



The brand, the persona and the algorithm: How datafication is reconfiguring marketing work☆

Isabelle Aimé^a, Fabienne Berger-Remy^b, Marie-Eve Laporte^{b,*}

^a Kedge Business School, 40 Avenue des Terroirs de France, 75012 Paris, France

^b IAE Paris – Sorbonne Business School, Université Paris 1 Panthéon-Sorbonne, 8 bis rue de la Croix-Jarry, 75013 Paris, France

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ABSTRACT

Evidence suggests that datafication is bringing a potentially profound yet poorly understood transformation of marketing work. Most companies still struggle to adapt to the data deluge, which challenges the role of marketing inside an organization. This research uses a single case study to analyze how datafication is reshaping marketing work through the lens of sociomateriality and affordance theory. The findings shed light on the agency and imbrication of the persona, the brand and the algorithm together with managers and consumers. They reveal two actualized affordances obtained through datafication: *fragmented consumer tracking* and *organic branding*. This research contributes to sociomateriality and affordance theory by introducing a new type of agent, namely, *agents of fiction*, which are characterized by a symbolic and immaterial nature. This research also contributes to the marketing-as-practice perspective by providing an in-depth understanding of marketing work as a result of dynamic imbrications between human and nonhuman agents.

1. Introduction

Recent special journal issues (Grewal et al., 2020; Rust, 2017; Yadav & Pavlou, 2020) have highlighted the decisive impact of datafication on marketing work. Datafication is defined as “the practice of taking an activity, behavior, or process and turning it into meaningful data” (Leonardi & Treem, 2020, p. 1602). As Rust puts it (2020a, p. 25), certain advances, such as “artificial intelligence, the Internet of Things, and huge leaps in computation and data analysis, will lead to a marketing environment 50 years from now that few would recognize today.” Datafication is becoming central in decision making, and this “deluge of customer data is altering the practice of marketing” (Kalaigian et al., 2021, p. 35; Sridhar & Fang, 2019). Marketing is said to be undergoing a profound transformation (Day, 2011; Kannan & Li, 2017; Kumar, 2018; Moorman & Day, 2016). As an illustration, Lee et al. (2014) identify major challenges for marketing work, such as the generation of actionable customer insights and an overreliance on data crunching, which can stifle creativity and innovation and impede the maintenance of brand reputation in social media environments.

Faced with such challenges, most companies struggle to adapt their marketing approach. In a survey of nearly 500 American companies, Rodriguez-Vila et al. (2020) underscore that marketing managers feel

uncertain and anxious about the role and performance of marketing and that only 20% are satisfied with their department effectiveness. In the same vein, a 2021 executive survey from NewVantage Partners reports that only 29% of Fortune 1000 companies have achieved a data-driven organization and that 92.2% face “cultural challenges relating to organizational alignment, business processes, change management, communication, people skill sets, and resistance or lack of understanding to enable change” (Bean, 2021, p. 3). These issues are particularly relevant for legacy firms, which are defined as “brick and mortar companies typically [set up] before the modern digital era” (Kopalle et al., 2020, p. 115) that have built their success on traditional marketing. Such firms once represented the marketing paradigm and were considered to be the “best school” for practitioners (Aimé et al., 2018). However, while digital native companies such as Uber and Netflix are immersed in the digital ecosystem, which is the very source of their value creation, legacy firms are destabilized by datafication and struggle to adapt their marketing (Kopalle et al., 2020; Loonam et al., 2018).

Questions around the role of marketing within organizations have been debated, and studies have concluded that marketing has been subject to a possible loss of influence (Brown et al., 2005; Homburg et al., 2015; Verhoef & Leeflang, 2009). Datafication brings this questioning a step further. Marketers no longer have exclusive, direct access

* Corresponding author.

E-mail addresses: isabelle.aimé@kedgebs.com (I. Aimé), berger-remy.iae@univ-paris1.fr (F. Berger-Remy), laporte.iae@univ-paris1.fr (M.-E. Laporte).

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to consumers, and they are losing influence on sales (Homburg et al., 2015) and IT departments (De Swaan Arons et al., 2014). Furthermore, marketers are either challenged by new specialized jobs (Brinker & McLellan, 2014), completely transformed (Cluley et al., 2020), or directly threatened by artificial intelligence (Davenport et al., 2020; Rai, 2020). This raises concerns over marketers' employment prospects as, today, the marketing function can be performed by other people, or even by nonhuman agents – a concept close to “actants” in Latour's words that describes any entity acting within a sociotechnical network (Latour, 2005).

