

The Inextricable Intertwining of the Firm, the Platform and the Customer: The Case of a Social Media Platform for Innovation

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Abstract The aim of this contribution is to explore the relationship between human actors and technology in the context of a social media platform, developed by a leading Italian firm in the food industry. In order to address these issues, we adopt a theoretical approach that is deeply rooted in Pickering’s “mangle” theory, and Jones’ subsequent metaphor of “double dance of agency”. We developed a longitudinal case study with two rounds of interviews with marketing and R&D managers. The contribution provides three main theoretical contributions. It provides detailed attention to the co-evolution over time of human-material entanglement, an aspect that papers in this area often omit. It provides a clear picture of a series of inter-related emergent phenomena, entangling managers, users, and the social media platform. It introduces further dimensions in the dancing metaphor. On the practical side, the double dance of agency perspective on this platform’s evolution also offers useful insight for practitioners.

Keywords Social software · Innovation · Double dance of agency model · Case study

1 Introduction

Common understanding of the innovation process today builds on the observation that firms rarely innovate alone and that the innovation process can be seen as an interactive relationship among producers, users and many other actors [1]. Based on

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the idea that one of the fundamental sources of knowledge for innovation is the customer [2], coupled with drastic reductions in communication costs through the use of Web technologies, some firms have begun systematically involving users in their innovation processes by leveraging social media tools [3]. These tools rely on active content creation by users or members as a central distinguishing feature. Companies use social media to do what traditional advertising does: persuade consumers to buy a company's product or service. Some companies have recently become aware that social media is not simply another channel for distributing corporate information or an add-on to a firm's promotional media mix [4, 5]. These companies are experimenting with more advanced uses of social media [6]. The debate is open on the ability of consumers to develop ideas that can inspire product or brand managers to veer hugely from a chosen course of action [7]. Our focus is on the use of social media to gather innovative ideas from an online community. Other study perspectives have included incentives to contribution [8] and methods for idea screening and evaluation [9, 10]. The use by a firm of social media based tools raises several issues concerning the difficulty of conceptualizing the roles of the different actors involved, their capability to act, the impossibility to anticipate or control the consequences of their actions, among others. In order to address these issues, we adopt a theoretical approach rooted in Pickering's "mangle"¹ theory, and Jones' subsequent metaphor of "double dance of agency" i.e. human [11] and material agencies [12–14]. Drawing on actor network theory, Pickering suggests that technological systems need to be understood in terms of interaction between human and material agency and the two can be seen as constitutively intertwined. He describes the process of mutual adjustment by which human and material agency are interactively stabilized over time as a temporally emergent dialectic of resistance and accommodation represented by the mangle of practice. Resistance can be offered by any entity, including material objects and it can be defined as the occurrence of a block on the path to some goal [13]; accommodations are made by the user to overcome or avoid resistances, and Pickering calls the interplay of human and material agency, as they interactively stabilize each other, the "dance of agency" [14]. Jones introduced the concept of a temporally emergent double mangling where human agents seek to channel material agency to shape the actions of other human agents in a sort of "ongoing double dance of agency" [15]. This model considers different kinds of actors who influence one another in an ongoing dialectic of resistance and accommodation. This model is useful in studying the particularly complex interactions related to information technologies with their intangible products and extensive involvement in a diverse range of organizational work practices.

According to this theoretical approach, the process of information systems development and use is understood as an emergent process in which human and material agencies are inextricably intertwined. We adopt this approach to

¹A mangle is an old fashioned device with two rollers and a crank used for pressing and wringing water out of wet laundry.

investigate a specific social media platform for innovation—In the Mill I Wish (MIW). MIW was developed by a leading Italian firm in the food industry to maintain contact with and gather innovative ideas from its customers. This case is particularly relevant because companies in the food sector are just beginning to experiment with social media [16]. We examine the ongoing functioning of MIW, and consider how the platform’s material agency² (re)configures the practices and possibilities of different modes of engagement by multiple users and vice versa [14].

