users concerning a wide range of travel destinations is in the foreground.

What our two examples have in common is the openness of their web platforms, imbuing the respective services with the character of public goods. The information they offer is freely accessible, and anyone can contribute. There are no formal limitations; all that is asked of users is that they register before writing.

2.1. Garmin forum

The basic concept of the Garmin Forum (<https://forum.garmin.de>) is spelled out in the first rule of forum use: ‘This forum is first and foremost to be used for users’ questions and for the exchange of information regarding the use of Garmin products.’¹ The forum is for Garmin customers who use their GPS devices in outdoor activities (e.g. motorcycle riding, cycling, trekking, mountain climbing) or in their work (usually for traffic navigation). Regular users not only have specific knowledge

about the devices, but are also familiar with the particular needs and problems of users who have the same hobbies or enjoy the same outdoor activities as themselves. The Garmin forum is a platform on which they can converse with each other about experiences, problems and solutions. The same kinds of exchange take place offline as well, whether among friends and acquaintances or at work, but in the online forum, the number of people reached by a given discussion is expanded radically. The more people involved in the discussion, the greater the likelihood of finding another user whose experiences are similar to one's own, among them perhaps one who can help solve a problem. Many members of the user community spend a lot of time online and check the forum frequently for new posts, though most of them only rarely contribute. The German Garmin Forum has about 20,000 active (registered) users. In the beginning of 2012, there were about 80,000 user posts in 10,000 threads. The number of readers is many times higher than the number of members registered in this forum. The ten thousand threads on the website represent roughly the same number of user questions, which have quite likely already been answered within the forum – or, if not, then at least the forum has informed the manufacturer of a problem so the company can solve it. Generally, every question is taken up for discussion immediately (within at most a few hours) among the users. This rapidity of response is another advantage of the large number of users and the openness of the platform.

From their common interest comes a shared motivation to act, as is vividly expressed in the following user's personal introduction in the Garmin forum:

For those of you who do not know me yet: As you can easily see, my name is Andreas and I come from beautiful Berlin. I am about 40 years old and have been using Garmin GPS devices for about 10 years now In my free time I use them for both short and long trips on my motorcycle I try to help other GPS users whenever I can. Because Garmin equipment means a lot to me, I also write fairly often about what can be improved in these devices, and I hope that this is the right place for these suggestions.

(ANDREASL. This user has added 116 contributions since April 2009)

On the basis of their common interests, the users share their experiences in a self-determined and self-organized way. Any registered user can start a new thread, usually for the purpose of describing a problem

with a Garmin device. Other users answer and frequently a long debate ensues, often joined by a Garmin moderator as well. In this manner, the user contributions determine what topics are discussed. This openness toward users' needs is the special quality of this user-generated service.

The fact that the questions and answers are publicly and permanently available is crucial for the usefulness and efficiency of the service provided by the user forum. Even interactions that involve just a few parties can benefit a large number of users over a long period of time. In other words, the help provided by this user-generated service is not limited to the person who asked the question; the number of hits per thread as documented in the Garmin forum indicates that there are often hundreds of other users reading these discussions and solutions. Thus a huge reservoir of problem descriptions and solutions is created, where users can search for answers any time and without restriction.

But if anyone can start a thread about any topic, how can the result be a well-structured and helpful service? In the Garmin forum, the phenomenon is explained by their clear and simple rules, complied by all contributors. If a user breaks a rule, she is warned by a moderator; if necessary, the warning is followed by action. The contributors' voluntary compliance is the main factor, however, and this is linked to the general acceptance of the rules. Thus, the rules have a normative character in the context of the user community.

The Garmin forum is structured along the lines of product series and models. There are forums on street navigation, outdoor activities and leisure, sports and training, smartphones, maps, and map software. Each of these has subforums for individual devices. Another forum area is dedicated to customer feedback directed at the Garmin company, with the subcategories 'Customer Requests and Ideas for *Garmin* products,' 'Report a Defect,' and 'Feedback.' Within the device-specific subforums the structure is problem-oriented, an arrangement that results from the threads started by users. Other contributions contain criticism or suggestions for improvements. These may be addressed to Garmin, but they can gain in significance if supported by other users.

The Garmin Forum is structured in part through adherence to the forum rules, such as the following:

Please post each contribution in the forum provided for the specific topic.

Please limit each thread to only one topic.

When starting a new thread, please enter a Subject Line that clearly describes the content.

Before starting a new thread, please search the forum for existing threads addressing your topic, as your question may have already been answered.