While for many years, the information system research (Dremel et al., 2020; Lehrer et al., 2018; Zammuto et al., 2007) and the management research (Loonam et al., 2018) have focused on the impact of datafication on work practices and organizations, the research on its consequences on marketing work is still scarce. To date, the marketing research has mainly focused on the potential of datafication from a conceptual point of view and provided research agendas (Grewal et al., 2020; Wedel & Kannan, 2016) and models (Du et al., 2021; Erevelles et al., 2016; Kopalle et al., 2020; Rodriguez-Vila et al., 2020). Other studies have investigated the disruptive practices stemming from service or digital native companies (De Luca et al., 2021; Gielens & Steenkamp, 2019). However, there has been little empirical research investigating how the potential of datafication is concretely adopted (or not) in marketing and the extent to which marketing work is (or is not) modified.

Therefore, the goal of this paper is to explore how datafication reconfigures marketing work by means of a single case study analyzed with the help of a sociomateriality and affordance theory framework (Leonardi, 2011; Leonardi & Treem, 2020; Orlikowski & Scott, 2008). This research reveals the sociomaterial role of *agents of fiction* in marketing work. It also contributes to the marketing-as-practice perspective on marketing work by shedding light on the sociomaterial imbrications obtained through datafication and resulting in two affordances: *fragmented consumer tracking* and *organic branding*. Finally, the research provides insights into the potential evolution of marketing work.

2. Diverging perspectives on marketing work

2.1. The classical perspective on marketing work

Marketing has progressively developed as a discipline and a managerial practice over more than a century, and since the 1950s, it has been widely adopted as a key management function, notably in fast-moving consumer goods companies (Aimé et al., 2018; Tadajewski, 2009). Marketing work can be defined as “the process of taking care of the fulfilment of customer needs and desires” (Grönroos, 1994, p. 350) in which marketers evaluate opportunities and make informed decisions (Moorman & Miner, 1998; Naik et al., 2005; Zinkhan & Pereira, 1994). On this basis, marketing work consists of a succession of carefully planned activities starting with the formulation of a strategy followed by its implementation and evaluation through metrics (Varadarajan, 2010; Morgan et al., 2019). Marketers take on a number of tasks that are mainly developed from the inside out (Miller et al., 2002; Urde et al., 2013). Such tasks include segmentation, targeting and positioning (Natter et al., 2008); reporting (Casenave & Klarmann, 2020); internal planning and coordination (Ernst et al., 2010; Verhoef & Leeflang, 2009), interfacing with advertising agencies (Moeran, 2009) and brand development (Brexendorf & Daecke, 2012; Veloutsou & Panigyrakis, 2001).

Some scholars question the influence of marketing in organizations (Verhoef & Leeflang, 2009). Although marketing tasks are crucial for a company (Merlo et al., 2012) and contribute significantly to company performance (Cui et al., 2014; Morgan, 2012), the position and influence of marketing within organizations have been debated virtually since its inception (Aimé et al., 2018). Marketing is regularly considered to lose power in favor of sales (Homburg et al., 2015) or IT (De Swaan Arons

et al., 2014). Additionally, some argue that marketing tasks should not necessarily be performed by professional marketers, as marketing is more of an attitude of mind and a “diaspora of skills and capabilities spread across and even outside the organization” (Kent, 1986; Webster et al., 2005, p. 36).

The classical perspective is also criticized for being disconnected from practices. Indeed, marketing scholars have mainly focused on revealing patterns and tools that are perceived as highly replicable (Grönroos, 1994; Kent, 1986). The goal was to provide managerial contributions in the form of models and textbooks that could be easily taught and learned (Dibb et al., 2014; Gross & Laamanen, 2018). However, by simplifying or hiding the complex social interactions that characterize marketing work, this conception of marketing may be reductive.

2.2. The marketing-as-practice perspective

Drawing on the strategy-as-practice turn (Fenton & Langley, 2011; Jarzabkowski & Paul Spee, 2009; Whittington, 2006), scholars in market studies have adopted a more critical view of marketing work that sheds light on its contextual and embedded nature (Araujo et al., 2008; Jacobi et al., 2015; Skålén & Hackley, 2011; Svensson, 2007; Zwick & Cayla, 2012). Another line of research in marketing management embraces a pragmatic approach of marketing work by examining the variety and scope of marketing activities, tasks and processes (Dibb et al., 2014). From the marketing-as-practice perspective, marketing work relies on hidden patterns, know-how and capabilities that are profoundly embedded in a firm's organizational culture. It argues for a more situated and empirical approach to marketing work with a focus on microlevel practices (Dibb et al., 2014; Gross & Laamanen, 2018; Kjellberg & Helgesson, 2006; Zwick & Cayla, 2012). Marketing work is also understood as being performed through multiple social interactions with internal and external stakeholders – among them, consumer communities (Black & Veloutsou, 2017; Cova et al., 2015) and key suppliers such as advertising agencies (Jacobi et al., 2015; Moeran, 2009). In this view, marketing work is defined as performative because it is “constituted by interlinked practices that enact a world of ideas and a world out there through a chain of translations” (Kjellberg & Helgesson, 2006, p. 845). Thus, marketing work actively molds phenomena that are socially constructed, such as the shaping of customer segmentation (Sunderland & Denny, 2012; Venter et al., 2015) and new markets (Araujo, 2007), through activities such as advertising planning (Jacobi et al., 2015) or the shaping of the consumer (Cochoy, 2002; Desroches & Marcoux, 2012) through sociomaterial devices such as focus groups (Grandclément & Gaglio, 2012). This perspective on marketing work points to an in-depth understanding of the sociomaterial entanglements that shape reality. It can be particularly fruitful for the study of socio-technical phenomena such as datafication.

