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The influence of User Involvement and Community Management on Online Behavior: the case of a digital newspaper community

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1 – Introduction

«The job of a Publisher is to monetize people's attention», said Stefano Quintarelli, the head of the Area Digital at Il Sole 24 ORE, during the first meeting with his new team. His words are particularly true if we are talking about the newspapers' industry in the middle of the digital revolution. In this industry the revenues streams are moving from the paper to the bit, from the hard copies to the several digital appearances of the informational content. Indeed, the value remains linked to the original content, the selected valuable piece of information that is able to generate people's interest and involvement. In this new and still evolving scenario the competition is tough and the war for obtaining and maintaining customers uses different weapons for different kind of prey. It' a fight not only to find new customers, but also to empower and make them more involved with the product. In fact, having involved customers implies the generation of value for the company, both because of the more attractiveness for advertisers and for the higher conversion rate of visits into desired actions, such as those required for the effectiveness of promotional activities. Indeed, thanks to the diffusion of web social technologies consumers became also producers of digital contents, fostering a virtuous cycle in which people get the things they need from each other, rather than from the companies, creating the trend called "*groundswell*". Managers have to deal with it and a common corporate response is the introduction of a virtual community management team. But what's the right way to do it? How is it possible to influence and take advantage of user's online behavior?

The present research focuses on the connection between a digital newspaper and its group of online consumers, considered as a product-related virtual community. Firstly it is applied a tool suggested in literature as a way to understand how customers use the Internet, with

the aim to find possible initial hints about how to take advantage of the groundswell trend in the case of a digital newspaper. Then, the core of the research is developed by introducing a model assessing the influence of user involvement with the product on user's online behavior, distinguishing between active and passive use of social technologies . It is eventually given a special attention to the effect of community management practices, looking at the born of a virtual community management team and measuring its impact on the observed variables.

Community management at Il Sole 24 ORE

The research period covers a time lag of six month during which the author was collaborating with the Area Digital at Il Sole 24 ORE. More in detail, it is considered the specific product www.ilsole24ore.com, a business-related digital newspaper. The observation begins from a starting point where there were only the basic elements of a community: with the registration to the website, the readers were allowed to comment almost all the articles published online by journalists, in a forum-like interaction. The company was intentioned to invest in the creation of a well defined community management activity, offering in this way a good occasion for this research's purposes. The research design was developed by using the digital newspaper www.ilsole24ore.com as an exploratory case, using it as the object of the product involvement measures and its virtual community as the basis from which gleaning the sample for the study. In this way, it was possible to draw additional significant conclusions about the strategic decision to introduce a virtual community management team and about its role in influencing user involvement and online behavior. Moreover, internal analytics instruments developed by the company suggested additional considerations.

2 – Theoretical Background

The sources of profit for a digital newspaper are traditionally linked to consumers' passive behavior: users are considered to generate value when they see a banner, watch a commercial, or listen to an advertising jingle; when they download a content through a pay-for-download solution; when they renew a subscription; and so on. For this reason marketing managers often use indicators such as "page views", "unique visitors", and "click-through rate". However, commercial success in the online area was proved to belongs to those businesses that organize virtual communities (Hagel and Armstrong, 1997), taking advantage of the consumers active use of web-based social technologies. Companies are facing the issue by introducing a professional often called "community manager", a label that defines a role having reference to those of a virtual community management team (Rosenkranz and Feddersen, 2010). This is true also for what concerns digital newspapers, where the community manager interacts with marketing and IT people, often working with self-made tools and analytics, in a field largely unexplored by management scholars. The objective of a community manager is not only to avoid to be overcrowded by the groundswell trend, but to understand and take advantage of it. Indeed, a theoretical framework able to support his purposes is still ill-defined.

In this chapter the theoretical background related to these themes, which are the basis of the present research, is outlined. Firstly, there is an overview on the relevant literature about the newspaper industry. Secondly, it is introduced the theme of user involvement with the product as an indicator related to the user's value for the company. Then, there is a review of the literature about the user online behavior, distinguishing between active and passive use of social technologies. Finally, it is presented the topic of virtual community management.

2.1 – Newspapers in the digital era

Once upon a time there was the paper, and any piece of information had to be printed on it. But since Gutenberg's invention a lot of things changed and, especially in the last decades, the new economics of information deconstructed the traditional publishing industry leading to the separation of the content/information from the physical support/things (Evans and Wurster, 1999). Fostered by the diffusion of the Internet and by digital technologies, the advent of several devices made to enjoy digital contents – eg. e-readers, tablets, and smart phones – amplified this revolution disrupting the industry and changing the winning business models. The "long tail" effect (Anderson, 2006) moved the attention from the distribution of best-seller contents to that of niche contents, bypassing the traditional distribution channels. Even though through different models, attaining a user mass is still critical, and the largest barrier to reach it is the consumer acceptance of currently available technology (Shaver and Shaver, 2003). However this acceptance will happen sooner or later, publishers are experimenting new ways to obtain revenue streams. If we take into consideration a specific and dynamic sector of the publishing industry, that of newspapers, the mentioned transformation implies the necessity to convey the same informational content trough new technological supports which have in common the Internet as distribution channel: mainly the online website, the downloadable digital version, iPad Applications, mobile websites, and so on. In fact, despite the fear of a negative effect of the contents diffusion through the Internet, it was proven that the supposed cannibalizing effect is largely overstated, especially in cases where the newly established Internet channel doesn't mimic too closely the old channels (Deleersnyder et al., 2002).

The umpteenth disruptive innovation impacting on the digital newspapers is the so called "web 2.0", a label that is used in allusion to a

new web, considered as a platform, where users themselves create contents and interact among each other[2]. Following the already mentioned "long tail" distribution (Anderson, 2006), the majority of the contents available online are not produced by few big players, but by a huge number of single users. The so called user-generated contents[3] became an important source of information and companies operating online cannot avoid dealing with it. Further considerations about how this trend is related to online behavior and to the use of social technologies within the phenomenon called "the groundswell" are developed in paragraph 2.3.

2.2 – Measuring involvement

Involvement with products has been hypothesized to lead to greater perception of attribute differences, perception of greater product importance, and greater commitment to brand choice (Howard and Sheth, 1969). In this sense, involvement with a digital product, such as a newspaper's website, leads to more valuable consumers for the company: they are committed to the brand, they perceive the digital product as more important and spend more time with it, and so they are more valuable also for advertisers. In the literature about the topic, involvement has been measured by adopting Likert scales based on statements such as "the product means a lot to me", "it matters to me", or "the product is important to me" (Lastovicka and Gardner 1978; Traylor 1981). Zaichkowsky (1985) developed a standardized, general, valid, and

[2] The label "web 2.0" comes from a conference organized by the publisher Tim O'Reilly in 2004 (see http://oreilly.com/web2/archive/what-is-web-20.html). As the Encyclopedia Britannica says, « *an exact definition of Web 2.0 continues to prove rather elusive, in part because the concept encompasses different goals and expectations for the future of the Internet and of electronic publishing in general*» (http://www.britannica.com/EBchecked/topic/1192837/Web-20).

[3] For more information about what is considered to be a User-generated content check the Oecd report "*Partecipative Web: User-Created Content*" by the Working Party on the Information Economy (http://www.oecd.org/dataoecd/57/14/38393115.pdf)

multiple-item measure of involvement called Personal Involvement Inventory (PII). The PII is a bipolar adjective scale composed by 20 pairs of terms, selected in a way that the scores are positively related to perceived differences among products, product preferences, and comparison of product attributes among brands. In contrast with the Consumer Involvement Profile (Laurent and Kapferer, 1985), which measures the antecedents of involvement as a stable trait, the PII measures the motivational state of involvement, since the antecedents may cause the involvement to change. Its validity has been tested with three different product categories (instant coffee, laundry detergent, color television) by the original study, then extended with advertisement and reduced to a 10-item scale (Zaichkowsky, 1995). Both the original and the reduced version of the PII has been widely used in literature testing it with several product categories and fields – eg. involvement with sport (Lascu et al., 1995), involvement with services (Celuch et al., 1999) – and it has been applied also in the marketing field as a tool to identify involved consumers for managerial purposes (Flynn and Goldsmith, 1993).

2.3 – Online social technologies and behavior

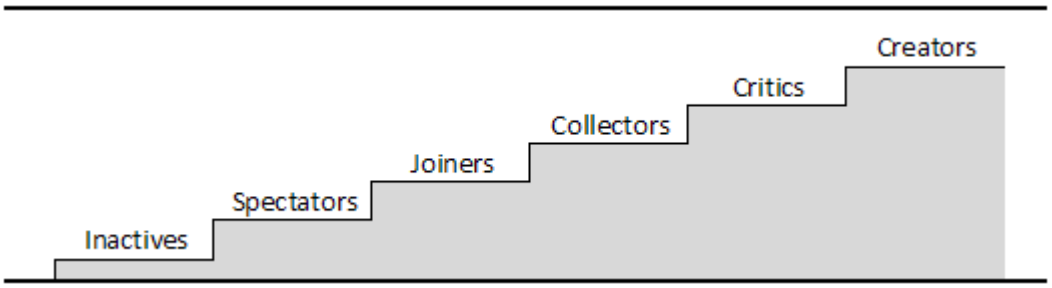
The relationship between the consumers of an online digital product and their involvement with it becomes especially relevant if we consider the ongoing trend called *the groundswell*. In the book "G*roundswell: winning in a world transformed by social technologies*" the groundswell is defined as «*A social trend in which people use technologies to get the things they need from each other, rather than from traditional institutions like corporations*»[4]. A trend coming out from the interaction of three elements: people's desire to connect, new interactive technologies and online economics. To deal with this trend from a managerial point of view it is necessary to consider the specificities and differences of the people participating in – and so creating – the groundswell. The authors of the

[4] Li and Bernoof (2008), page 9.

mentioned book, Charlene Li and Josh Bernoof from the Forrester Research Inc., introduced the concept of Social Technographics Profile (STP), a tool made for the managers willing to turn the power of the groundswell to their advantage. The participants to the groundswell are not all alike; they can be divided into different groups requiring different strategies. The STP is a tool that allows the segmentation of the Internet users into clusters of people, each one with distinctive characteristics. Those clusters are graphically visualized in the Social Technographics Ladder.