Writing multiple posts on a single topic and posting them in different forums is not allowed.²

The rules help ensure that information on a given problem can be found in one thread so that it is easy to find. Without the rules, it would be inordinately more difficult to find relevant information, which would detract considerably from the value of the forum. The rules are formulated in such a way that they are easy to follow and do not restrict the posts, making the problem of convincing users to observe the rules a minor issue.

The fact that Garmin 'limits' the forum content to its own products and subdivides topics into device-specific subforum threads is in no way a disadvantage from the user's point of view; rather, these features are in the interest of this user community. As long as the topic discussed is in the right forum and thread, there are no restrictions on the content of the individual posts. Some contributions are critical and even articulate sharply negative statements about product characteristics and some go so far as to advise others not to buy certain products until the manufacturer has addressed the defects described by users.

For Garmin, the forum is an effective approach to the problem of customer support, while at the same time the company gleans input concerning product improvements. Thus, the forum is also a part of their innovation strategy. Garmin is involved in forum organization and content presentation through the forum moderators. On the subject of defects or deficiencies of the equipment, Garmin is addressed, and sometimes even challenged, directly as the product manufacturer. Garmin sales representatives are also active in the forum, and use it to forward customer criticisms to the company. Garmin does not operate the forum as part of a value-adding strategy (e.g. advertising), but rather offers it as a form of customer support that flanks its core business as a manufacturer.

2.2. TripAdvisor

TripAdvisor is a large, international travel information site (www.TripAdvisor.de), on which travelers report their experiences with hotels, inns, flights, sightseeing, or other activities. The basic idea of the founder and CEO of TripAdvisor is to offer travel advice based on the authentic experiences of travelers.³ The more reviews on a given

hotel, restaurant, or famous sight, the better the quality of advice. The TripAdvisor web pages, according to the company (www.TripAdvisor.de), currently contain more than 75 million reviews from 30 countries (as of May 2012), which are used by approximately 50 million visitors per month.⁴

The TripAdvisor service consists of authentic user reviews from travelers who have actually been to the places they review, with the kind of information previously available only in personal conversations with the travelers. The goal of this web-based service is to collect neutral – including critical – information from users and make it available uncensored and without comment. That is why there is no moderator role at TripAdvisor (or at least none that is perceptible). The spontaneity of the descriptions conveys authenticity and is characteristic of the contributions. The specific quality of these user-generated travel reports lies in learning from others about places that one has not visited (e.g., a hotel in another town). Everyday common sense is what counts – no special expertise is required. Individual contributions may address a very specialized aspect of travel or of a particular journey or visit, but the sum of the many user posts combined with sophisticated search and research functions yields a scope and intensity of service which one-to-one consulting on a hotline or with a travel agency employee cannot equal.

The quality of the service provided depends not only on the quality of the individual contributions, but also very much on the scale of participation: the more contributions there are from many different users, the better the service. Another effect of the large number of contributions is the improved credibility of the advice. If there is only one post on a certain hotel, for example, readers may wonder whether the review is believable. But if similar reviews are posted by five different people, they will be less likely to question their validity. The problem of trusting posts written by total strangers is significantly reduced when one is not dependent on the opinion of only one contributor, but rather can compare a number of opinions.

The basic structure of TripAdvisor is intuitive and uncomplicated: it is organized around the hotels, restaurants, etc. that the users review. If the name of a place, hotel, famous sight, etc. is not found in the system, the user can create an entry under that name. Every review must refer to a specific destination (city, hotel, restaurant, etc.), and is automatically linked to that destination name. When a user looks up a certain hotel, for example, all reviews that refer to this hotel are listed in their complete, original form, chronologically and without comment. The user can also sort the list of reviews, for example by language or evaluation

points. The suppliers (such as hotel or restaurant management) can comment on the reviews, but these posts are not displayed as reviews themselves. Readers are meant to find as many reviews as possible from which they can take the information most meaningful to them and use it to form their own opinion. Unlike the Garmin forum, there is no public discussion about the reviews, most likely because it might discourage users from contributing their honest opinions and evaluations. Everyone knows that differences of opinion can sometimes be unpleasant.

Another level within the structure is that of the persons who have written contributions. Each review indicates who wrote it, what else that user has contributed, and the user's profile if he or she has created one. TripAdvisor provides the infrastructure for storing user profiles in order to give users some basis for the evaluation of other users' reviews. A profile can list the user's personal characteristics and interests, and, most importantly, information on where they have been (in the form of a map) and their interests related to those destinations. The TripAdvisor site counts the number of reviews contributed by each user and shows this number, along with other user data, together with each review. Viewing the profile and reading the other reviews written by a given user can help the reader get an idea of that user's interests and the criteria applied in his or her reviews. The person reporting gains points from the profile and from being ranked as an expert.