3. Marketing work facing the challenges of datafication

Whether it is simply referred to as big data or as a big data revolution (Erevelles et al., 2016), big data analytics (Dremel et al., 2020) or big data technologies and analytics (De Luca et al., 2021), datafication can be understood as a practice of transforming a process or activity into actionable data (Leonardi & Treem, 2020). The research acknowledges that datafication deeply transforms marketing (Grewal et al., 2020; Kopalle et al., 2020; Moorman & Day, 2016). The process may be two-way, as “the marketing function is not only influenced by but also influences the immediate business environment” (Kumar, 2018, p. 2). Ongoing changes among consumers and markets increase opportunities and expectations for proposed personalized and experiential offerings. At the same time, however, marketing increasingly uses technological advancements and data-processing capabilities to influence the environment.

The impact of datafication can be seen at multiple levels. First,

algorithms – a set of operations and rules applied iteratively following a systematic method – revolutionize how markets are approached in many ways, not only in terms of services (Rust, 2020a). Although algorithms are not new, their use has grown in sophistication and is now embedded at multiple organizational layers, thereby impacting work practices, illustrating what Orlikowski (2016) calls “algorithmic phenomena”. As a result of D³ (“digital, data-rich, and developing market”) environments, data, which are always becoming more affordable and more abundant, can be effectively leveraged to support marketing decisions (De Luca et al., 2021; Erevelles et al., 2016; Sridhar & Fang, 2019). Accordingly, new forms of marketing have emerged with “in-use information”, defined as “information acquired in real-time as a product or service is consumed” (Kopalle et al., 2020, p. 116), which permits the development of technologies such as geofencing, search marketing, retargeting, AB testing, programmatic reality, and virtual reality.

Second, this new digital ecosystem disrupts consumers’ relationships with brands by creating distinct (dis)intermediation processes that put the consumer in the driver’s seat (Gielens & Steenkamp, 2019). Disintermediation occurs through the rise of direct-to-consumer and consumer-to-consumer models with the development of platforms such as Airbnb. Conversely, new intermediation emerges between brands and consumers, which implies a multitude of interactions (Appel et al., 2020; Iglesias & Bonet, 2012) leading to the coconstruction of meanings within communities (Quinton, 2013; von Wallpach et al., 2017). As a consequence, marketers are losing control over brands (Wider et al., 2018).

Third, datafication has fostered new positions, such as chief digital officer, chief information officer, and chief data officer (Joshi & Giménez, 2014; Singh & Hess, 2017), while certain traditional positions, such as market research manager, have been deeply transformed (Cluley et al., 2020). Indeed, new technologies require new skills in different domains, including data analytics skills (Joshi & Giménez, 2014; Wedel & Kannan, 2016), social media skills (Brinker & McLellan, 2014; De Swaan Arons et al., 2014), and collaborative skills (Kane et al., 2016).

Datafication has challenged marketing work even further. This is because it can consolidate standards through the increased accumulation of knowledge and facilitate higher levels of professionalization. Datafication can also mean the end of marketing as it has been practiced, as marketing tasks may eventually be better performed by artificial intelligence and/or other management professionals. Sociomateriality and affordance theory, which have been used extensively to illuminate technology’s impact on work and organizations, provide a useful framework for analyzing the effects of datafication on marketing work.

4. Viewing datafication through the lens of affordances

This paper is based on a sociomateriality approach and more precisely on affordance theory. Scholars in organization studies have long recognized that practices are sociomaterial configurations created by technological (“material”) and human (“social”) interactions and that they seem central to the performance of work as well as to organization change (Leonardi, 2011; Malhotra et al., 2021; Reckwitz, 2016). In this view, which is rooted both in Giddens’s theory of structuration (1984) and agent-network theory (Callon, 1984; Latour, 1987, 2005), the social and the material are presented as inseparable in practice and ontologically indeterminate (Orlikowski, 2016; Orlikowski & Scott, 2008). This theoretical framework has been mobilized to shed light on how digitalization reconfigures work and organizations (Callon & Muniesa, 2005; Orlikowski, 2016; Orlikowski & Scott, 2015).