This chapter is organized as follows. In the next section we present the methodology. The case setting makes up section three, which is followed by the empirical evidence, both in terms of description and discussion, in section four. The chapter concludes with implications for researchers and practitioners.

2 Methodology

A single longitudinal case study (2009–2011) was developed: Barilla. The company is highly innovative and represents one of the most engaged companies experimenting with social media in Italy today. Data was collected primarily by means of semi-structured interviews inside the company and by observations of the social media under investigation. Interviews ranged between 40 min and 2 h involving key informants covering different roles. Full write-ups were done. Interviewees were given the opportunity to make comments on drafts. Secondary data were collected by using different sources of data and methods to validate one another [18]. In order to allow a more precise and nuanced description of MIW, a layered and modular view of the platform has been adopted. MIW platform is characterized by four layers—devices, networks, services and content [19–21]—two of which, i.e. services and contents, well describe MIW evolution over time.

The method for analyzing interview data (e.g., [22]) was intended as a process of progressive refinement, moving from raw transcribed interview text toward more general theoretical inferences. Collected data allowed the distinction and examination of two main developmental stages in MIW’s life: the first stage (October 2009–November 2010) and the second stage (November 2010–November 2011). In each stage of the platform’s evolution over time, frames of meaning for the different actors were derived from the analysis of interview data related the firm and of secondary data related to consumers/users. Such frames of meaning were confronted with the main elements of the mangle. The firm’s and the users’ agency were classified as human agency that intertwines in outer/inner entanglements

²As a reviewer noted, the usage of “material” in relation to a software platform could be counter-intuitive but the paper maintains the human/material dichotomy because literature referring to Pickering’s work generally adopts this distinction, also when talking about a software tool (see e.g. [17]).

respectively, with the non-human, i.e. material, agency of the platform. The evolution of the platform is read as a continuous dialectic of resistance and accommodation.

3 The Social Platform

This contribution sheds light on the characteristics of the social media platform for innovation—MIW—that the brand Mulino Bianco of Barilla company implemented in 2009. Through this platform (<http://www.nelmulinochevorrei.it/>), customers can share ideas and suggestions about company's products, promotions, initiatives, social/environmental commitment and other aspects.

MIW provides the customers with the following main services: new idea submission, and voting on, commenting on and revising others' ideas. Ideas are collected in a structured manner, according to areas and thematic fields. Ideas are then voted on by the community and those ranked the highest (top ten) are considered for implementation by WM's marketing department. MIW includes a blog, which is also published in RSS (Really Simple Syndication) format, where WM employees write and discuss newly implemented projects or launched products, as well as about how ideas from customers are realized or how suggestions are used. MIW also includes links to the official company web page and Facebook (FB). The "Contact tutor" button is available on the right side of the MIW home page to allow users to contact MIW staff in order to request support for posting a new idea. A counter is available with the number of ideas posted on the system with the number of total votes received. At the top of the page, there is a link to polls on issues of particular interest to the company.

4 Empirical Evidence: Presentation and Discussion

Figure 1 represents MIW's two main developmental stages described in Methodology section.

As it is shown in Fig. 1, we have identified two entanglements for each developmental stage. One, called inner entanglement, happens between the firm and the platform, while the other, called outer entanglement, is between the customers and the platform. Therefore, there are two kinds of human actors that intertwine with the same platform. The first is the firm, which has specific goals to be reached through the platform, intertwines with it to reach them and, last but not least, is responsible of the platform's initial design and subsequent modifications. The second is the customer, the final target of the firm's actions, whose behavior is entangled with the platform but that cannot directly modify its features. Moreover it is worth noting that the two entanglements are themselves deeply intertwined in that outcomes of the first. A detailed description of both developmental stages follows.