TripAdvisor is a commercial platform with the purpose of selling advertising space. The majority of the site's advertisers are travel businesses.⁵ At the same time, however, the independence of the website from the travel businesses is a prerequisite for the credibility of this platform among its users. The trust problem is also particularly significant in the case of TripAdvisor because the independence and authenticity of the user reports cannot be taken for granted. For example, it has been suggested that hotel guests might receive some form of reward from hotels (such as room upgrades or free meals) for posting positive reviews, or that hotels might even commission their own reviews, written under pseudonyms. On the other hand, travel businesses have also criticized TripAdvisor, and on occasion have even filed lawsuits, regarding negative reviews that they say are not credible. Thus in spite of, or perhaps because of, TripAdvisor's position as an intermediary, their relationship with travel businesses merits scrutiny. TripAdvisor itself does not make any appearance on the website in the form of written contributions or (visible) forum moderation; rather, the organization of the website is (apparently) for the most part automatic; that is why there are no moderators (or at least none perceived by the user).

3. A new service type based on customers' collective action

The sites we describe above show how customers assist other customers by sharing knowledge, answering questions, and even working out solutions to problems for one another. Successful platforms like these thrive on having a large number of (mostly small) contributions from a multitude of users. It is the quantity and broad variety of the contributions that creates a new quality of service. But whence this willingness of so many users to help others? And how are the innumerable contributions organized, when their creation is entirely at the users' own discretion? In this section we argue that the user-generated, web-based service platforms in which customers work for customers represent a new form of collective action, even though the web 2.0 platform is operated by firms.

Web 2.0 technologies enable joint production of public goods on a scale previously unseen – so the argument of Benkler (Benkler, 2002, 2006) – and a new culture of sharing, of which open source software, Wikipedia, and user-generated content sites are prime examples. The central argument of this section is that user-generated, web-based service platforms cannot be sufficiently explained without drawing on theories of collective action, and interestingly, web 2.0 technologies facilitate collective action in many ways. First, by making it possible for users to share their experiences and their knowledge with other users with a degree of simplicity and immediacy never seen before. Second, by bringing together large numbers of contributions from different contributors; in the aggregate, these numerous contributions provide more comprehensive, precise, and balanced user support than an individual professional advisor could provide. The web enables 'mass collaboration' of large numbers of users (Tapscott and Williams, 2006). And third, by providing free access to the web platforms that are open to everybody and where all contributions are publicly documented. The new service type which has evolved from these user-generated, web-based service platforms is a form of collaborative production with a highly specialized division of labor, and this enables new forms of co-production of services in which users exchange their knowledge and experiences and make them generally available on the web.

A central condition for mass participation of the users in our two examples is previous positive experience with this type of assistance from other users. Contributors feel they are doing something for others that is useful and socially approved. Social ties are formed online and roles emerge on the basis of shared interests, the presence of others on the web, and the shared everyday practices which are visible to all users

of the website. Membership in this web community is attained through making a contribution to the forum (unlike traditional communities, which require formal membership procedures). The desire to belong to the community is an incentive to contribute. At the same time, barriers to making a contribution are low and there is no obligation to remain involved over a long period. This makes it easier to participate. The better the mutual support among users, the greater the attractiveness of the community to new users.

3.1. Collective action in a web 2.0 user community

Collective action aims at the attainment of a shared goal. The actors who are interested in using a certain collective good are the ones who participate in collective action toward its achievement (Ostrom, 1990). User-generated content on the web can be seen as such a collective good. A prerequisite for collective action on user-generated web platforms is, again, a goal shared by the actors involved. The mutual exchange of experiences and knowledge among the users of Garmin devices is a joint action toward a shared goal, as is the exchange of travel experiences as seen at TripAdvisor. With web 2.0 technologies, this collective action by users can take place on a much broader basis than ever (Benkler, 2006).