From a complementary perspective, affordance theory, which is rooted in Gibson’s work (1977), suggests that an agent perceives an object in the environment in terms of how it can be used (what it “affords” the agent in terms of action possibilities) and not as a set of characteristics or features that are inherent to the object and independent of the agent. For instance, a tree affords an individual the possibility of shelter in case of rain and does not depend on that person consciously analyzing the tree’s height, variety or age. Similarly, an

email system affords an individual with the appropriate faculties the opportunity to communicate. In this view, social and material agencies are distinct from one another, and affordances – perceived or not by users – arise from the user/object relation (Leonardi, 2011; Volkoff & Strong, 2017). Thus, Volkoff and Strong (2013) define an affordance as the potential for achieving a goal that arises from the relation between an object and a goal-oriented agent. A single object may provide multiple affordances or bundles of affordances that may be interconnected (Leonardi, 2011) and applied at distinct levels – individual, shared or collective (Leonardi, 2013).

Building on sociomateriality and affordance theory, Leonardi (2011, 2013) goes one step further by including the concept of “imbrication”. He suggests that as human agents seek to reconcile their goals with the materiality of a technology, they actively exploit affordances and constraints, which leads to reciprocal changes and a sequence of imbrications that change routines or give rise to new technologies. To become effective, an affordance – which is merely a potential action – must be perceived and “actualized” by a human agent with both the necessary capability and the goal to do so (Volkoff & Strong, 2013). In other words, a given technology is “actualized” when an agent realizes its potential for action; therefore, in the organizational context, some affordances are never transformed into effective actions.

Affordance theory has been widely used in the information systems (IS) research to explain the organizational impacts of new technologies such as social media (Jung & Lytinen, 2014; Majchrzak et al., 2013; Treem & Leonardi, 2013), software development (Canhoto, 2021; Krancher & Luther, 2015; Van Osch & Mendelson, 2011), or, more recently, big data (Dremel et al., 2020; Lehrer et al., 2018) and open platforms (Abhari et al., 2022). For instance, Zammuto et al. (2007) provides five examples of organizational affordances offered by information technologies: work process visualization, real-time innovation, virtual collaboration, mass collaboration, and simultaneous synthetic representation. With regard to big data, Lehrer et al. (2018) identify two affordances that emerge in service companies (service automation and human-machine service practices), while Dremel et al. (2020) indicate affordances that occur in the auto manufacturing context (establishment of customer-centric marketing, provisioning of vehicle-data-driven services, development of data-driven vehicle, and optimization of production processes).

In marketing, De Luca et al. (2021) note three affordances of big data in the context of services, specifically, customer behavior pattern spotting, real-time market responsiveness, and data-driven market ambidexterity. They use these affordances as independent variables to estimate the payoff of big data investments. However, the affordances proposed in this study do not stem from empirical fieldwork but are constructed from recent marketing activities described in the literature (Erevelles et al., 2016; Wedel & Kannan, 2016). To the best of our knowledge, no research has yet highlighted actualized affordances based on an empirical study of marketing work. However, the study of “actualized affordances” appears to be a useful framework to identify organizational change mechanisms while providing guidance to managers (Volkoff & Strong, 2017, p. 11). Thus, our research aims to answer the following question: how and to what extent do the affordances obtained through datafication reconfigure marketing work? The empirical study of this question first requires the identification of affordances but, above all, the determination of whether and how such affordances are actualized in situated practices. Toward that end, a single case study was conducted at a legacy firm.

5. Methodology: A single case study

5.1. Research approach

A single case study relying on semistructured interviews and observations was carried out. This is a relevant methodology for exploring intraorganizational phenomena and requires an understanding of the

participants' perspectives and getting close to them in their natural setting (Creswell, 2012; Inglis, 2008). This approach has the potential to generate rich insights on substantive topics by focusing on the “how” and/or “why” aspects (Dyer & Wilkins, 1991; Harrison et al., 2017; Yin, 2014). Most research mobilizing sociomateriality and affordance theory relies on single cases “with interviews as the main source of data (albeit there tends to be more use of observation than in other qualitative studies)” (Cecez-Kecmanovic et al., 2014, p. 816). Observations make it possible to capture sociomaterial imbrications “in action” and to bring into focus the agency between human and nonhuman actors (Gheradi, 2012; Nicolini, 2013). Following Nicolini's practice theorization (2009), an iterative process of zooming in and out of practice was adopted, beginning the in-depth study in one location (zooming in) and then expanding it to other locations by following the emerging relations (zooming out).