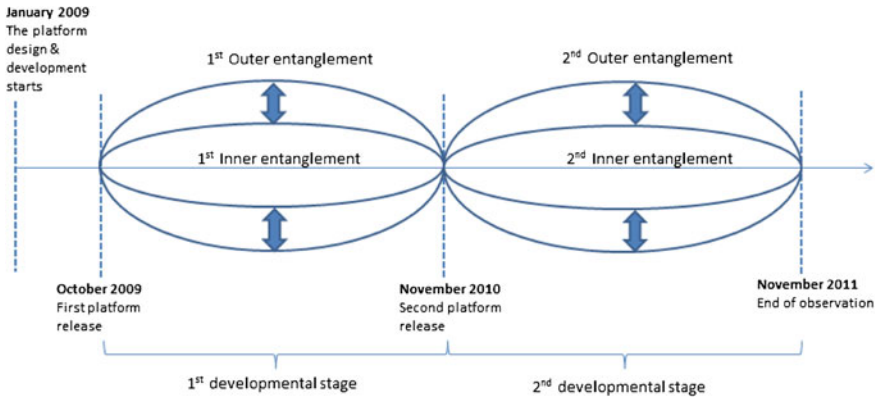


Fig. 1 MIW’s main developmental stages

4.1 The 1st Developmental Stage

Figure 2 represents the two entanglements—inner and outer—we have identified in the first developmental stage. The inner entanglement includes: the firm’s initial purposes and relevant features implemented on the platform; ongoing accommodations to emerging resistance; final assessment of resistance and the firm’s decision to introduce significant adjustments of technology and organizational practices. The outer entanglement describes the intertwining between the human agency of customers and the material agency of the platform and how this may end, from time to time, into a resistance for the firm.

At the launch time in 2009, WM had the following main objectives for its digital strategy: gathering all brand lovers into an organized online community leveraging several examples of spontaneous online fan-clubs that arose for specific WM

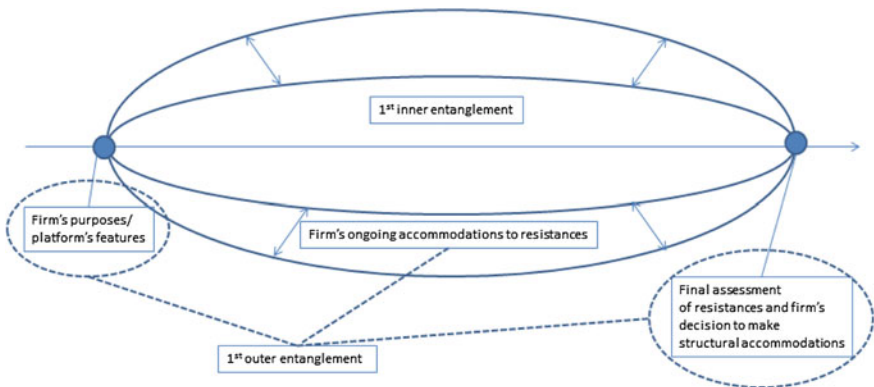


Fig. 2 The first developmental stage

products, such as “Pan di Stelle” biscuits or cult-like snack “Soldino”, which is now out of production. In 2009, the FB page entitled “Give us back Soldino” had about 10,000 subscribers, while there were about 700,000 Pan di Stelle fans. To obtain feedback on WM initiatives and gain new insight from the online community, DCM spoke of a sort of “recruitment” of people to engage in a new relationship with the brand.