Figure 1 – Social Technographics Ladder

Each step on the ladder represents a group of consumers more involved in the groundswell then the previous



Source: Li and Bernoof (2008), page 43

The *Creators* are Web users accustomed to publish blogs or web pages, upload self-created video and music, and post original articles or stories. The *Critics*, instead of producing completely new contents, tend to react to other content online, by posting ratings/reviews of products or services, commenting someone else's blogs, contributing to forums, editing wiki pages. The *Collectors* are those who most use RSS feeds, tag pages and contents, and rate, "thumbs up" or vote for websites and digital items. The *Joiners* approach the Internet through social networking; they maintain personal profiles on websites and visit Social Networks. All the groups mentioned until now are thus referring to an active behavior, characterized by an active use of social technologies. In opposition to this active use, it is also possible a passive use of social technologies: those

made by the *Spectators* who are people that read blogs, watch videos, listen to podcasts, read online forums and others' rating/reviews, all without contributing to contents creation and definition. Finally, there is also the residual group of the *Inactives*, made of the internet users who are not really involved in any of the activities listed before. Since people can perform several groundswell activities, the Social Technographics groups overlap – for example, most Creators are also Spectators[5]. However, it is possible to estimate the degree of affinity with each group for every user.

The distinction between an active and a passive use of social technologies is suggested by Pagani, Hofacker, and Goldsmith (2011). In their study, it is pointed out how the value created by the users themselves is part of a virtuous circle, in which for joining and browsing a website users should find valuable contents, while in order to produce contents they need to feel that other users consume them. Therefore, managers should distinguish between, on the one hand, joining and browsing social networking sites and, on the other hand, actively contributing to them. In their study, Pagani et al. measured active and passive use with an adaptation of the scale proposed by Shim, Lee, and Park (2008), a scale that include the list of activities made possible by social technologies. For this reason, considered what have been previously said about the Social Technographics profile, it is not surprising that there are several similarities in the scales used by Forrester and those used by Pagani et. al in order to measure a behavioral attitude in the use of social technologies by internet users.

2.4 – Virtual community management

The rising interest in the theme of virtual community (VC) management could be linked to the diffusion of a study claiming that

[5] Li and Bernoof (2008), page 41

online commercial success belongs to those businesses that organize virtual communities (Hagel and Armstrong, 1997). Some elaboration about the creation of VCs pointed out that several different perspective could be taken while measuring the success of a VC, with regard for different stakeholders (Leimeister et. al, 2006). Indeed, the lack of a codification of the themes related to rules and practices leading to a successful virtual community has been pointed out by several authors (Allen et. al, 2005). Still, even more recently there was a call for the development of frameworks and rigorous theories necessaries both for researchers and practitioners as guidelines to understand and manage VCs (Dannecker et al., 2007). More than one definition was developed about virtual online communities (Rheingold, 1993; Preece, 2000). However, the majority of the researches dealing with the theme of people's communities does not focus on online behavior, but looks at social interactions among a group of people from a more anthropological and sociological perspective (Wenger et al. 2002; Cohendet et al. 2004; Li, 2004; Lee et al. 2003).

For the sake of the present research it is used the definition given by Rosenkranz and Feddersen (2010), that consider VC management teams as «teams [that] organize all administrative tasks in a VC and supply a technical and organizational framework for interaction and communication. The framework is controlled by the VC management team and focuses on supporting the VC and its members»[6]. This definition is considered to be flexible since it takes into account both commercial and non-commercial VCs. Indeed, it becomes especially useful since it is designed with the purpose to support an exploratory research, exactly with the aim to analyze how management teams affect virtual communities.

[6] Rosenkranz and Feddersen (2010), page 6.

3 – Theoretical Development

This research investigates the themes of user involvement with a product, online behavior, and virtual community management, in relation to a digital newspaper community. The literature about these topics considered one by one is quite rich. Yet, mainly because of the relatively newness of the interactive technologies and the fast evolving situation of the groundswell trend, it is not possible to find in literature any contribution about the interrelation of them. The present investigation wants to fill the gap between the existing research on the use of social technologies and online behavior within the "groundswell" trend and those about product involvement, in order to provide some useful findings for practitioners and to possibly suggest new enlightening research directions. The focus is on the newspaper industry, and a special attention is given to the building of a virtual community management team and to its influence on user involvement and online behavior.

3.1 – Involvement and online behavior

The Social Technographics Profile (STP) is a tool that marketers should use before building a strategy, since understanding how customers uses the social technologies is a prerequisite to define how to interact with them, how to "*tap the groundswell"*. Yet, beside the classification of the customers into groups in order to understand the right use of social technology, the STP doesn't say anything about the involvement with the product of the costumers composing a group. Moreover, the analytical tools used in the industry focus the attention on a passive use of internet technologies, since the revenue streams are directly linked to passive behaviors such as browsing web pages and downloading files. In this way the potentiality of the groundswell, highlighted in the literature review, are ignored for what concerns all the active use and the interactive dimension

of social technologies. What is hypnotized by the author is that a greater involvement with a digital newspaper –which is a product swamped by the groundswell phenomenon – is related both to an active and a passive use of social technologies. Therefore:

$H1_a$: Involvement with a digital newspaper is positively associated with an active use of social technologies (the equivalent of being Joiners, Collectors, Critics, or Creators)

$H1_b$: Involvement with a digital newspaper is positively associated with a passive use of social technologies (the equivalent of being Spectators)

On the one hand, the validation of H1b would allow the finding of a link between the involvement with a digital newspaper and a behavior that has a direct impact on profits. In fact, it has already been said that browsing websites, reading blogs, watching videos, and so on are all activities targeted by advertising or subject to payments solutions. On the other hand, the positive association between the involvement and an active use of social technologies on the web can suggest some useful indication for management in order to implement the right technological solutions, even though it doesn't give any idea about the advisability of investments in this direction.

3.2 – Association between active and passive use

Given the importance of having involved consumers, and the potentiality and pervasiveness of social technology, the first two hypotheses investigate the influence of user involvement with the product on online behavior. Could it be that the level of involvement with a digital newspaper is related to an active use of social technologies? And, if it is the case, is it possible to leverage on this relationship in order to have an impact also on passive use? Following these questions, a second

hypothesis is that a higher active use of social technologies corresponds also to a higher passive use:

H2: Active use and passive use of social technologies are positively associated

Therefore, even though the active use of social technologies is not directly related to the generation of revenues for a digital newspaper that decides to invest in it, the validation of this hypothesis would give useful hints. If the users more likely to behave as Joiners, Collectors, Critics, or Creators tend also to behave passively as Spectators, it would mean that the implementation of strategies aimed to satisfy, increase and retain customers who are prone to do an active use of social technologies have an impact also on the side of passive use. That is to say, a possible positive association between an active use and a passive use of social technologies by customers would be an incentive to invest in the implementation and management of "2.0" technologies, since a more active use of them would also mean an higher passive enjoyment of digital contents, that is the behavior influencing revenue incomes.

3.3 – The impact of community management

For a digital newspaper, the integration with social networks and other "2.0" services and the adoption of social technologies is considered as a must. Indeed, it is a common believe that the practice of virtual community management gives some kind of benefit to the company, at least in terms of going along with users' wishes to share contents within their social networks, and increase the diffusion of the newspaper's contents. The range of benefits is probably wider and more defined, but beside internal empirical investigations there aren't scientific publications with clear results about it. Leveraging on the findings about costumers involvement with the product and the associations with an active and

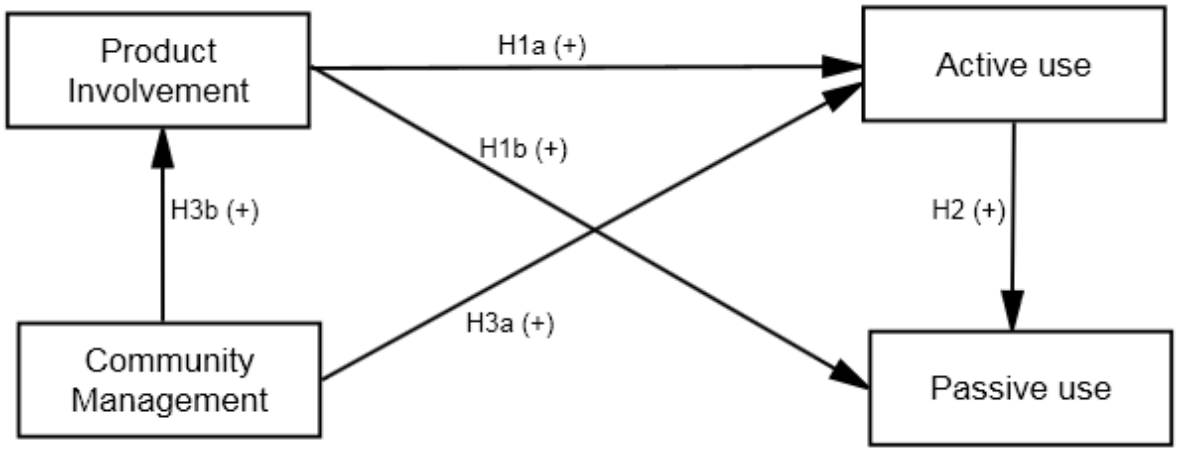
passive use of social technologies, this research wants also to analyze the possible influence of community management practices on the studied variables. Therefore:

$H3_a$: The implementation of virtual community management practices within a digital newspaper is positively associated with an active use of social technologies by its users

$H3_b$: The implementation of virtual community management practices within a digital newspaper is positively associated with costumer's involvement with it

In opposition to the two former hypotheses, this one has a theoretical complication. In fact, while the involvement with the product and the user online behavior are two dimensions deepened in literature and with validated ways to be measured, virtual community management is still an ill-defined concept. Since the activities performed by virtual community management teams are included in the organization of all administrative tasks and the supply of a technical and organizational framework for interaction and communication, in order to support the virtual community and its members (Rosenkranz and Feddersen, 2010), the idea is to put the respondents through two situations: the first one in which interaction and communication among the member of the communities is present but not organized in a clear framework; the second one after a conspicuous supply of new technical and organizational solutions in support to the community members, and where a community management team is clearly identified. This complication led to the decision to exclude the analysis of the impact of community management practices from the structured equation model exposed afterwards, even though a straight focus was maintained on it. Details about how the analysis of the born of a virtual community management team – and of its influence on user involvement and online behavior – was developed in the research design are exposed in the methodology chapter.