5.2. Research context: A typical legacy firm

Because legacy firms rely on traditional marketing and established brands, they constitute an adequate field of study to analyze and understand the reconfiguration of marketing work. Legacy firms, which still account for a large part of Fortune 1000 companies, appear to be particularly threatened because of the “interdependencies entailed in the production and selling of goods or services, or the value chains”, and they may be jeopardized by digital native companies (Kopalle et al., 2020, p. 115; Loonam et al., 2018). As Bean (2021, p. 5) underscores, such firms “remain saddled with legacy systems, legacy cultures, and in some cases, legacy skill sets”.

FoodCorps (pseudonym), a large European Fast-Moving Consumer Goods (FMCG) company operating in the food industry, was chosen as a critical case (Benbasat et al., 1987; Goffin et al., 2019) for several reasons. First, it is a major company, a leader in its markets with a large portfolio of well-established global or local iconic brands. Second, FoodCorps is recognized for its excellence in marketing practices and focus on consumer insights, which makes it a first-choice employer for young top business school graduates. Therefore, marketing work is expected to be extensive and of a high standard. Third, it is a typical legacy firm with brick-and-mortar production and supply chain systems, and it mainly relies on retail channels to ensure the physical distribution of its products. Moreover, FoodCorps is a perfect illustration of the above described “legacy interdependencies” and, at the time of the fieldwork, is engaged in reflexive attitude and change management processes to adapt to consumer data deluge.

5.3. Data collection

The data collection took place in three distinct locations: corporate headquarters (HQ), a strategic business unit dealing with national brands (SBU1), and another unit selling a well-known global brand (SBU2). The marketing organizations on all sites were facing datafication issues, with different degrees of maturity depending on experience, skills, brands, and market situations between the two business units. As Orlikowski (1992) notes, the central premise of the structural model of technology is that actors are “knowledgeable” (discursive and practical knowledge) and “reflexive” (they routinely observe and understand what they are doing while they are doing it). Hence, the selected interviewees were experienced managers and practitioners with an engaged approach to the marketing function and digital transformation. To obtain multiple stakeholders' views and increase respondent triangulation, four targets were chosen: (1) marketing and sales managers; (2) digital managers; (3) HR managers engaged in the group's digital transformation; and (4) consultants in major consulting firms (partners and directors of EY, BCG, McKinsey, etc.) or leading FMCG associations, all of whom were working on FoodCorps's digital transformation (Table 1). While they were active stakeholders in FoodCorps, the consultants also possessed a wider perspective on

Table 1
Interviewee details.

Interviewee	Location	Area	Positions	Length of interview
Alex	SBU1	Digital/ media	Project manager	0 h 58
Aurélie	HQ	Human Resources	In charge of the marketing reorganization, former brand manager	1 h 20
Carlos	SBU2	Digital	Project manager	1 h 19
Charlotte	SBU1	Human Resources	HR dedicated to marketing	1 h 10
Claire	SBU1	Marketing	Product manager	1 h 28
Clementine	SBU1	Digital	Project manager	1 h 04
Daniel	FMCG trade association	Marketing	Board member	1 h 42
Denis	EY	Consultant	Partner/managing director	1 h 12
Ethan	Mc Kinsey	Consultant	Partner/managing director	0 h 59
Gina	SBU1	Marketing	Chief marketing officer	1 h 27
Jade	SBU1	Marketing	Brand manager	1 h 16
John	FMCG trade association	Strategy	Board member	1 h 12
Josephine	SBU1	Human Resources	HR dedicated to marketing	1 h 10
Lucas	SBU2	Marketing	Brand manager	1 h 04
Mark	HQ	Digital	Chief digital officer	1 h 45
Michael	EY	Consultant	Partner/managing director	1 h 26
Monica	HQ	Human Resources	Head of digital transformation	1 h 15
Nadia	SBU2	Marketing	Brand manager	1 h 03
Niels	BCG	Consultant	Partner/managing director	1 h 11
Peter	Media agency	Consultant	Chief operational officer	0 h 47
Sally	FMCG trade association	Marketing	Marketing director	1 h 30
Walter	SBU1	Sales	Category manager	0 h 57
Average				1 h 14

datafication thanks to their other clients. Therefore, the interviews complemented the process of gaining insights into affordance potentialities independent of their actualization.