To this purpose, the firm decided to go “where the clients are”. Then, the firm decided to monitor its fans meeting places (directly and indirectly), assigning each channel a specific task and maintaining a balanced relationship among them. Through its digital strategy, the firm wanted to have people experience its world by engaging them directly. MIW is part of WM’s overall digital strategy, with the specific role of “engaging people and giving them a voice”. MIW takes the concept of crowdsourcing and opens it up to any customer upon registration. MIW integrates and cross-promotes WM’s web presence; MIW is bi-directionally linked to the official company web page and is also available as a FB application through which users can vote and comment on others’ ideas. Users can also connect their MIW account with FB. In this way, any action they do on the MIW site or on MIW’s FB application is visible on their FB bulletin boards. To reach the second objective, the main tools that WM activated were a blog and an application where people can put forward ideas and vote/comment/work on others’ ideas. MIW’s first year of activity recorded about 4,120 ideas; six of these were selected for implementation. MIW users are mainly WM customers and brand lovers, even though participation is open to anyone. From participation data after the first year of activity, users were 27 % men and 73 % women (98.6 % from Italy); the average age was 35. Women mainly using the platform have no children, are college educated and browse from home (these site demographics have been provided by Alexa.com at <http://www.alexa.com/siteinfo/nelmulinochevorrei.it#>). The community seems to be driven by people that strive to re-create the past, perhaps connected to their childhood, by proposing the re-edition of old products, old packaging, old gadgets. Several WM products have been on the market since the mid-seventies, so the community was formed prevalently by those who were children at that time. The mechanism of having the same users vote for their favorite ideas seemed to have a conservative effect that cut off the most potentially innovative ideas. Thus, in this first phase, MIW acted mainly as a generator of incrementally new ideas. Also, a couple of disruptive radically new ideas were proposed. They were not the most voted, but nevertheless the marketing unit selected them for implementation. In spring 2009, two users proposed that WM support protected WWF (World Wide Fund For Nature) sites in Italy. From this idea, three successful FB projects were started. Through one of them, the “count-a-tree” project, WM committed to planting one tree in a WWF site for each ten users that voted for their favorite WM product in the “Fruit histories” (milkshakes and fruit-cups) line, engaging in a sort of FB competition. Only 1 week from the application’s launch date, 2,500 users had voted and 250 trees had been planted. After 20 days, the final target of a planting whole orchard had been reached and currently the competition continues on through new initiatives.

Through the mangle conceptual model, the story of MIW's first developmental stage can be read as a continuous dynamic of resistance and accommodation. Specifically, the online community's conservative nature can be read as resistance, while the marketing unit's direct intervention to select the most innovative ideas for implementation can be read as accommodation enacted by the company in response to the previously mentioned resistance. Several studies handle this issue considering both extrinsic (money, recognition, reputation) and intrinsic (social status, task fulfillment, altruism) benefits (see e.g. [10, 23–27]). At the same time, the material agency of the platform, which is entangled in the everyday practices of users, concretely participates in the production of output. As Scott and Orlikowski [28, p. 19] affirm, “social media are not neutral pipes through which knowledge is delivered but integrally and materially part of knowledge production”. In line with the extant literature rooted on mangle theory we can say that the output of what we call inner entanglement is the unpredictable and emergent result of the mangle of practice between users and the platform. Such a result can be identified, from time to time, with the list of the 10 most voted ideas that WM takes into consideration for realization. This is a simplification, in that the result of entanglement between users and the platform is more rich and complex. We have narrowed the focus on the application to the gathering of ideas in order to exemplify our argument. The discussion on mangling could readily be extended to include all its features. In this case, the choice to produce limited editions of old products can be seen as accommodation by the firm. The winning idea was to start up production of a biscuit that was popular in the seventies. The firm carried out the idea of re-producing the biscuits and offered them as a free sample for customers who bought two packages of biscuits or snacks. In this way, the firm satisfied its most devoted customers, the “former children” community, without really returning to the past. In the same vein and in response to continuous calls for old surprises,³ the firm activated a blog entirely dedicated to them and run by the person who has been managing WM surprises and promotions since 1978. As previously noted, another significant instance of resistance against the firm's purpose of gathering new ideas from customers was inherent in the mechanism of idea voting. The online community was conservative; therefore, the most innovative ideas risked being excluded. The accommodation chosen by the firm was to break the “rules of the game” by directly selecting the most promising ideas even though they were not the most voted by the community. At the end of the first developmental stage, the firm had identified the main forms of resistance to its original purposes, and once it had experienced the platform's potential, it identified new goals to be reached. The main forms of resistance involved both contents and methods and referred to the community's conservative tendency. Specifically, resistance can be identified as the tendency to suggest ideas repeatedly on the same issues, ideas frequently connected to a return to the past and the tendency to exclude the most radically new ideas by

³Some of WM's products contain small toys or gadgets in their packaging (e.g. small pie or cookie shaped erasers) which have become a cult phenomenon among adults.

simply not voting them. Another instance of resistance against the firm’s dream to have a creative community working on innovative ideas for WM was that what the firm had was, at best, a community of “creative”. In fact, the first year of MIW revealed that people tended to prefer suggesting their “original” ideas instead of working on someone else’s ideas. The result was that suggested ideas were frequently replicated or were very similar to others, whereas promising ideas, which would have needed only slight adjustment to be considered for realization, remained untouched. The firm accommodated these instances of resistance through modification of technology and practices. At the same time, these mo would also facilitate the achievement of the new goals the firm identified for the platform.