Figure 2 – Theoretical development



4 – Methodology

The main part of the research is based on the data gathered with a questionnaire. Starting from the methods suggested in literature, the questionnaire investigates the online behavior of the interviewee, pointing out the distinction between active and passive use of social technologies. Moreover, it introduces the product ilsole24ore.com, the online version of a business-related newspaper, and measures the involvement of the interviewee with it, plus some other characteristic such as awareness and usage of specific features of the product. Finally, some socio-demographic characteristics, necessary to improve the quality of the research and to increase its external validity, are detected. Beside the questionnaire, some additional qualitative and quantitative data have been collected in order to give a better interpretation of the research design. As mentioned in the theoretical development, in order to validate the third hypothesis, two different situations divided by time lag had to be compared. Therefore, the

research was divided into three temporal moments: the assessment of the initial situation and the administration of the first questionnaire; the born of the virtual community management team and implementation of its activities; the administration of the second questionnaire. In the following paragraphs the methods used to collect and analyze these data are exposed.

4.1 – Research design and measures

The investigation of the research questions was planned to be done through the submission of a questionnaire. For what concerns the user involvement with the product, it has been measured by applying the Zaichkowsky's 20-item Personal Involvement Inventory, translated in Italian[7]. Since any item of the PII is rated on a Likert 1-to-7 scale, the total expected rating could range from a minimum of 20 to a maximum of 140 for each respondent. The 50 percent of observations around the median was intended to be considered as people with medium involvement with the product, the top 25 percent people with high involvement, and the bottom 25 percent people with low involvement. This classification has been used only for descriptive purposes, since for the data analysis it was considered, instead, the numerical value. Some of the bipolar adjective pairs were reversed – some with the adjective meaning high involvement on the right and low involvement on the left, and some vice versa – in order to avoid distortions and keep alive the respondent's attention. The twenty items were introduced by the question "*Thinking at the digital newspaper ilsole24ore.com, do you believe that it is:".* The interviewees were asked to answer quickly, following their first impression, and to consider any pair of adjective one independently from each other.

[7] See "Attacment A - The Italian translation of the 20-items Personal Involvement Inventory used for the questionnaire"

Otherwise, the behavioral approach to the use of social technologies was measured using an adaptation of Forrester's Social Technographics Profile. The definition says that, to join a group of the STP, a consumer needs only to participate in one of the related activities at least monthly[8]. The list of activity proposed in literature has been adapted to the nowadays scenario of the Internet in Italy. More in specific, the following modifications to the original Social Technographics ladder[9] were done:

- Spectators: the activities "Read blogs", "Read online forums", and "Read costumer ratings/reviews" were grouped in the single activity "Read forums, blogs, comments and reviews"
- Joiners: the activity "Visit social networking sites" was modified in "Visit a social network (Facebook, Twitter, etc.)" in order to be more clear with an Italian respondent. The activity "Maintain profile on a social networking site" were substituted by the two activities "Update your profile on a social network" and "Create a personal user profile on a website".
- Collectors: the original activity "Vote for Web sites online" was modified in "Vote or Like/Dig/+1 etc". This modification was intended to adapt the concept of Collector's behavioral attitude to the new social technologies' scenario, which is characterized by the presence of some big player whose social rating tools are integrated with third parties online contents.
- Critics: the activities "Comment on someone else's blog" and "Contribute to online forums" were merged in the activity "Comment on blogs, articles, or forums". The sentence "Contribute to/edit articles in a wiki" was rephrased as "Collaborate to a wiki page".

[8] Li (2008), page 43

[9] The original Social Technographics ladder is in the "Attachment B".

- Creators: the original activities were completely re-adapted resulting in "Write articles or posts", "Create contents for your own blog or website", and "Create and upload videos or music".

For each of the five main groups of internet users defined by the STP – Creators, Critics, Collectors, Joiners, Spectators – a bunch of three significant items has been selected (see Table 1 – "Groups and corresponding activities"). In the questionnaire the activities were listed after being introduced by the question "*How often do you do the following activities on the Internet?",* and with the possibility to answer on a Likert scale from 1 (never) to 7 (every day).

Table 1 – Groups and corresponding activities

Group	Activities
Spectators	• Read forums, blogs, comments and reviews • Download podcasts • Watch other usres' videos
Joiners	• Visit a social network (Facebook, Twitter, etc) • Update your profile on a social network • Create a personal user profile on a website
Collectors	• Reed RSS feeds • Tag pages or photos • Vote or "Like"/Digg/+1 etc.
Critics	• Collaborate to a wiki page • Comment on blogs, articles or forums • Rate or write reviews for products or services
Creators	• Write articles or posts • Create contents for yout on blog or website • Create and upload videos or music

Source: author's elaboration starting from Li (2008)

Before the first inquiry, from March until June 2011, the starting situation of the website ilsole24ore.com has been analyzed in detail and some analytics was instrumented. More precisely, it was developed a toolbox able to: find the ratio "number of comments"/"unique visitors"; analyze the distribution of comments along the time (hours, days, weeks,

months); check the distribution of comments per category (economics, law, finance, sport, etc); query the system to find comments by specific nickname or containing specific words. Other than these quantitative data, during the six-month period of the analysis all the incoming user generated contents were carefully red, obtaining qualitative insights useful to orientate and support the research. Both the just mentioned quantitative and qualitative elements were taken into consideration before, during, and after the implementation of the virtual community management practices. Indeed, during the period before the lunch of the first questionnaire, it was internally developed by the newborn virtual community management team, a list of action to be developed: a first part to be used as an initial test, all the others for the future investments in the community, in case of positive results. The design and implementation of these virtual community management practices has to be considered as an external variable, an occasion used to deepen the current research. The researcher's role is not that of defining and implementing the mentioned community management practices, but simply that of comparing two different situations and trying to identify possible effect on the studied phenomenon – that of the potential influence of user involvement with a digital product on active and passive use of social technologies. To verify whether a virtual community management team was actually born, it was used the definition proposed by Rosenkranz and Feddersen (2010), that is the identification of a group of people in charge of: the organization of all administrative tasks; the supply of a technical and organizational framework for interaction and communication; the support of the virtual community and its members.

To sum up the analyzed constructs and the related scale items, consider the Table 2 in the following page.

Table 2 – Scale items

Construct	Scale Items	Source
User Invovlement	Bipolar adjective scale (Likert 1-7): I1. Of no concern / Of concern to me I2. Irrelevant / Relevant I3. Means nothing to me / Means a lot to me I4. Useless / Useful I5. Trivial / Fundamental I6. Doesn't matter to me / Matters to me I7. Uniterested / Interested I8. Insignificant / Significant I9. Superfluous / Vital I10. Boring / Interesting I11. Not needed / Needed	Adapted from Zaichkowsky, J. L. (1985)
Active Use	AU1. Creator: produce original multimedia contents. AU2. Critic: react to contents made by others. AU3. Collector: tag, vote, and collect other's contents. AU4. Joiner: register to and visit social networks.	Adapted from Li, C. (2008)
Passive Use	PU1. Spectator: browse or download contents.	
Community Management	Presence/absence of a team in charge of: CM1. Organization of all administrative tasks. CM2. Support the virtual community and its members. CM3. Supply of a technical and organizational framework for interaction and communication.	Rosenkranz and Feddersen (2010)

4.2 – Sample and data collection

The sample was intended to approximately reflect the average audience of a digital newspaper, even though without the pretence to be representative of the real population. An initial filter was imposed by making an online survey: only people used to surf the internet where able to submit it. The survey was built with a specific online service and accessible through a public web link. Since the digital newspaper used for the research is Italian, and all its users are of necessity Italian speakers, also the questionnaire was submitted in Italian. The link to the survey was initially shed around the web leveraging on the author's personal network of acquaintances. It was indeed posted on Facebook, Twitter, Google+, and FriendFeed. Additionally, the members of the community of ilsole24ore.com who decided to leave their email address public where contacted. The data collection for the first questionnaire ended when it was reached the number of 200 respondents. So, the initial sample resulted to be composed by 112 males and 88 females, aging 17 to 66, and with a predominance of university students (39%). As introduced above, in order to check the evolution over time of the relationship between the active and passive use of social technologies and user involvement with the product, with a focus on the potential influence of virtual community management, the questionnaire was submitted two times to the same interviewee, once in June and the second one in September 2011. The interviewees were asked to leave their email address as a contact for the delivery of the second part of the questionnaire. After one week from the request to answer the second part, a recall message was sent to those who didn't respond yet; after three weeks, a final reminder was sent to the still missing interviewees. The data collection was closed the 1st of October, when the response rate has been stable at zero for ten days. In the end, the data analysis was limited to the 142 interviewees who went through all the research

process, answering in a complete way to both the first and the second part of the questionnaire. They were the 54% males and the 46% females. The age ranged from a minimum of 17 to a maximum of 66, with a median of 25 and a mean of 32 years old. The 42% of the sample was made by students.