The data were collected through multiple sources: 22 in-depth individual interviews and six days of observation. Each interview was conducted by two researchers following the same study protocol to reinforce trustworthiness (Gibbert et al., 2008): one led the interview, and the other took notes highlighting the context. The interviews took place on site face-to-face and lasted on average one hour and fourteen minutes (Table 1). The interview guide was organized into four themes: (1) the interviewees' professional background, working situation, work tasks, and career; (2) the marketing organization today; (3) the evolution of marketing in recent years, with a reflexive focus; and (4) a prospective vision of marketing. To avoid prompting the informants, issues of datafication were not explicitly mentioned in the interview guide; the theme was investigated further once it was raised by the interviewees themselves. The interviewees were invited to take a step back using biographies, histories, memories, and eyewitness accounts to accurately study the dynamics of change brought about by datafication. Intra-action through time – histories, legacies, and memories – is critical to studying materialization in practice (Barad, 2003). All the interviews were recorded (total duration: 25 h and 23 min) and transcribed in full (474 pages).

To provide unique insights into practices, the researchers spent two days at each of the three locations to observe the marketing and digital teams performing their tasks and attending meetings. To increase the credibility of the data and its robustness (Gibbert et al., 2008; Goffin

et al., 2019), data from interviews and observations were completed with various materials provided by the interviewees (reports, organization charts, internal presentations, white papers, and archives on the marketing organization – 13 documents totaling 708 pages). This information helped enrich the understanding of the case by capturing the complexity of the phenomenon from various perspectives.

5.4. Data analysis

The collected data were analyzed through an iterative process between raw data and an emerging theoretical understanding of the interviewees' observations (Strauss & Corbin, 2014). The data analysis followed a three-step process (Gioia et al., 2013) and was conducted with the help of NVivo12. (1) Two researchers independently coded the material, bringing to light *first-order* themes, and negotiated a common axial code grid (*second-order* themes). (2) The researchers recoded the data with this grid and discussed any discrepancy to obtain a consistent coding. The intercoding reliability check on a random selection of transcripts showed a kappa of 0.84, which is well above the recommended 0.70. (3) After reviewing the sociomateriality and affordance theory literature, two aggregated theoretical dimensions emerged. An illustration of the data structure (based on Gioia et al., 2013) is presented in Fig. 1.

To reinforce internal validity, the researchers made a point of looking for converging evidence among several sources concerning an affordance's actualization through a triangulation process. For instance, the code “hyperspecialization of marketing” in Fig. 2 emerged jointly from three sources: (1) interviews – Aurélie explained that she had just recruited to the marketing team three young experts from external agencies (an integration communication planner, a CRM program manager, and an on-and-off line public relations manager); (2) observations during a meeting of internal and external marketing stakeholders including media buying, owned media, website, CRM and community managers; and (3) collected documents – newly revised organigrams of the marketing department describing newly specialized functions. Additionally, as respondent validation increases construct validity (Gibbert et al., 2008), the researchers shared their analysis with

three key informants – Carlos, Lucas and John – who expressed strong agreement with the framework proposed, with only minor comments that were subsequently integrated.

6. Findings

The interviewees acknowledged that datafication has enabled access to a wealth of consumer data, which has led to a fragmentation of target groups and significant growth in the number of touchpoints. This creates unprecedented complexity for marketers, as Lucas (who used the word “complexity” 34 times during the interview) testifies:

It's tremendously complex. It means we have to... in the past, we used to issue the same message for everyone. Now, we have to understand each target group, what they do, how we're going to address them, what the right media for this is, and then what message we're really going to deliver. In the end, it's almost like working by hand, when we used to do line work.

Reducing the complexity induced by datafication appears to be a major challenge for marketing work. The findings show that the imbrication of marketers with three nonhuman agents – the persona, the brand, and the algorithm – creates two new affordances, which, once actualized, have the potential to reduce complexity. The findings section is organized as follows: the nature and agency of the three nonhuman agents are first described, and two affordances resulting from their imbrication with human agents are detailed: *fragmented consumer tracking* and *organic branding*.

6.1. The brand, the persona and the algorithm as sociomaterial agents

6.1.1. The persona as a prominent agent

To deal with the volume of consumer data, the role of client archetypes (referred to as *personas* by the interviewees) is more important than ever before. Personas embody target groups and are constantly referred to in meetings with third parties, such as communication agencies, or within the company. Thus, the managers in SBU1 use “red,