4.2 The 2nd Developmental Stage

Figure 3 represents the two entanglements—inner and outer—that we have identified for the second developmental stage.

The second developmental stage starts with the revision and extension of the firm’s initial goals. In particular, after the successful WWF initiative and receiving some unexpected, highly innovative ideas, the company interpreted these facts as signals of MIW’s potential to gather not only incrementally new ideas, but also radically new ideas. This bias of a scarce innovative potential on the part of customers was also shared by DCM who declared at the launch of MIW that the firm’s expectations were limited to incremental ideas, as reported in the first developmental stage.

As a result, in the second developmental stage, the company decided to pursue customer involvement in the innovation process with greater emphasis by fostering the proposal of radically new ideas and by improving the quality of proposals received. These new goals implied the implementation of new platform services,

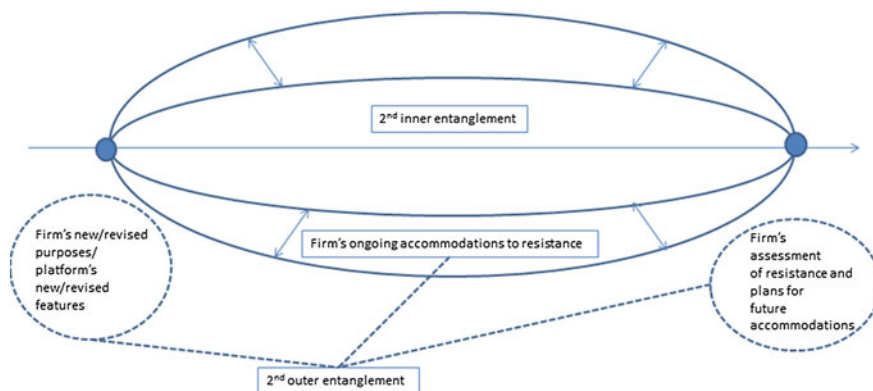


Fig. 3 The second developmental stage

such as a procedure called search-sift through-find, a tutor, and polls on specific issues.

The search-sift through-find procedure was introduced both to limit the conservative attitude of the online community and to foster more radically innovative ideas, therefore it represents both an accommodation to users' resistance and a mean to pursue the company's new innovation goals. This new service allows marketing staff and brand managers to choose an idea, independently from the success it garnered in the community. Several innovative ideas can be directly selected and developed. A set of ideas deemed interesting by WM staff but with few Community votes are resubmitted to the Community for reconsideration through the "Not to forget ideas" link. This new service impacts both the inner and outer entanglement. On one hand, it facilitates managers in identifying ideas with the most potential by means of a more advanced search and presentation system; on the other hand, it encourages users to go beyond easy suggestions while stimulating more challenging proposals. It is worth noting that ideas have to be analyzed by the firm's employees, which limits the applicability of automated information retrieval approaches. In this case, the platform mainly helps by providing an overview of large amounts of data, so that the marketing staff can gain insight from this information. Once an idea has been selected and developed, it appears on the list of developed ideas. It is clearly stated that the idea did not receive the highest ranking from the community, but that it was chosen directly by the company's management, thus contributing to a further reason for a sense of satisfaction by the contributor. The tutor was introduced to provide users with help in order to improve the quality of the proposals received, thereby reducing idea repetition and increasing recombination. It represents an accommodation to previously detected user resistance. The tutor provides suggestions on how to formulate ideas in order to make them clearer and have greater chances of being chosen by the community. However, the tutor does not provide any judgment on the quality of ideas. He/she also encourages users to check if their idea already exists in the community, avoiding resubmission of a previously existing idea. Repetition causes the idea to split votes, resulting in a low correlation between the quality of an idea and the number of votes it receives. In the case of great similarity with an existing idea, the tutor may encourage users to post their idea description as a comment instead of a new stand-alone idea. The tutor can also open new discussion threads and delete inappropriate posts to safeguard the company's reputation. Through a tutor, the company aims to be present, not to show off and to remain as neutral as possible.