According to a common assumption in the literature, actors act collectively when they can reasonably expect that other members of the community are also contributing to the shared goal; that is, when they feel that reciprocity is assured (Ostrom, 1990; Wiesenthal, 2000, 2006; Brint, 2001). Typically, however, collective action constellations are fraught with uncertainty as to whether the expectation of reciprocity is justified. This uncertainty about the behavior of others is what Ostrom refers to as the 'collective action dilemma' (Ostrom, 1990). In conventional communities, trust – and the lasting relationships that permit its formation – can help resolve the dilemma. But web communities differ fundamentally from conventional communities (Wittke and Hanekop, 2011): they are large, impersonal, and highly volatile, for which reason personal trust alone is insufficient for solving the collective action dilemma.⁶

But in web 2.0 user communities, the collective action dilemma is defused through the transparency and openness of the web platform: the behavior of others is visible and lasting documentation of contributions is provided. Successful web 2.0 platforms give users a feeling of community and of solidarity in working toward a shared goal. Moreover, most of the contributors to these platforms spend some time as 'inactive'

observers before actively participating in the production process (by making contributions). In other words, they profit from the collective action of others before they perform services for others. This is how the visibility of contributions from others can provide an incentive for contributing. Another feature of attractive platforms is that users see something big growing out of a mass of very small contributions that includes their own.

The other side of the coin, however, is another form of 'collective action dilemma,' which is usually discussed as the problem of 'critical mass' (Comino and Manenti, 2008, 2007; Prasarnphanich and Wagner, 2008). User-generated content requires many contributions from many users, but as long as there are only a few contributions, this kind of support service is not particularly attractive. The early stages, when only a few contributions are present, are marked by uncertainty as to whether the web platform will become a valuable product or will disappear – and with it, one's own contribution. A good web 2.0 user forum functions well only after the number of contributing users and contributions has reached a critical mass, because at this point, positive feedback effects typically cause the growth curve to climb exponentially. These effects help forums like TripAdvisor and the Garmin forum achieve steady growth. The intriguing question is: How do they attain this critical mass?

In her well-known study, 'The Governance of the Commons,' Elinor Ostrom (1990) used the example of the commons to show that collective action in large groups is promoted through collective self-organization. The self-organization of joint action, in which activities are organized by participants in accordance with collective goals, processes, and rules, is demonstrated to be an efficient form of coordination for collective action (in contrast to coordination through hierarchy). Subsequently, we want to show that Ostrom's principles of collective self-organization are transferable to user-generated web 2.0-based services.

3.2. Institutionalized rules and processes of self-organization

A condition of collective self-organization according to Ostrom is that the parties involved share collective goals and organize their activities in accordance with common rules, norms and practices. In other words, collective self-organization is based on the institutionalization of shared goals, processes, and rules for the production of collective goods. This implies the existence of an underlying idea about structure and rules for the collective good that are in the interests of, and are suitable for orientation of, the members of a user community (Ostrom, 1990; Raymond,

1999). In open source projects and at Wikipedia, such an idea comes from an initiator, who both proposes and begins the project. Because it is a collective project, the idea also addresses the collaboration process and the ways in which others can participate. It includes both a rough product design and rules for contributions.

Unlike Wikipedia and many open source projects, the rules governing contributions to the user-generated web platforms we examined are laid out by a company in its role of web platform operator. However, because the service offered is not produced by that company but rather by the users, it is important that the product idea, the design, and the rules for contributions are all accepted by these users. Sharing the goals and accepting the rules stated by the company is essential for voluntary and independent participation by users. Furthermore, it must be made clear just what can be contributed and how contributions are to be made, and a low threshold for contributing must be maintained because small contributions are just as important as larger ones.

Self-organization and autonomy promote the willingness to participate. But how can contributions of many autonomous contributors be coordinated in a way that a structured and useful good is created? With so many contributors deciding autonomously what to contribute, their sheer number and variety could lead to such confusion that it would be difficult or even impossible for users to find answers to their questions. We shall argue that collective self-organization of users requires specific coordination mechanisms that integrate contributions in a collaborative production process. This is facilitated by the orientation of the individual contributions along institutionalized rules and processes. The Garmin forum, for example, has rules that help maintain content-based structuring, such as the instruction to check for existing discussions on one's topic of interest before opening a new discussion thread on that topic. A similar rule is familiar from Wikipedia, where it is not permitted to publish a second article on a topic that already exists. These rules for content-based coordination are very important for the quality of the service offered by the platform. Other rules regulate the type and form of the contribution. Frequently, possible contribution types are implemented in the collaboration tools provided by the platform technology. In the Garmin forum, for example, this takes the form of threads; at TripAdvisor, of reviews. Clearly there are a number of ways to coordinate the contributions of autonomous co-producers. Which form is best for a given case depends on the object of the service provided and on the participating actors and their interests. Furthermore, processes and rules for user participation are the subject of arguments and negotiation

processes at practically all user-generated websites, whether among the users themselves or between the user community and the company involved. This is seen in discussions on the platforms and is reflected in modifications to the rules, which are usually part of the terms of use for the web platform. The Facebook social media platform recently provided a prominent example of such interactions and negotiation processes (Elkin-Koren, 2011).