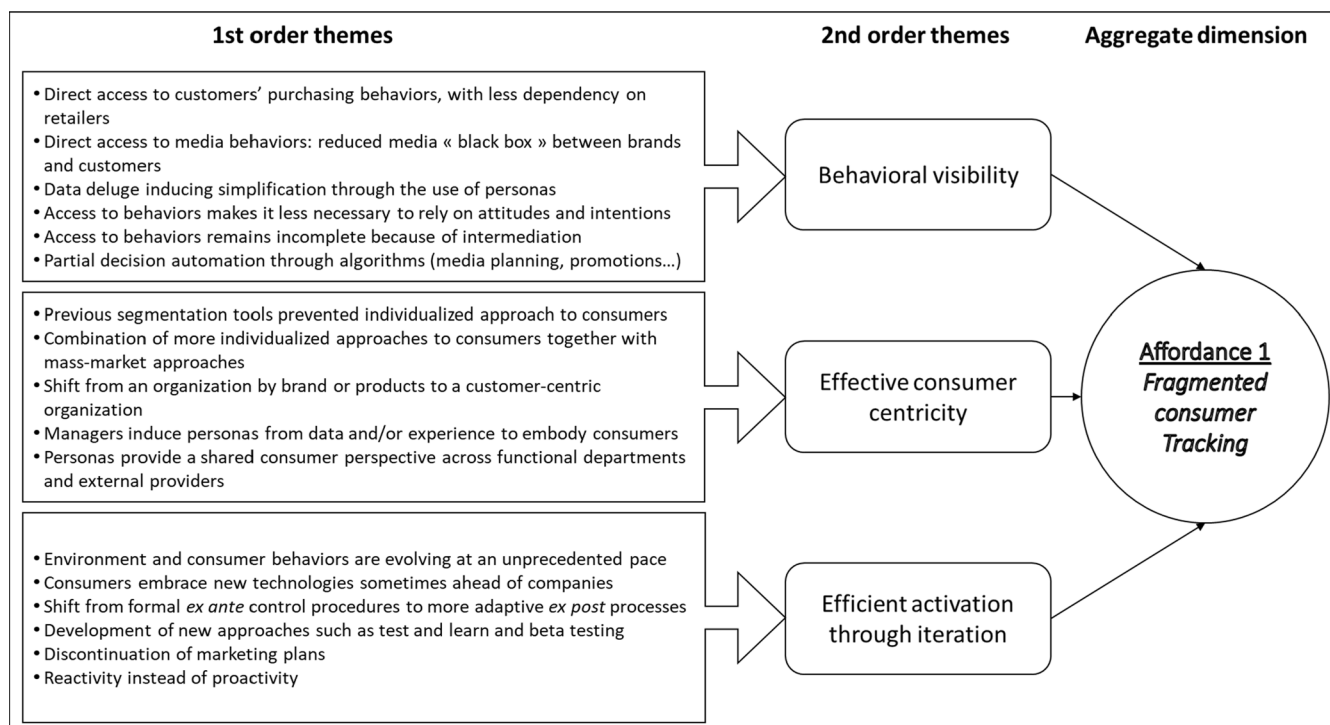


Fig. 1. Illustration of the data structure (Affordance 1).

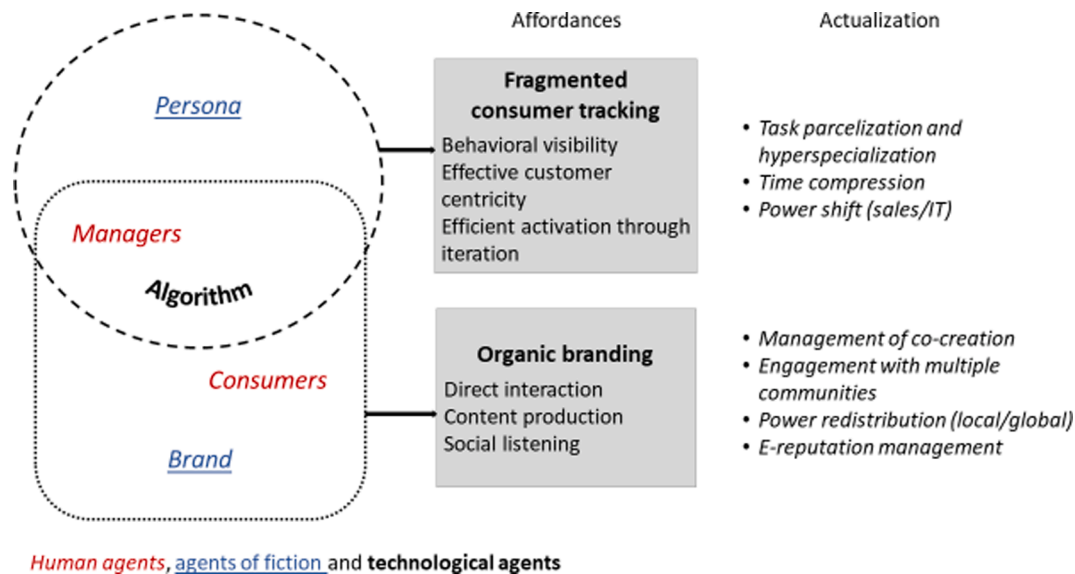


Fig. 2. Imbrications of agents and affordances generated by datafication.

yellow, and blue moms” as if they were part of the company. As an illustration, Clementine explains that to properly manage the brand portfolio and produce good advertising campaigns, they constantly utilize the red mom (for brand A) and the yellow mom (for brand B).