Polls on specific issues of particular interest to the company were introduced to pursue the objective of getting new ideas from the community more effectively. It represents an accommodation to the users' resistance of proposing mainly conservative ideas, aimed at re-launching discontinued products. Each brand manager can launch a quantitative/qualitative poll and then the Marketing Research Unit identifies users to be involved in the poll in order to have a stratified sampling of the population under investigation. This procedure rewards customers with indirect financial incentives (free products) on the basis of the intensity of their participation in the polls.

In the second developmental stage, there was a revision of the professional figures involved in MIW. As a consequence of the new services, a more systematic involvement of managers in different units was enacted. In the first developmental stage, DCM acted as a sort of “idea-router”, involving the relevant brand manager, the marketing unit or the platform innovation manager from time to time. In the second developmental stage, with the new “Search-sift through-find” service and the launch of specific polls, brand managers and the marketing unit were stimulated to interact directly with the tool and use it to look for new ideas on specific themes of interest. WM realized that only selected managers and experts in specific fields can usefully interact with customers and identify radical innovative ideas. New services were introduced in order to enlarge the commitment of the whole company; also, a carefully selected group of employees was chosen to directly interact with customers. The new professional figures involved are themselves a form of accommodation to the resistance that emerged both in the inner and outer entanglements. In the inner entanglement, the resistance addressed is represented by the above-mentioned conservative customer behavior. In fact, merely knowing that there were marketing and innovation experts behind the scenes with the task of observing and scouting “highly innovative” ideas had the effect of stimulating the most innovative wing of the online community. In the outer entanglement, the resistance addressed is represented by the risk of bias connected to the involvement of only one person (i.e. DCM), or one department (i.e. the digital communication department) in MIW. Moreover, in order to guarantee company engagement in MIW at all levels, firm’s practices were revised introducing in the second developmental stage: a weekly review meeting involving Directors, the Business Development and Innovation Unit (BD&I) and the Digital Communication Unit; a monthly newsletter sent to BD&I, MKT, the Marketing Research Unit and Trade; and periodical review meetings involving the whole company.

In the following, some of the resistance-accommodation dynamics subsequent to the start of the second developmental stage—indicated in Fig. 3 as “Firm’s ongoing accommodations to resistance”—will be described.

A first example of resistance regards a slowing down of participation in the online community and the subsequent accommodation of the company. In the first months after launching MIW, the number of new ideas as well as comments on others’ ideas grew at a fast pace. Then, in the second developmental stage, this pace started to decrease and, for a certain time, the number of ideas remained almost unchanged. The company interpreted this resistance in MIW’s evolution path as a result of the fact that, up to that moment, WM had not yet launched any product based on ideas collected from MIW. This lack of action most likely provoked dissatisfaction among contributors. The first accommodation introduced by the company was to provide users more information about work in progress by means of the “Under realization ideas” link. Afterwards, a re-design of the evaluation process was undertaken in order to shorten the time-to-market factor. Small and

easy to implement projects were given priority in order to show the community that the company was true to its word. Handling the process in a timely manner was illustration that the company was not using MIW as a mere communication channel, but that it seriously considered MIW as a precious source of new ideas. For customers, it is highly important that their suggestions are actually used by the company to innovate. In this vein, the firm launched an idea diary in order to keep customers constantly informed on the path followed by ideas submitted to MIW. According to interview data, the scarce communication by the firm about the “life” of ideas after submission to MIW was recognized as a factor affecting participation slowdown. The idea diary openly informs customers about idea processing towards realization/rejection. The team explains why they appreciated and selected the idea. If it is eventually realized, they discuss how it was carried out. Otherwise, they discuss the reasons for rejection. The team frequently groups several ideas together through the diary and provides a solution intended to merge stimuli from several users. This kind of accommodations seemed to produce the desired result and the participation rate on MIW began to increase again.