The rules of collective self-organization extend to the tone of contributions as well, because irrational or insulting posts have the effect of discouraging or even deterring contributions and impair the feeling of community. Of course, not all users of such websites are polite, friendly, competent people. There are always the notorious egomaniacs, the complainers, the incompetent know-it-alls, and others who do not contribute anything to the purpose but regularly annoy others with personal, nonsensical, or otherwise irrelevant contributions. And there are the fighters, who have little to say about the topic under discussion but make up for it by saying a lot about the people discussing it in the form of personal insults or other provocations. Because these websites are basically open, this kind of thing always happens in some form or other. In this respect there are also rules which contributors are supposed to follow. Those who do not comply with the rules are given warnings and may in the end be excluded (see the rules mentioned above regulating the Garmin and TripAdvisor forums). The Garmin forum rules, for example, explicitly state that insults, slander, provocation, and sarcasm will not be tolerated.⁷

Our central argument in this section is that the coordination of the customers, who are working for other customers in the successful, user-generated, web-based service platforms we studied, takes place neither in pursuit of economic interests nor in accordance with hierarchical principles of planning, control, and company-dictated rules. Rather, there is a development of collective self-organization processes and rules that are accepted and shared by users and give them space for autonomous decision-making. The logic of the exchange among users is oriented around shared goals and production processes, as well as around collective rules, norms, and practices.

4. Firms as operators of user-generated web-based service platforms

As operators of the sites for user-generated, web-based services, firms play a role that is clearly distinguished from the conventional role of a

service provider. The operator role in our examples consists in offering opportunities for customers to advise or support other customers, rather than having the firm or a sub-contractor do this. Our thesis in this section is that the firms, as seen in our examples, do not follow their own logic exclusively but rather adapt themselves to the collective logic for the purpose of encouraging participation in co-production by customers for other customers.

Garmin and TripAdvisor succeed in attracting large numbers of user contributions because they make the interests of users in supporting one another the central point of the website. Furthermore, their production processes are organized to enable users' collective action, as well as autonomy and self-organization. The consequence of these features, however, is that they deviate from the conventional principles of production and the value-creation logic of firms.

Characteristic for both of our examples is that the division of labor is turned on its head: customers carry out the major part of the work, while the firms and their employees do a smaller part. In fact, a major part of the work is not only quantitatively shifted onto the customers. The quality of the service, in the sense of what type of service is actually being provided, changes as well. The special quality of the customer support service available at websites with user-generated content results from users sharing their knowledge and experience. The service is based on the particular knowledge and experiences of users. This quality of authenticity is lost if other motivating factors, such as monetary gain from the firm or market-driven relationships, influence the content written by users. As is seen clearly in the discussion at TripAdvisor, purchased contributions generally contradict the collective goals and expectations of the users. We posit that the attractiveness of the user community in the Garmin user forum or at TripAdvisor stems from the very fact that the user contributions do not arise from market-driven intervention or monetary incentives, but rather solely from the common interests of the user community. The collaboration of users follows the logic of collective action. But, paradoxically, it is the task of commercial firms to initiate and foster this collective behavior of customers, to organize processes and rules for the collective action of customers working for customers to produce a public good, in order to operate a successful web 2.0 platform (Wittke and Hanekop, 2011).

4.1. The operator and moderator role of firms

What do firms do as operators of user-generated web-platforms? As described above in our examples, Garmin and TripAdvisor implement

processes and define rules for user participation that are accepted by their users and contributors. Various processes and rules are adapted from the community-based practices of open source or open content projects. Firms also monitor the observance of these rules, and enforce them if need be. The latter is not trivial from the user's point of view, because this aspect of the firm's role could be abused to censor unwanted critical contributions (which would be entirely in line with conventional behavior of firms).

The firms in both examples are responsible for control and administration tasks, although they carry them out in different ways. Administrators are – insofar as can be detected – employees of the company. They check whether the contributions are relevant, serious, and in keeping with the rules. Administrators have a key position because they function on the one hand as representatives of the firm, while on the other hand they are a part of the online community and need the acceptance of the users. Garmin plays this role proactively, while TripAdvisor is more reticent; the activities of the latter are all but invisible. At TripAdvisor, there are no administrators or moderators who get involved personally or take part in discussions (whether there are any at all is, in fact, difficult to tell). In the Garmin forum, by contrast, each subforum is moderated, and the moderators take an active part in debates.