Beside the collection of direct data about product involvement and active/passive use of social technologies through the questionnaire, there was a constant collection of additional data related to the digital newspaper used as object of the research. The data related to the virtual community of ilsole24ore.com was supposed to be useful as elements of a framework used to better interpret the findings. In particular were collected the data about: the number of comments produced by the community members per day, per week, and per month; the number of unique visitors and page views; the degree of participation of each customer in terms of comments-per-user. Additionally, all the incoming user-generated contents, that is to say all the comments made by the community members plus the emails sent by users to the virtual community management team, were carefully red and any possible useful consideration was reported in working field-notes, used to give additional hints during the discussion phase.

4.3 – Data analysis

The data analysis could be ideally divided into three parts: a first one with descriptive purposes; a second one using structure equation modeling (SEM) to verify the core research hypothesis; the last one investigating the theme of virtual community management, combining a basic quantitative analysis with qualitative considerations. For what concerns the data about online behavior and the use of social technologies, the first analysis went through the methods related to the groundswell phenomenon. In order to determine the social technographics profile and

assign every interviewee to a cluster, the people rating more than 12 in a specific bunch of activities (see Table 1) was marked with the corresponding label. The people rating less than 12 in all the five three-item bunches were assigned to the group *Inactives*. As already mentioned in the literature review, this means that groups overlap and a single person can be assigned to more than one group. The STP was determined both for the global audience and for the group of consumers claiming to be usual readers of ilsole24ore.com, in order to verify possible similarities and discrepancies through statistical analysis[10]. This methodology has been repeated for the analysis of the data coming from the second questionnaire, looking for possible evolutions over the time within the same group of people.

The analysis of the presumed influence of user involvement with the product on online behavior, differentiating between active and passive use of social technologies, was investigated following the two-step procedure exposed by Gerbing and Anderson's (1988). Firstly the measurement model was assessed with respect to the variables user involvement with the product (labeled "Involvement") and active use of social technologies ("Active Use"); passive use of social technologies ("Passive Use") doesn't need to be assessed since it is measured with only one item. Consequently, the analysis began with a confirmatory factor analysis (CFA) using maximum likelihood estimation. Finally, after these tests, the research model was implemented and hypotheses tested using estimated SEM path coefficients. As scheduled in the research design, after a defined period of time from the first questionnaire it was delivered a second questionnaire. The just described two-steps procedure was repeated also with these data.

[10] The data analysis has been conducted using SPSS, the statistical software developed by the IBM Corporation. The structural equation modeling (SEM) was done using SPSS AMOS.

In order to check for the possible impact of the introduction of a virtual community management activity, defined by a newborn but clearly identified virtual community management team, both the quantitative indicators and a qualitative evaluation of users' reactions were considered. The data coming from the predisposed analytics tools were processed with descriptive statistics using SPSS, when significant. Moreover, additional data such as the number of comments produced by the community members per week, the number of unique visitors and page views, and the degree of participation of each customer in terms of comments-per-user were used as lateral qualitative hints. Because of the actual limitations of the research, expressed in the conclusions, the qualitative analysis of the users' comments didn't follow any systematic and structured qualitative research method. However, they were carefully red and any possible useful consideration was reported in working field-notes, used to give additional hints during the discussion phase.

5 – Findings[11]

In this chapter the findings are exposed, structured in the following way. Firstly, there is a paragraph illustrating some descriptive statistics about the respondents' social technographics and involvement in the groundswell activity, plus some results about their involvement with the digital product used for the present research. Secondly, there is the report of the findings coming from the structural equation modeling, which proves the validity of the model and gives a feedback on the hypothesis about the influence of user involvement on online behavior, distinguishing between active and passive use of social technologies. Finally, the last paragraph lists the findings about the born of a virtual community management team, and the impact of community management practices on the considered variables in relation to the studied phenomenon.

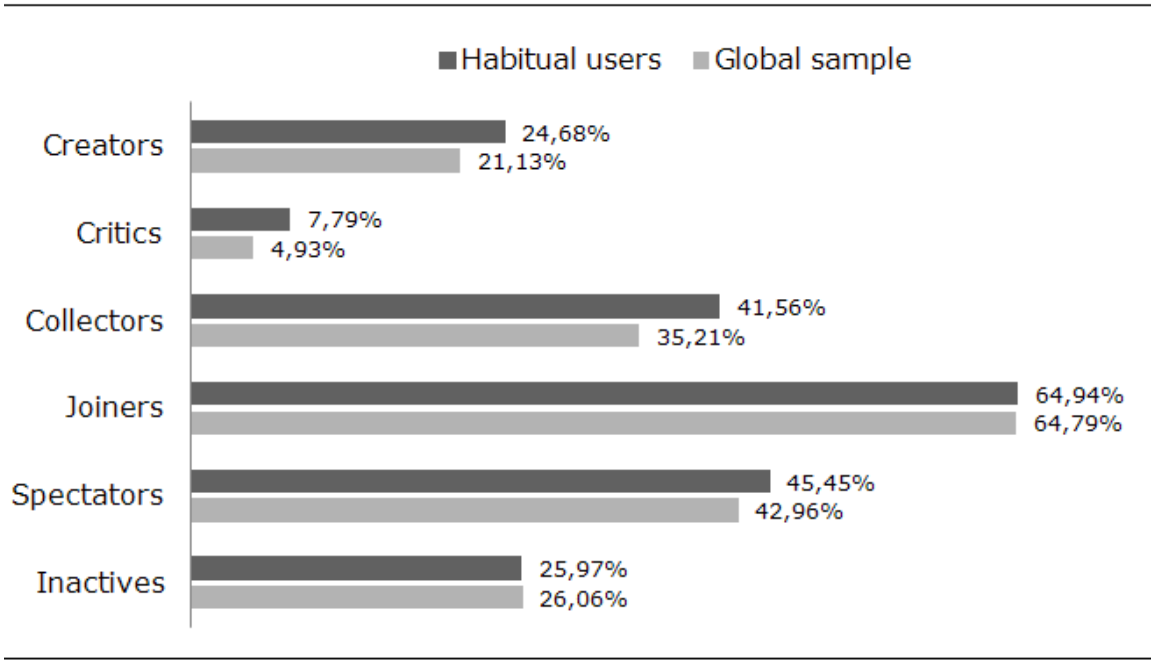
5.1 – Descriptive statistics about the use of social technologies

The Social Technographics Profile of the global sample resulted to be composed by a large percentage (64.8%) of Joiners, which are people who claims to create user's profile on website, join social networks and frequently update their profiles. The group with the lower number of members (4.9%) is that of people collaborating on wiki-pages, commenting on blogs or articles, rating or writing reviews of product and services: the Critics. This composition changes if we consider only the interviewee who visited the website at least once in the last month. The habitual users of ilsole24ore.com are overall more involved with the groundswell activities, with a significant difference in the percentage of

[11] This chapter reports several sensitive data, some of which could not be reveled outside the company Il Sole 24 ORE. In these cases, the original data are protected by altering them. However, this modification has been done in a way that the results relevant for the present research are not influenced.

Collectors (41.5% versus a 35.2% of the global audience), Creators (24.7% versus 21.1%), and Critics (7.8% versus 4.9%).

Figure 3 – Social Technographics Profile (first questionnaire)



NB: The sum is more than 100% since a single user can be assigned to more than one group.

The groundswell activity with the higher participation is that of visiting a social network, followed by the activity of reading text-contents – blogs, articles, forums or reviews – and by that of rating digital content shared by others, including the Facebook "Like", Google "+1", Digg, and so on. On the opposite side, the less practiced groundswell activities are the collaboration with a wiki-page (70% of people never did it) and the use of podcasts (43% never did). Also the activities of creating contents for the own blog or website, and uploading music or videos have a high percentage of people who have never done it (respectively 51% and 45% of the interviewees); however, in these cases there is an higher variance in the audience since there is also a significant percentage of people claiming to practice these activities every day.

Although all of the interviewees had ever seen the website ilsole24ore.com just the 54% visited it at least once in the last month, and so can be considered as composed by habitual customers. Moreover, the 75% of the audience claimed to be aware of the possibility to comment the digital contents of the website, while the 11% declared to have commented an article at least one time. A statistical mean comparison revealed that the average level of involvement with the product ilsole24ore.com was significantly higher for Spectators ($p = 0.002$), compared to non-Spectators and for Collectors ($p = 0.001$), compared to non-Collectors. Not others strongly significant differences in terms of involvement with the product were observed among the other STP's groups. Indeed, a regression was run to check for a linear relation between the total STP score – the sum of all the activities' score, which is a measure of the degree of involvement with the groundswell – and the involvement with the product. The finding was that of a significant ($p < 0.001$) positive linear relation: the higher is the general participation in the groundswell, the higher is also the involvement with the product ilsole24ore.com. Because of the small percentage of the sample claiming to have ever commented an article on the website ilsole24ore.com, it was not possible to do any significant comparison between commentators and non-commentators. It was instead compared the level of involvement with the product between habitual users and non-users, resulting in a higher product involvement for the interviewee who visited the website at least once in the last month.