The second example of resistance-accommodation dynamics that we will describe regards the role of the tutor, introduced to help customers in formulating new ideas. Interviews revealed that the use of a tutor turned out to be initially below company expectations. The community did not seem to appreciate this new service and scarcely used it. This customer behavior can be read as resistance towards the firm’s aim of gathering better formulated ideas from the online community. A few months later, some comments were posted on the blog and forced the company to change the way the tutor was introduced to the community.

After this company accommodation, consisting of an adjustment of technology content, the message became more generic and better suited to MIW users who are not young Net surfers—as described above—and who, in fact, started to rely on the tutor more often and more readily. The language turned from a sort of official and political jargon—as noted by some users—to a more emotional and easy tone. Again, this is an example of how social media are not “neutral pipes” and a few words to introduce a new actor into a community can strongly influence users’ behaviors. It is never known in advance which accommodations will be successful and if they will lead to the emergence of new resistance. As illustration that the resistance-accommodation dynamics are a never ending story, interviewees told us of a plan to start a third developmental stage introducing some structural changes in the platform’s features. The changes will include features to help users explore the idea space by linking similar ideas more clearly on the site, therefore reducing the repetition of similar ideas while increasing recombination with other existing ideas. Table 1 summarizes main resistances-accommodation occurred along the first and the second developmental stages.

Table 1 Resistance—accommodation across stages

| Stage | Resistance | Accommodation | | |
|-------|--|---|--|---|
| | | Adjustment of technology | Revision of firm's practices related to the platform | Revision of firm's practices related to the real world |
| 1st | Conservative attitude (return to old surprises) | Launch of a blog on old surprises (content and service) | Introduction of a new role for a long standing employee (the woman who has been managing WM surprises and promotions since 1978) | – |
| 1st | Conservative attitude (return to old surprises) | Communication on the homepage of the organized meetings (content) | – | Organization of big meetings for surprise collectors |
| 1st | Conservative attitude (return to old surprises) | Communication on the homepage of the new techno-surprises (content) | – | Introduction of a new version of surprises as applications for smartphone |
| 1st | Conservative attitude (return to old products) | Communication on the homepage of the launch of limited editions, list of the stores where to find the products and the duration of the initiative (content) | – | Production and sale of discontinued products as limited editions |
| 1st | Conservative attitude (disruptive ideas are not voted) | Communication on the homepage of the new informal procedure of idea selection (content) | Deep examination of all the ideas suggested by customers and direct selection of the most innovative ones independently from the number of received votes (informal procedure) + direct involvement of marketing staff and brand managers on an occasional basis | – |

(continued)

Table 1 (continued)

| Stage | Resistance | Accommodation | | |
|-------|---|---|---|--|
| | | Adjustment of technology | Revision of firm’s practices related to the platform | Revision of firm’s practices related to the real world |
| 2nd | Conservative attitude (disruptive ideas are not voted) | Introduction of a new formal procedure “search-sift through-find” (service) and relevant communication: “from now on the marketing staff will fix eyes on your ideas” (content) | Direct involvement of marketing staff and brand managers on a systematic basis | – |
| 2nd | Conservative attitude (disruptive ideas are not voted) | Introduction of a new link “not to forget ideas”: ideas that have received only a few votes, and are vice versa considered interesting by the marketing staff, are brought back to the users’ attention to be re-considered (service) | Direct involvement of marketing staff and brand managers | – |
| 2nd | Low quality of ideas/discussion | Introduction of “contact tutor” service via MSN messenger or Skype to support new idea submission (content + service) | Introduction of a new role—the tutor—dedicated to support/intervene in the community (provide suggestions to improve ideas, open new discussions and delete inappropriate posts...) | – |
| 2nd | Monothematic ideas (customers tend to focus on a limited set of topics when suggesting new ideas) | Launch of polls on specific issues (of interest to the company) (content + service) | Direct involvement of the brand managers and marketing research unit to suggest the poll, select the sample that can participate and examine the submissions | – |