The critical point in the operator role is that the commercial interests of the firms might conflict with the interests of customers in the publication of a critical, unbiased user opinion. After all, the extensive and unbiased posts from customers actually are not the firms' objective, but are rather a means toward the goal of value creation. Thus firms might be accused of using their administrator role to censor user contributions, in which case a fundamental legitimacy problem arises. How the operator and moderator roles are played is thus a sensitive dimension in the success or failure of the platform.

4.2. Value creation strategies of the firms

User-generated content at the Garmin and TripAdvisor forums is a collective service provided by customers for customers. These voluntary, unremunerated contributions from customers cannot be directly marketed by firms. At the same time, the operation of a large, successful forum is no small expense for the firm. From the perspective of the firms it is important that such user forums be compatible with value-creation strategies in spite of their openness; in other words, the firm must have a value-creation strategy that does not require commodification of the user contributions.

The Garmin forum and TripAdvisor are examples of two different value-creation strategies, both of which are in widespread use. The Garmin user forum presents an additional support for their devices, available free of charge. The objective is the better marketing of the firm's own products. The use of these highly specialized, complex devices is demanding, in particular when used professionally or in sports. The advantage of the user forum lies in the high degree of specialization of the information offered in the device-specific forums, the collective expertise of masses of users, the opportunity to post questions, and the rapidity with which satisfactory solutions are interactively found. The strategic advantages for Garmin include the improved customer support, community-based marketing, and also the potential for development and improvement of products through following up on criticism and suggestions from users (open innovation in the sense of Chesbrough, 2003, 2006, 2011, and Piller et al., 2006, 2011).

By contrast, TripAdvisor is a commercial travel website with a value-creation strategy aimed at reaping advertising revenue. The majority of the advertisers on TripAdvisor are firms in the travel sector. The highly successful strategy of TripAdvisor is based on setting themselves up as an intermediary, independent of travel businesses, that presents content-based reviews while at the same time generating their revenues through advertising from those very businesses. From the user's point of view, it can be assumed that TripAdvisor's independence from the travel businesses reviewed probably enhances the credibility of the content offered. Interestingly, some – if not all – of the same people who write reviews on the TripAdvisor site are sure to be customers of the travel businesses that advertise on TripAdvisor. At the same time, TripAdvisor generates its income from advertising contracts with these very travel businesses. Balancing this contradiction is a tricky business, but also a highly attractive strategy for value creation based on advertising revenue.

5. Conclusions and outlook: A new type of service and a new mix of governance

The user-generated web-based services described in this chapter are, as we argued above, a new form of service. In traditional co-production scenarios, the company is dominant in producing the service, while in user-generated services the user is dominant with regard to both the extent of the service and the form of its content. This is due to the users' autonomy in deciding whether and what to contribute. In conventional

service relationships, customers are systematically involved in the production of the service, as co-producers. Here, however, the customer is integrated in a company-organized process of service production. In traditional co-production, the supplier–customer relationship is typically a one-to-one constellation. The individual customer is involved in the creation of his own service; it is a relationship of exchange and cooperation between the supplier on the one hand and an individual customer on the other.

User-generated web-based services, however, are created by the collaboration of a large number of users working for other users. Web 2.0 technologies are used to combine user-generated, open content production with the organization and marketing of services through a commercial supplier to create a new type of *collaborative co-production*. Self-organized, large-scale collaboration of users is combined with the principles of internal coordination (hierarchy) of production by firms, who are the operators of the web-based services platform. This combination is a new mix of different coordination mechanisms, and as such has a number of social prerequisites.

5.1. Governance of user-generated, web-based service platforms

On the one hand, the coordination mechanisms of large-scale user collaboration are oriented around the principles of collective action within a user-community. User-generated, web-based services are public goods; no one is excluded from using them. The participation of a large number of users and contributors is essential for the quality – and thus the value – of these platforms. The willingness of large numbers of users to actively participate is closely connected to their expectation of reciprocity. The creation of these services is self-organized by the users, while the norms and rules that guide the service creation are quite similar to those of open source software production or Wikipedia. On the other hand, commercial firms provide the infrastructure for these user-generated services. Not only the operation of the web platforms, but also the establishment and maintenance of their structure are tasks of the firm, which, of course, is pursuing its own commercial value-creation interests.

Characteristic for this specific production model, which we have termed 'collaborative' (Wittke and Hanekop, 2011), is that the creative context of the production process is not the company but rather the community of users who are producing the services. Thus the creative context is external to the firm, outside its logic of planning, instruction, and control. Our study of the Garmin user forum and TripAdvisor shows

that the firms do not attempt to apply company principles to the contributing users and customers; instead they adapt the mechanisms and rules from community-organized projects.