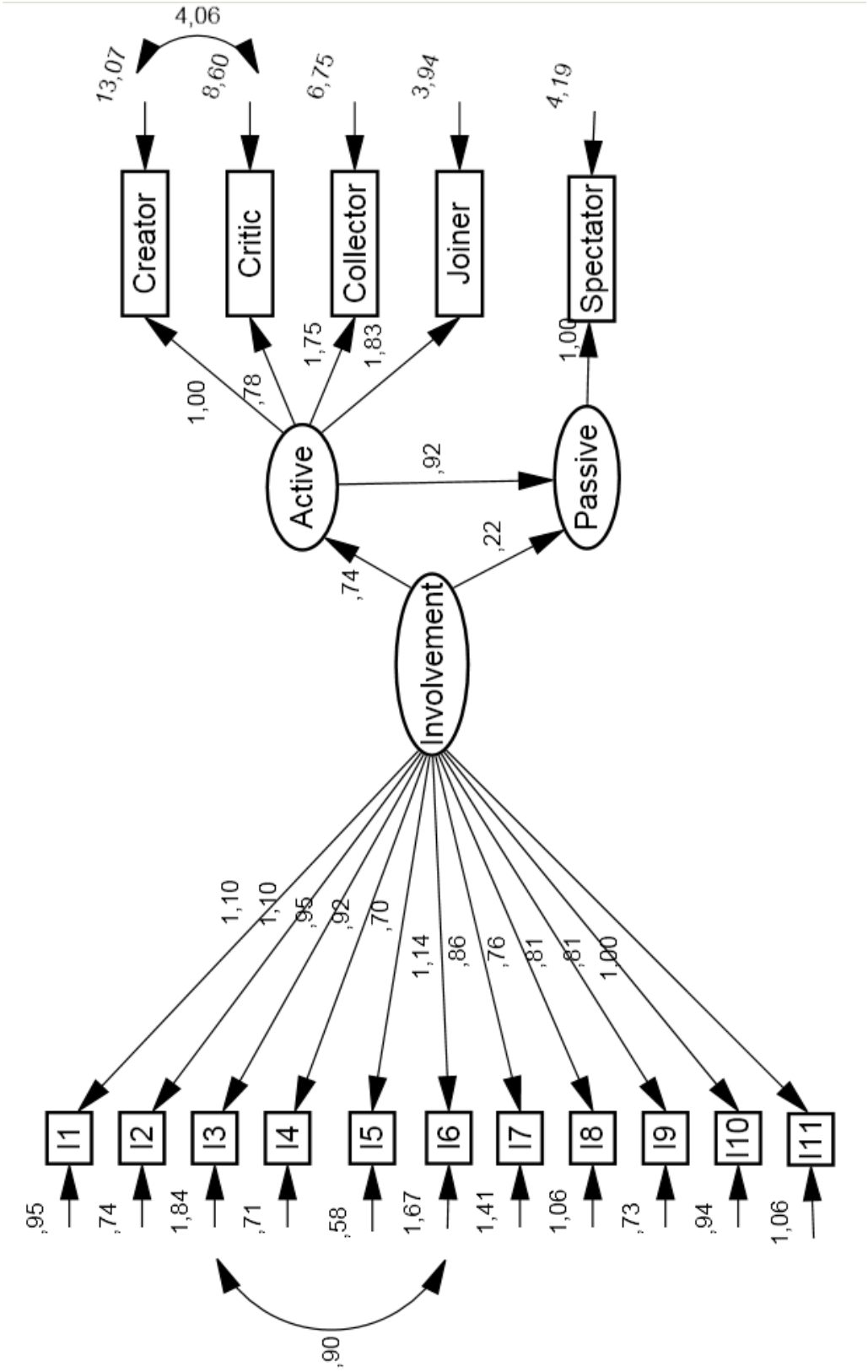
5.2 – The influence of user involvement on online bahavior

The validation of the research hypothesis went though the development of a model built with the theoretical constructs exposed above. Al the constructs was found to be reliable, with a Cronbach Alpha of 0.933 for product involvement and 0.840 for the active use of social technologies; the passive use is measured by only one item, so it doesn't

require a reliability test. Doing model fit, a confirmatory factor analysis (CFA) using maximum likelihood estimation led to the reduction of the number of factors related to the product involvement construct. After the model fit adjustments, all measures loaded higher than 0.76. The model yielded a χ^2 of 156.623 on 87 degrees of freedom (p-value < 0.001), the goodness of fit index (GFI) was 0.87, the adjusted goodness of fit index (AGFI) was 0.82, and the root mean square error of approximation (RMSEA) was of 0.075, indicating a reasonable error of approximation (Browne and Cudeck, 1993). It was so possible to move to the second step of the analysis, which is the implementation of the research model in order to test the research hypothesis with a structural equation modeling (SEM) path coefficient estimation. The fit was good, since the model yielded a χ^2 of 183.289 on 100 degrees of freedom (p-value < 0.001), the GFI was of 0.86, the AGFI of 0.81, and the RMSEA of 0.077. In Figure 4 the output of the structural equation model fit is represented. Not all the paths were statistically significant: the regression weight for product involvement in the prediction of passive use of social technologies is not significantly different from zero at the 0,05 level (two-tailed). On the contrary, as predicted by $H1_a$ product involvement has a positive impact on active use ($\beta = 0.74$, $p < 0.001$), and active use has a positive impact on passive use ($\beta = 0.92$, $p < 0.001$).

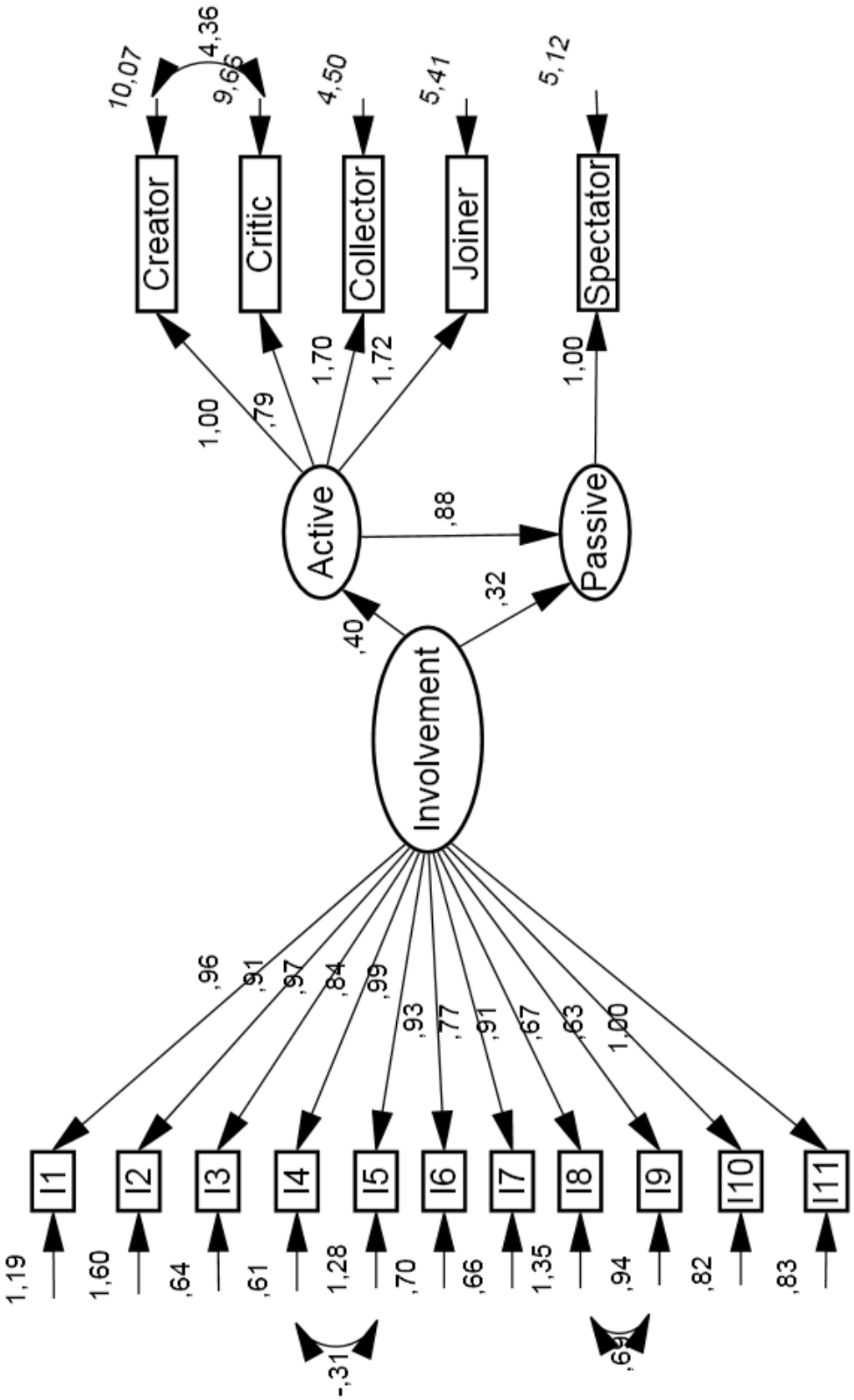
Moreover, the theoretical model used to verify the associations between user involvement with the product and active/passive use of social technologies was double-checked using the data coming from the second questionnaire. That is to say, all the analysis was repeated with the responses of the same 142 people, but given three months later. This was done with the double aim to strengthen the model validity and to check any possible influence caused by the time maturation or by the implementation of structured virtual community management practices, as better explained in the paragraph 5.3.