(continued)

Table 1 (continued)

| Stage | Resistance | Accommodation | | |
|-------|---|---|---|--|
| | | Adjustment of technology | Revision of firm's practices related to the platform | Revision of firm's practices related to the real world |
| 2nd | Bias due to the initial direct involvement of the digital department only | – | All the already mentioned government activities that include participation of other departments (new services, launch of polls, tutorship...) | – |
| 2nd | Bias due to the initial direct involvement of the digital department only | – | – | Introduction of a weekly review meeting involving Directors, the BD&I Unit and the Digital Communication Unit |
| 2nd | Bias due to the initial direct involvement of the digital department only | – | – | Launch of a monthly newsletter to BD&I, MKT, the Marketing Research Unit and Trade |
| 2nd | Bias due to the initial direct involvement of the digital department only | – | – | Organization of periodical review meetings involving the whole company |
| 2nd | Participation slowdown | Launch of the idea diary (content + service) | Direct involvement of marketing managers in communication activities related to the diary on the platform | – |
| 2nd | Participation slowdown | Extended account on the blog of the launch-promotional events occurring in the real life, with interviews to the participants and comments by the winners (content) | – | Organization of big events around the country to launch winning initiatives: the customers who suggested the winning ideas are invited to participate to the launch and to post comments on the blog |

5 Conclusions

The scope of this contribution includes exploring the mangling of an information system and its users in the context of a social media platform. We investigated the empirical case study of MIW, a social media platform developed by a leading Italian firm in the food industry, created to maintain contact with its customers and gather innovative ideas.

Theoretical and practical contributions emerged. On the theoretical side, it provides detailed attention to the co-evolution over time of human-material mangling, an aspect that papers in this area often omit. It also aims to provide a clear picture of a series of inter-related emergent phenomena, entangling managers, customers, and the social media platform. Social media are a sort of modeling clay, allowing humans agents to (re)configure its shape in a way precluded to other kinds of information systems. It suggests the existence of two kinds of accommodations, both proactive and passive in nature. By their means, the company attempts to disrupt the prevailing users' conservative needs by stimulating the most innovative wing of the online community and by revising firm practices. A single-loop learning [29] can be identified where the organization compares its performance to a set of pre-established goals and tries to make appropriate accommodations. In some cases, a double-loop learning emerges where the firm reassesses goals themselves. It introduces further dimensions in mangling. The double mangle can only partly explain MIW's evolution over time; other mangles should be considered. In fact, as it is well known in the literature [30], once a firm decides to develop social media strategies, the whole ecosystem of online social media is somewhat activated. Thus, other mangles on different, loosely interconnected platforms (i.e. FB, Twitter, blogs, consumer forums, etc.) may have considerable impact on its evolution.

On the practical side, the mangle perspective on MIW's evolution also offers useful insight for practitioners. Analysis of the firm's initial objectives for MIW and description of a tortuous path made of resistance and accommodation clearly indicate that the output of social media is unpredictable, as it depends on several factors and is temporally emergent. Firms that decide to use social media should clearly define their objectives, constantly monitor the outcome, be prepared to adjust their objectives over time.

Future studies should seek to extend our findings, specifically exploring social media platforms for innovation in different organizational settings and industries. In fact, we note that our findings are limited to the extent that we only examined the adoption of one specific digital innovation in a particular organizational context. It seems fruitful to explore the possibility of applying the mangle theory to the entire social media ecosystem, which is deeply interconnected. We could further investigate how the ecosystem may create blocks (i.e. resistance) in accommodation processes undertaken by the companies. Finally, elaborating on the existence of two kinds of accommodations seems promising. By means of theory-building

procedures and techniques [31, 32], we could try to enrich the mangle theoretical framework of reference and suggest a more fine-grained classification of accommodations.

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