This is a decisive condition for success, because hierarchical coordination mechanisms are not effective in collaborative action constellations. They either remain without effect, due to user resistance, or they block the development of collective action and collective coordination mechanisms. Coordination mechanisms are specific to certain social action and creative contexts. They are not interchangeable, neither are they transferable (without risk) to another social creative context.

Our analysis of the social context of the content creation in the Garmin forum and at TripAdvisor shows patterns of collective action and orientation among the contributing users. The coordination of the many parties involved takes place in transparent, IT-based processes on the web. This enables collective action on a new level, with a large number of participants, far-reaching individual autonomy and with a highly specialized division of labor. They are oriented around the rules, norms, and practices of the user community. These coordination mechanisms have a strong similarity with the mechanisms of collective self-organization in the commons as explored by Ostrom (1990).

In the cases examined here, typical market-driven relationships are irrelevant, and monetary compensation is, as far as can be detected, performed only selectively, carefully, and in limited fashion. However, the boundaries between the user community and the company workforce seem to be quite fluid. This seems to be a mechanism of interconnection in mixed governance forms that calls for more intensive investigation. Our conjecture is that the role of the actors in this area cannot be satisfactorily described in the conventional terms of hierarchical or market-driven relationships. Obviously, the coordination mechanisms in web 2.0 communities also differ fundamentally from those in conventional communities, which are based on lasting personal relationships, stable memberships, and personal trust.

In the user-generated, web-based service platforms examined here as representing a new type of service in web 2.0, we find a link between the collective logic of the user communities and the hierarchical logic of companies. Typically, the producer role is displaced onto the customers and the firm's role is reduced to that of website operator. Our examples show that a company's role can vary in accordance with different business concepts, just as the involvement of Garmin, a manufacturer, differs from that of TripAdvisor, an intermediary. The value-creation

strategies vary as well, although in both cases the user contributions are publicly available.

The fact that the firms establish rules and processes through which collective action among users is initiated and maintained is both characteristic of the firms' role as operators and a basic condition for the success of this form of mixed governance. The specific mix of governance forms relies not on a disconnected, parallel coexistence, but precisely on the mutual acceptance, and even joint adaptation, of each others' mechanisms. The more far-reaching the displacement of production work onto customers, the more far-reaching the need for each side to adapt or accept the rules of the other. From the firms' perspective, web-based organization of the users' production processes fits in with the role of the firm as platform operator because many technical aspects of these abstract, rule-guided processes are to a large extent standardized and automated.

5.2. Social prerequisites for mixed governance

Our concluding argument holds that this combination of different coordination forms has its own social prerequisites and that these prerequisites have not yet received the full attention they merit, neither from scientific observers nor from many of the participating firms. To illustrate the underlying problem, we refer to articles on the coordination of economic and social action by Marc Granovetter (1985) and Helmut Wiesenthal (2000).

We can adapt Helmut Wiesenthal's idea that a mix of different coordination mechanisms does not necessarily pose a governance problem. In his article on the systematization of different forms of social coordination, he argues that the mix of coordination mechanisms is not unusual; rather, empirically observable coordination *methods* are generally composed of a mix of the three basic different coordination *mechanisms* of market, organization (or hierarchy), and community (Wiesenthal, 2000). In fact, the very combination of the different coordination mechanisms tends to make mixed governance more robust than monostructures, because each contributes its specific strengths while compensating for the weaknesses of the other. Whether this actually takes place and which mixture of capabilities is best are empirical questions; the 'right' answer depends on the specific characteristics of each case. We can also learn from Wiesenthal's deliberations that mixed governance methods are not only possible but, empirically speaking, represent more the rule than the exception.

In our efforts to define the specific social prerequisites for coordinating user-generated services, we also refer to the work of Marc Granovetter, who argues in his oft-quoted essay on social embedding of economic action (Granovetter, 1985) that genuine market coordination functions because it is embedded in social norms and rules. This embeddedness engenders the trust necessary for the market exchange because neither side acts opportunistically. When these ideas are combined with those of Wiesenthal we arrive at precisely the particular social prerequisites that apply to the coordination of user generated services.

To ensure the success of the specific mix of coordination mechanisms on user-generated, web-based service platforms, it is important that the activities of the firms are embedded in social norms and rules. Those rules are binding for all actors participating on user-generated platforms, both for the actors within the company and for those in the user community. The observance of the rules and the transparency of the processes promote mutual trust among the actors participating in the distributed creation of the services.