Figure 4 – Result of the SEM, first questionnaire



Chi-square = 183.3, df = 100, p < 0.001, RMSEA = 0.077.
Note: the regression weight for product involvement in the prediction of passive use of social technologies is not significantly different from zero at the 0,05 level (two-tailed)

Figure 5 – Result of the SEM, second questionnaire



Chi-square = 182.5, df = 99, p < 0.001, RMSEA = 0.077.
Note: the regression weight for product involvement in the prediction of passive use of social technologies is not significantly different from zero at the 0,05 level (two-tailed)

Also for this second analysis it was followed the two-step procedure, beginning with a CFA. The model fit required some adjustment, after which all measures loaded higher than 0.63. The model yielded a χ^2 of 135.570 on 86 degrees of freedom (p-value < 0.001), the goodness of fit index (GFI) was 0.89, the adjusted goodness of fit index (AGFI) was 0.85, and the root mean square error of approximation (RMSEA) was of 0.064, indicating a relatively close fit of the model with a more than reasonable error of approximation. Moving to the second step, the model fit once again well and led to very similar findings. The model yielded a χ^2 of 182.461 on 99 degrees of freedom (p-value < 0.001), the GFI was of 0.87, the AGFI of 0.82, and the RMSEA of 0.077. The output of the structural equation model fit is represented in Figure 5. Once again, the regression weight for product involvement in the prediction of passive use of social technologies was not significantly different from zero at the 0.05 level ($p = 0.121$), making this path not statistically significant. The hypothesis $H1_a$ was confirmed, since product involvement has a positive impact on active use, even though the beta coefficient was lower than in the first analysis ($\beta = 0.40$, $p < 0.003$). The impact of active use on passive use was proved again to be significant and positive ($\beta = 0.88$, $p < 0.001$).

These results, that are discussed later on, confirms the positive influence of user involvement with a digital newspaper on active use of social technologies (H1a), and the positive association between active use and passive use of social technologies (H2). Indeed, there was not any valid prove of the presumed positive association between user involvement with a digital newspaper and passive use of social technologies.

5.3 – The fleeting impact of community management

The first data collected were about the initial situation of the community management activity at the observed digital newspaper. The possibility to sign up to the website ilsole24ore.com was introduced more than five years before, with the registration to a newsletter sent after the only requirement to leave an email address. Afterwards it was introduced the possibility to comment the articles, with the additional requirement to register a username. But it was only in the end of January 2011, with the introduction of a new content management system specific for user generated contents, and the creation of the box "Community Live" in the website home page, that the user's community was born. However, when the research begun in March 2011, the theme of "community management" was more a label than a real practice, and the relevance of the commentators and of theirs contributes was comparatively low. Technically the "community management" practices were limited to the comment's moderation activity, which is still at the base. Comments are filtered by a moderation system storing the users' contributes until a moderator decides to publish them – or to cancel them in case of inappropriate content. Since this human intervention is required, and since the resources dedicated to this activity are limited, the moderation activity happens only during office hours. In consequence of this limitation, also the users' potentiality to interact, talking with the readers in general or among them, is strongly limited by the postponed publication – sometimes few minutes, sometimes a couple of day, more often several hours. To sum up, there are not enough signs to consider the existence of a virtual community management team (Rosenkranz and Feddersen, 2010).

Despite the just mentioned limitation and the primitive structure of community management, it was still possible to identify a community composed by the users who registered a username and made at least one

comment. In March 2011 there were about 1'000 active users, with an average increasing trend of 11% per month[12]. Nevertheless, the total number of incoming comments has been pretty stable between the end of January – the introduction of the new content management system – and the end of July: around 1'400 comments-per-week, with some peak and some downfall during particular weeks, in line with the variation of the website's page views[13]. Indeed, the percentage of users contributing with only one comment was slightly increasing, from 63% in February to 67% in July, and those of very active users (with more than 5 comments) slightly decreasing, from 12% in February to 8% in July. In March the company decided to commit one person with the role of "community manager" and a team of employees to support him in the elaboration of a report listing some possible evolutions of the community management system. The core of a virtual community management team was born. Among others later improvements, it was decided to invest in the development of a specific functionality, called "comment publication mail-alert", aimed to empower the community. Until that moment any user, after sending his/her comment, was simply unaware about when and whenever it would have been published. The only way to see their own contribution published online was to go back to the webpage, sometimes after hours or days. But, because of this time lag uncertainty, people often didn't went back and they wasn't able to see any possible answer to the same comment's thread, neither direct answers and questions to them from other users. Considering this as one of the reasons why a great percentage of the community was contributing with only one comment, the functionality "comment publication mail-alert" was identified by the newborn community management team as a tool able to increase the

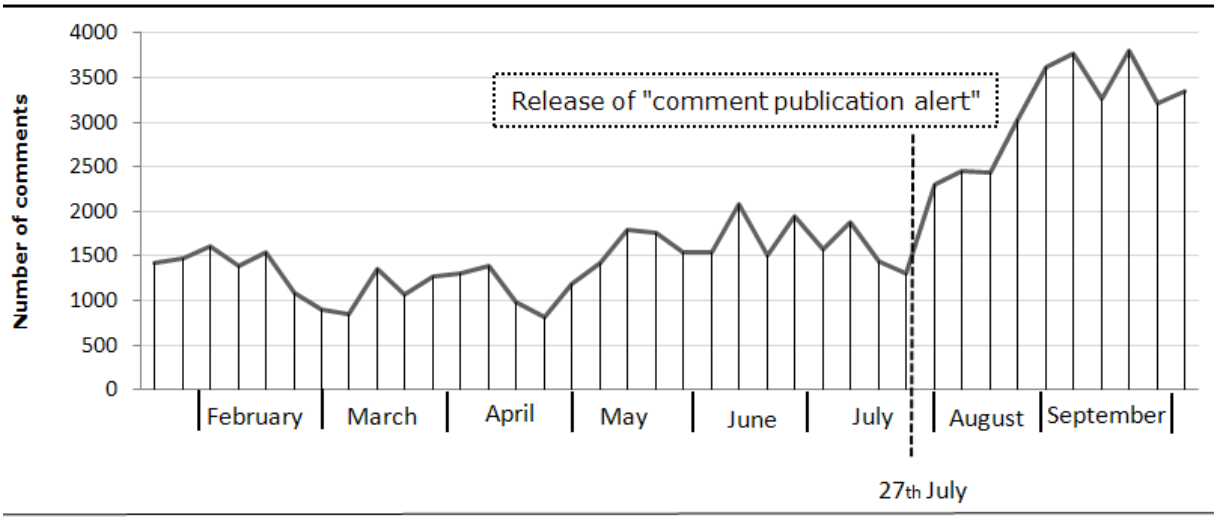
[12] The rise of active users has been of 10.6% between February and March, 8.1% between March and April, 17.3% between April and May, 11.9% between May and June, 12.3% between June and July.

[13] Since the considered digital product is an online newspaper, his daily number of consumers is related to the current events. Moreover, it is a "Business Newspaper", focused on economics and finance: more consumers read it in case of economics-related happenings.

involvement of the community towards the website[14]. To be released at the end of July, this functionality was the first step of the implementation of community management practices, a test for future investments in the community management activity.

The 27th of July the functionality "comment publication mail-alert" was released and for two months its effect, together with the other surrounding practiced composing the community management activity, has been monitored. After four weeks the number of comments more than doubled, and after 2 months the average number of weekly contributions was stable at around 220% of the average level before the release (see Figure 6).

Figure 6 – Trend: number of comments per week



Source: author's elaboration. Data are altered in order to protect company's reserved information, but the overall trend is likewise the real one.

[14] The functioning of the "comment publication mail-alert" tool was as follows. After the submission of a comment, the commentator receives a screen message saying «We received your comment; it will be moderated as soon as possible. You will receive an email when it will be published». At the moment of the publication, an email is sent to the user with a link to the comment's thread and an invite to continue the debate with the community.

On the one hand, this increase could have been caused by other elements than the simple community management practice. For example, in August 2011 in Italy there were several happenings related to the national economic situation, such as the so called "manovra di Ferragosto"[15], which led to an overall growth of the unique visitors at ilsole24ore.com[16]. Moreover, also the number of registered users had a steep jump of about 50% from the beginning of July to the end of September. On the other hand, the rate comments/active-users rose as well meaning that, beside the growth in the number of comments due to a greater number of visitors, also the members of the community was contributing more actively to the debate with their contents. Indeed, the percentage of users doing only one comment – that was increasing until July – inverted its trend falling from 67% in July to 59% in September, while the percentage of users contributing with more than 5 comments also inverted its trend rising from 8% in July to 13% in September.

Some descriptive statistics was elaborated also with the data coming from the second questionnaire, but no significant variations from the initial results were registered. The involvement with the product ilsole24ore.com was still significantly higher for Spectators compared to non-Spectators (p-value=0.003). Also in the second survey it was observed a positive linear relation between the overall involvement in the groundswell and the

[15] The "manovra di Ferragosto" is a rule of low issued by the Italian Government the 13th of August in order to correct the government budget, because of the emergency and urgency caused by the precarious economic situation. The name "Ferragosto" comes from the Italian holiday celebrated on August 15.

[16] As mentioned before in the text, ilsole24ore.com is a digital version of a business related newspaper, the most authoritative in Italy about economics and financial issues. The growth in page views and unique visitors is proved by Nielsen Site Census and reported by the company itself: http://www.ilsole24ore.com/art/notizie/2011-09-19/quotidiano-sito-crescita-190356.shtml and http://www.ilsole24ore.com/art/tecnologie/2011-10-05/settembre-record-storico-sole24orecom-140256.shtml

involvement with the product ilsole24ore.com. Moreover, the involvement with the product was higher for habitual users. Despite this, there is no empirical evidence to claim that there was an increase in the level of involvement with the product: even though the average positive variation of the product involvement seems to be higher for habitual users, the level of variance and the limited number of cases lead to the possibility to commit an error by deducing an involvement variation (p-value=0.179). Finally, as seen in the previous paragraph, the structure equation modeling was repeated to test the validity of the developed model also with the data coming from the second questionnaire, those collected after the implementation of ponderous community management practices. The results confirmed the findings of the first analysis, meaning that the community management activity didn't have any influence on the validity of the model. Indeed, it was not possible to obtain any empirical evidence of hypothesis $H3_a$ and $H3_b$, besides the proof that a virtual community management team was born. This could be a consequence of the fact that the sample was representative of the global audience of the digital newspaper, but not of the registered members of the community. Because of the limited number of cases, it was not possible to verify the hypothetical impact of virtual community management on the level of product involvement and on the active use of social technologies made by the community's registered members (commentators).

6 – Discussion

The groundswell is a fast growing trend in dynamic evolution. The three elements characterizing it - people's desire to connect, new interactive technologies, and online economics - have been concerning an increasing share of the society, making the groundswell a global phenomenon able to overcome social and demographics differences. Moreover, the technological evolution has been doing giant steps, together with the entrepreneurial exploitation of it. Consider for example the diffusion of social networks, from The Facebook explosion to the role of Twitter in the recent news and historical happenings. Another evident hint is the tremendous growing in the penetration rate of the Internet[17] in general and, in more recent years, those of mobile Internet connection through smartphones, netbooks, tablets, and other devices. In this context, the economics of information is under strong pressure and the managerial issue about how to deal with the groundswell becomes a burning question. As key players in the economics of information, newspapers cannot avoid to deal with it, and their website is the starting point of the challenge, the core digital product from which to begin to tap into the groundswell. For this purpose, it doesn't make sense to segment the demand according to traditional schemes; a behavioral segmentation should consider the specificities of the customers in their way of using online social technologies. Indeed, the distinction between an active and a passive use of social technologies becomes crucial, and a possible association between them and the user involvement with a digital newspaper a key to develop useful managerial implication, as discussed afterwards. Finally, the creation of a virtual community management team and the implementation of community management practices has to be

[17] According to Internet World Stats, the average Internet world penetration rate in 2011 is 30.2% of the population – with a peak of 78.3% in North America and 58.3% in Europe – and an average growth rate of 480.4% in the period 2000-2011. For more details see: http://www.internetworldstats.com/stats.htm

taken into consideration as a possible element to leverage on the mentioned relationship in order to take advantage, from the perspective of a newspaper's management, of the groundswell trend.

6.1 – The usefulness of social technographics

The social technographics are segmentation tools needed to look at the way people use social technologies, and the social technographics profile (STP) developed by the Forrester Inc. proved to be a useful one. Compared to the time and the place where it was developed, the STP and the interpretation of its results had to be adapted to the Italian situation in 2011. Moreover, in the present research the STP has been applied to an audience of habitual Internet users. Once considered these elements, it is remarkable the finding about the use of social networking sites: approximately the 65% of global audience claims to daily visit a social network and only the 8% to never do it. Even though the sample was not representative of the Italian population, this result gives evidence to the importance of considering the groundswell phenomenon in the light of the social networks predominance: most of the Internet users, in their way to interact with social technology, are considered as *Joiners*. In concrete, this has several technological and managerial implications. One example could be the introduction of "share buttons" to help the users in sharing contents within their social networks, or even more radically the production of contents that are specifically made for being shared and designed to generate back-link traffic. In the specific case of ilsole24ore.com, some effort in this direction has already been done with the introduction of "share buttons" – Facebook "Recommend", Twitter, Google +1, plus other minor sharing services –, and with the possibility to sign up and login with the "Facebook Connect". In a complementary but somehow also opposite way, the structure of a product-related community itself could be designed in a social network-like way, with the creation of users' profiles, a personal page, and shared virtual spaces. For example,

the choice to keep the comments management system as an internally developed functionality, in the analyzed case, goes in this direction. More in general, for a digital newspaper the issue is the tradeoff between the integration of proprietary contents with third parties services and the internal development of an autonomous community. Probably the right solution is in a balanced mix of make-or-buy solutions. Indeed, given the high percentage of *Joiners* and, more in general, people's attitude to approach the Internet through a social networking-behavior, it would be interesting to analyze the possibility to design the costumer experience with digital newspapers in a social networking-way.

Beside general considerations about the social technographics of the interviewees, the STP becomes a useful tool especially if used to explore the way that a specific group of people has in using social technologies. That is to say, the STP of the customers of a specific product can be compared to the average results, allowing the detection of relevant characteristics. In the case used for the present research it was found that the habitual users of ilsole24ore.com are more likely to be Spectators, Collectors, or Critics, compared to those that are not considered as regular customers. This is a valuable piece of information from a managerial point of view, because it gives some leverage point to tap into the groundswell. For example, let's consider the high presence of Collectors among the customers. Those people tend to use RSS feeds, tag pages, and rate, "thumbs up" or vote for websites and digital contents. So, it would be a good idea to equip the digital newspaper with tools leveraging on these behaviors, such as the easiness to subscribe RSS feeds, the possibility to publicly express (dis)appreciation towards the contents, and to collect them. Indeed, one of the initiatives of ilsole24ore.com could be interpreted in this direction: realized in the experimental space 24labs.ilsole24ore.com, the tool My24 has been introduced giving to the registered users the possibility to collect interesting contents in a personal folder, or to share folders and bookmarks with other members of the

community. Further research should explore whether the predominance of Collectors, Spectators and Critics is a characteristic of all digital newspapers, or if it is related to the kind of customers of this specific business-related digital newspaper. In any case, the analysis of the STP would be a useful practice for each digital product, since it shows some concrete and customized way to tap into the groundswell, taking advantage of this trend.

6.2 – User involvement and active/passive behavior

The use of the Personal Involvement Inventory (PII) had also to be adapted and modified from the original one, mainly because the interviews had to be done in Italian language. The translation was as close as possible to the original version; however, as in all the translations, the tone of some pair of adjective could slightly differ from the original, even though maintaining the same overall meaning[18]. Despite this, the PII proved to work effectively. The Cronbach Alpha tests found the construct to be solid. Indeed, the habitual users of ilsole24ore.com had a significantly higher product-involvement score, compared to those who are not customers of the digital newspaper, which is in line with the expected result. The fact that the level of involvement with the product was proved to be higher for people more involved with the groundswell activity is a signal that further research could find interesting results. For example, a good strategy for increasing the involvement toward a digital newspaper could be that of leveraging on the less groundswell-involved customers, and converting them into "digital customers" through tutorials and basic explanations on how to get benefits by using social technologies. Concrete applications of this strategy are: the explicit invitation to comment articles, contributing in this way to the debate among registered users (teaching how to get satisfaction from being

[18] See attachment "A": The Italian translation of the 20-items Personal Involvement Inventory

Critics); the use of hyperlinks directing to photo galleries, videos, documents and other multimedia contents (showing the benefits of being *Spectators*); write articles about the technological innovation added to the website, such as the "My24" tool, explaining in a simple way how to use it (this will help to convert customers in happy *Collectors*). The fact that in the specific case of ilsole24ore.com there is a significantly higher level of involvement with the product for Spectators and Collectors could be due to the effort that this digital newspaper is already doing in providing social technologies for these group of groundswell players. It is not possible to get definitive conclusions about this from the present research, therefore further investigations are recommended.

Even more interesting findings, actually the core of the present research, comes while considering the influence of user involvement with the product on an active use of social technologies, and the positive association between active use and passive use. Firstly, it has been proved the existence of a positive impact of the user involvement with the product on an active use of social technologies. The importance of user involvement is clear since it is related to a perception of greater product importance, and greater commitment to brand choice (Howard and Sheth, 1969). In the case of a digital newspaper, an involved customer is also one more valuable for the company insofar he is committed to the brand, he perceives the digital newspaper as an important product and he probably spends more time with it. The fact that the user involvement with a digital newspaper is positively associated with the use of social technologies was reasonably predictable, since a digital newspaper is nowadays a product completely dipped into the groundswell and the interactivity between users and contents is a relevant part of the value offered in the user's consumption experience. Indeed, the positive influence that obtained empirical evidence was that on an active behavior, and not that on a passive use of social technologies. This highlights that is not only a matter of interaction between users and contents, but also

about interactivity through several modalities implying an active use, and often also an interactivity of users among them, in a community dimension. The second empirical evidence coming from the structural equation modeling, that is the impact of active use on passive use, is a relevant complementary piece of information. In fact, even if the active use of social technologies is an instance provoking a general interest and attention, the focus is still on the passive behavior for what concerns a newspaper's revenue sources. The positive association between user active and passive behavior suggests that the costumers who are more inclined to actively participate into the groundswell – those called creators, critics, collectors, and joiners – are also costumers more inclined to perform passive behaviors such as browsing pages and watching videos. It is indeed true that active behaviors often result in the production of valuable user-generated content, so in a greater amount of raw material for the passive activities and behaviors. Those behaviors, the passive ones, are the behaviors targeted by advertising and influencing the revenue streams. In the light of these considerations, the idea to invest in the development of digital newspapers towards an integration with social technologies is not simply something to do because everyone is doing it, but something with possible concrete returns.

6.3 – Why to build a community management team

The focus of the present research is on the influence of user involvement with a digital newspaper on the active and passive behavior in using social technologies. Moreover, an additional element is the theme of virtual community management, considered as the element able to link what is a mere theoretical debate with something useful for the everyday managerial practice. The use of Forrester's social technographics profile as a tool to better understand how the costumers of a digital newspaper interact with social technologies was firstly explored, obtaining concrete managerial suggestions. Secondly, the development of a model designed

to test the influence of user involvement on active/passive use of social technologies gave additional useful hints for the community management activity. The choice of focusing the attention on a specific digital newspaper, and not on digital newspapers in general, implied some significant limitation to these first analyses. Nevertheless, this controversial choice gave also an important occasion: that of observing in real time the born of a virtual community management team and analyze its possible impact on the studied variables. In fact, the research took place during a crucial turning point for the community of users at ilsole24ore.com. The six-month period of observation went through a starting point where the community management activity was an ill-structured process, to the development of a structured framework defining the roles and responsibilities in this area. A person was charged with the role of community manager and, even though only as a part-time activity, the definition of a team of people nominated to support the community manager can be considered as the born of a virtual community management team.