On both sides, trust applies not only to the assumption that other actors with the *same* coordination forms do not act opportunistically (as in Granovetter), but also that they observe specific norms and rules even though their actions are coordinated in a *different* manner (Wiesenthal).

We argue that user-generated, web-based service platforms function successfully only to the extent that users and firms alike accept the institutionalized rules and to the extent that they accept that the actors on the other side follow the logic of that side. Users who help other users with their contributions on these platforms accept that firms pursue commercial value-creation interests. At the same time the users expect that the value-creation of the platform operator does not violate the rules and norms essential for the participation and large-scale collaboration of the users (for example, deletion of critical contributions). Our assumption is that the users accept the value-creation interests as long as they do not denigrate the quality and usefulness of the service platform. Participating companies, on the other hand, accept the principles of self-organization that are followed in large-scale collaboration among users. In this context, they also accept the fact that the users' support for one another includes critical contributions and that they have no influence over the content of the criticism. We surmise that the firms accept these principles precisely because the visible acceptance of critical contributions is a prerequisite for the quality of the platform in the

perception of the user. Furthermore, the firms trust the users who help other users to supply honest and applicable contributions, thus ensuring that the content of the service is reliable – another aspect for which there is no guarantee. They accept these principles because without them, it would be difficult to attract large numbers of active users, and having large numbers of contributors is essential for the success of the platform and consequently for achieving the firms' value-creation goals.

This mutual trust, with each side expecting the other to observe relevant norms and rules, is a fragile resource, for presently, unlike the cases to which Granovetter refers, the newness of this phenomenon of user-generated services means that the basis of experience, which is where actors find evidence that their trust is justified, is still relatively small.

Notes

1. Forum Rule no 1 (Forumsregel 1) on <https://forum.garmin.de/showthread.php?1591-Forumregeln-wurden-erg%E4nzt>, retrieved on August 16, 2012.
2. <https://forum.garmin.de/misc.php?do=showrules>, retrieved on August 24, 2012.
3. http://www.tripadvisor.de/presscenter-c5-our_team.html, retrieved on August 25, 2012.
4. http://www.tripadvisor.de/pages/about_us.html, retrieved on October 10, 2012.
5. It seems likely that this would conflict with the independence that TripAdvisor is expected to have from the travel businesses.
6. For more on how the establishment of trust can be supported on the web, see Josang, 2011.
7. <https://forum.garmin.de/showthread.php?1591-Forumregeln-wurden-erg%E4nzt>; retrieved on August 20, 2012.

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11

Prosumption of Social Context in Web 2.0: Theoretical Implications for the Prosumer Concept

Tabea Beyreuther, Christian Eismann, Sabine Hornung, and Frank Kleemann

In his 1980 book *The Third Wave*, Alvin Toffler introduced the concept of the 'prosumer.' The portmanteau word describes the increasingly common fusion of consumer and production roles in advanced industrial societies. Whereas the traditional forms of agricultural and industrial production dictate a strict division between those who produce and those who consume, in advanced service-based economies (Vargo and Lusch, 2004), consumers often consume goods and services that they themselves produced in whole or in part. The notion is often related to the do-it-yourself culture or the 'invisible economy,' and it covers a vast array of activities ranging from furniture assembly, to blood pressure self-monitoring, to participation in self-help groups.

The Internet has extended the frontiers of prosuming. A large number of individuals worldwide now have access to instant communications through the world wide web. The dramatic increase of Internet-ready mobile devices and the widespread use of wi-fi networks has ushered in the age of ubiquitous computing. This decoupling from the dimensions of space and time (Giddens, 1990) boosts the importance of the Internet as a space of prosumption. We argue, however, that the most significant new developments in prosuming are not being driven by the hardware alone. They arise instead from the fact that the new density of Internet coverage, coupled with new software applications and habits of communicative interaction known as 'web 2.0,' have brought social factors into play.

Kaplan and Haenlein (2010: 61) characterize web 2.0 such that 'content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a

Customers at Work is about the ongoing transformation of service relationships, focusing on the incorporation of the customer's active contribution to virtually all aspects and stages of the production process. This volume illuminates social relations between customers and service providers as they interact in any kind of service relationship. It presents sociological approaches that provide new insights into the debates about service proletariat and internet-based knowledge work. Recent research on service interaction, informed by the German sociology of work tradition, highlights profound changes in service relationships that will shape the quality of future service work. The authors of this volume bring together many of these recent core findings and offer them in a combination of theoretical exploration and empirical analysis to an international audience for the first time.

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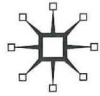
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Edited by Wolfgang Dunkel
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Customers at Work

New Perspectives on
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