In few weeks the organization of all administrative tasks and the supply of a technical and organizational framework for interaction and communication, in order to support the virtual community and its members, were clearly observable around the figure of the community manager. The first big impact of the virtual community management team was the functionality "comment publication mail-alert", developed and introduced by the team with the aim to empower the members of the community and reinforce their loyalty. If interpreted in the light of the literature about the groundswell phenomenon, this functionality can be classified into those fostering the activity of the *Critics*. The internally developed metrics showed that the new functionality had an impact in terms of bringing users to participate in the community's debate with a higher number of comments. Beside the boosting effect on the overall number of comments that was partially related to other external

phenomena, it is reasonable to attribute to the new functionality also the increase in the percentage of people contributing with more than one comment. But these consideration are only valid for the specific case, the research design wasn't elaborated with the possibility to give scientific evidence of these kinds of results. Staying within the boundaries of the research, some consideration could have been done about the variation in the level of involvement with the product. It has been proved that in the overall audience of the questioner, and among the habitual users of ilsole24ore.com, there wasn't any significant variation in the level of involvement. Alas, the sample was not big enough to make valid consideration about the variation in the level of involvement with the product for what concerns the active members of the community. Those who commented at least once in the last month were the 11% of the sample, only 16 people. Since the community management activity that occurred during the research period was specifically designed for the commentators, it could be that – despite it wasn't proved any impact in terms of involvement for the habitual users – it had an effect on the involvement with the digital newspapers only for what concerns the active members of the community. Further research should focus on the study of the impact of the community management activity on user involvement, giving more emphasis to the definition and classification of community management practices and choosing the sample accordingly to this purpose. It is indeed clear that, besides numbers and figures, the creation of a community management team is a corporate organizational response that allows to better understand the ongoing trends and take adequate decision about how to face them.

7 – Conclusion

The ongoing transformation in the newspaper industry is characterized by the dynamic interaction of people's desire to connect, new interactive technologies, and online economics. Understanding how customers interact on the web with digital products and among each other is not only a fad, but a real need to face in order to have success in this arena. The groundswell is a growing phenomenon, made more evident by the expansion of social networking sites. Indeed, it is not limited to those kinds of sites: it concerns all the use of technologies made by people in order to get the things they need from each other, rather than from companies. The social technologies often labeled as "web 2.0", including in this definition all the technologies allowing the consumers to become also producers of contents, are the technological side of the groundswell trend. It is clear that an understanding of the behavioral differences of consumers in using social technologies is becoming a marketing priority. It is true for what concerns almost any product category, but it is even more certain in regard to a product whose survival depends on the production, diffusion and consumption of digital contents, such as a digital newspaper. The present research is, among the other things, an attempt to imagine and realize a behavioral segmentation based on the way to use social technologies, in order to deduce practical suggestion for decision making. The classification of customers into behavioral groups such as Inactives, Spectators, Joiners, Collectors, Critics, and Creators could be a good starting point to better understand how to take advantage from the groundswell, as already suggested by the Forrester Inc. (Li and Bernoof, 2008). Building on it, this research goes beyond by analyzing the influence of user involvement with a digital newspaper on the online behavior in using social technologies. What comes out is a positive association between these two dimensions, a relationship that let managers to

glimpse the potential benefits of the integration of digital newspapers with social technologies, in relation to user involvement with the product.

On the negative side this research has some significant limitation. First of all, the focus on a specific newspaper implies a weak external validity. On the one hand, focusing on the business newspaper ilsole24ore.com allowed the observation in real time of the born of a virtual community management team and of its potential impact on the community involvement and behavior. On the other hand, it is not possible to say whether the measures about the involvement with the product and the validity of the hypothesis assessed by the model would have been similar while considering other digital newspapers. Further research should shed light on this dark spot. Another limitation is given by the fact that the sample of the questionnaire was representative of the global audience of the digital newspaper, but not of the registered members of the community. It is reasonable to presume that an impact of the virtual community management activity would be relevant on the registered and active members of the community, more than on the other users. Further research should extend the sample size and possibly focus on the registered users, as well as build on a better defined construct of virtual community management team and practices.

Despite the limitation just described, this work brings several positive contributions. One strong finding of this work is the validation of a model that asses the influence of user involvement with the product on online behavior, distinguishing between active and passive use of social technologies. This cross-field area of study is still unexplored in literature and so some new consideration emerged. Firstly, the positive impact of user involvement with the product on the active use of social technologies suggests that investing in supplying solutions to facilitate customers' interaction with the product and among the product-related community through the web is something pragmatically connected with brand

commitment. Secondly, the positive association between active use and passive use of social technologies confirms the idea of the groundswell as «a social trend in which people use technologies to get the things they need from each other, rather than from traditional institutions like corporations»[19] and supports the assumption that there is a virtuous cycle between contents creation and contents consumption (Pagani et al., 2011). Another interesting feature of this work is the exploration of the still ill-defined concept of virtual community management practices, intended not only as the practice to supply a technical and organizational framework for interaction and communication supporting the virtual community and its members (Rosenkranz and Feddersen, 2010), but also as a corporate strategic response to deal with the groundswell phenomenon and take advantage of it. As a consequence, this work encourages further research about the development of conceptual frameworks and models for the community management activity, pointing out the importance to find adequate analytics and measures of the impact and return on investments in this field. Indeed it is clear that the introduction of a person with the role of community manager, better if supported by a dedicated team of professionals, is a recommended first step for any digital newspaper.

[19] Li and Bernoof (2008), page 9.

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Attachment – A

The Italian translation of the 20-items Personal Involvement Inventory used for the questionnaire.

Original PII

a. important _____ unimportant*
b. of no concern _____ of concern to me
c. irrelevant _____ relevant
d. means a lot to me __ means nothing to me*
e. useless _____ useful
f. valuable _____ worthless*
g. trivial _____ fundamental
h. beneficial _____ not beneficial*
i. matters to me _____ doesn't matter*
j. uninterested _____ interested
k. significant _____ insignificant*
l. vital _____ superfluous*
m. boring _____ interesting
n. unexciting _____ exciting
o. appealing _____ unappealing*
p. mundane _____ fascinating
q. essential _____ nonessential*
r. undesirable _____ desirable
s. wanted _____ unwanted*
t. not needed _____ needed

* Indicates item is reverse scored.

Items on the left are scored (1) low involvement to (7) high involvement

Translation used for the questionnaire

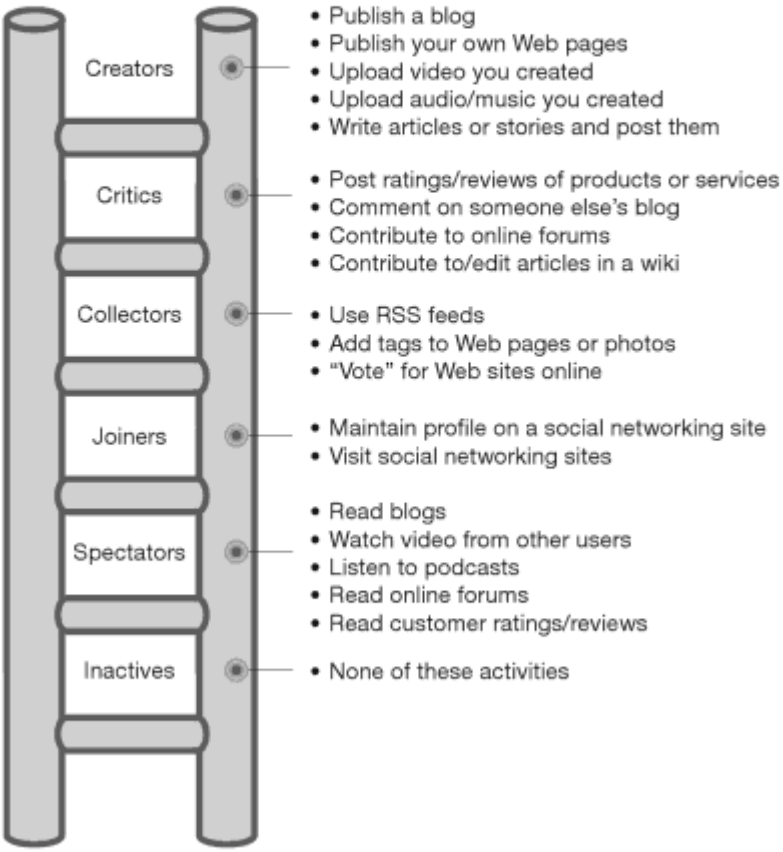
a) importante / non importante
b) senza interesse /interessante per me
c) irrilevante / rilevante
d) significa molto per me / non significa niente per me
e) inutile /utile
f) di valore / senza valore
g) futile / fondamentale
h) benefico / non benefico
i) importa a me / non importa
j) disinteressato / interessato
k) significativo / insignificante
l) vitale / superfluo
m) noioso / interessante
n) non emozionante / emozionante
o) attraente / non attraente
p) tedioso / appassionante
q) essenziale / non essenziale
r) indesiderabile / desiderabile
s) desiderato / non desiderato
t) non necessario / necessario

Attachment – B

Forrseter's Social Technographics ladder.

The Social Technographics ladder

Each step on the ladder represents a group of consumers more involved in the groundswell than the previous steps. To join the group on a step, a consumer need only participate in one of the listed activities at least monthly.



From Li and Bernoof (2008), page 41