The use of client archetypes is not new in marketing. However, in the past, they were utilized as tools to summarize target groups, mainly based on sociodemographic customer data (Fig. 1). The interviews and the observation done during meetings reveal that the persona now occupies a prominent position inside the organization. Indeed, although fictional, the persona can be considered an agent, as it plays an active role in the organization: it both inspires the marketing response to customer needs and overcomes internal resistance. As with datafication, customer knowledge has increased tremendously in size and precision, it paradoxically becomes almost impossible to grasp the consumer’s reality. Therefore, the persona acts as both facilitator and mediator to connect the different agents.

The persona’s agency is threefold. First, the persona serves as a basis for organizational design. For example, the marketing team in SBU1 dealing with red moms is called the “Red House.” Using this persona, they form a bridge among the local brands and encourage them to share practices – thus, the head of the Red House urges the French marketing team to adopt what the Polish team has successfully implemented for red moms, with no justification other than “Just do it, it’s great!” Second, the persona provides valuable help in exchanges with the numerous communication agencies in regard to the choice of media, content, or tone of voice. For example, in a working session on a communication campaign for a new product launch, the “yellow mom” mediates the debates between the communication agency and the marketing team (“the yellow mom wouldn’t do that”). Third, the persona maps out a clearer distribution of brand territories. It simplifies the allocation of resources, thereby minimizing debate. For example, the “yellow mom” requires a larger chunk of the social media budget than the “red mom”, as she is supposedly more engaged in peer groups.

6.1.2. The brand as a structuring organizational agent

Brands have always been important outcomes of marketing work. The new factor here is the agency role in the brand as an integrator to reduce the complexity induced by the data deluge. The informants regularly refer to the brand as the backbone of the company’s organizational identity regarding specific know-how, history, and values. At the time of the fieldwork, a transversal project called “One Brand X” was nourishing the company with the goal of “giving genuine consistency” to

the global brand strategy.

In fact, it is the construction of a common back office with a global focus that is the story of Brand X. Brand X’s mission is the same for everyone. If you work in Indonesia and I work in Mexico, we all have the same mission: health through food. One day, someone from the founder’s family came to set up the Mexican subsidiary, and it’s not the same local story. So, we have to keep this local aspect, which is the most interesting, because it’s all about people’s stories, and that’s what makes our brands stand out. However, we’re all under the same umbrella. (Carlos).

Indeed, the brand serves as a reassuring reference point, a constant in an ever-changing environment. John explicitly mentions that brands are “social actors”:

I think that today, the truly great brands are those that have a point of view on the world. A brand is a social actor. If the brand is just a product, it gets copied immediately. Kellogg’s, for example, has a point of view on breakfast. (John).

Brands can be assimilated with decision-makers because they contribute to establishing marketing strategies and filtering options. During meetings, the brand is regularly contacted regarding what may or may not be done. The “spirit of the brand” can be felt in the offices, if only through the design of workplaces where the brands’ signs are heavily displayed.

6.1.3. Algorithm as a powerful yet unsettling agent

Algorithms have been employed across industries for a long time. However, while they have mostly been dedicated to product lines, they have become increasingly sophisticated and can now transcend the boundaries between the different brands and product lines. Thus, algorithms provide a more complete view of the consumer journey but also appear as black boxes to marketers who no longer understand them, as Clementine underscores:

We’re also very dependent on our agencies [...]. We delegate everything SEO-related to our agency. That’s what Tom, the digital director, told us – that it is also a bit dangerous what we do because, in the end, we leave it in the hands of experts, but we don’t have the capacity to verify whether it’s really what we need to put in place for our SEO, our natural referencing... We have to trust them.

Indeed, marketing tasks are increasingly automated due to ever more sophisticated algorithms in either communication or product

development. In SBU2, Walter explains how the new automated real-time processing of promotional data makes it possible to identify which brand and format to push in which store so as to detect potential incremental revenue. Thus, there is a shift from category management (retailer oriented) to revenue management (brand oriented), which rebalances the power of negotiation with retailers to the benefit of brands. Another example is social listening. FoodCorps has just acquired an external platform based on artificial intelligence. Carlos says he is using it to better understand consumers. Nadia reveals that she consults it daily and compulsively:

It tracks everything, every post posted by a person who might be influential, meaning they have 5,000-plus subscribers. We receive information all the time. Every day. Like, this weekend, for example, it was a long weekend, but we had two brand events. All weekend long, I kept receiving news about who posted what... I checked it all the time because it might be something not nice. Or something nice....

In the end, many marketing decisions rely on algorithms either because they are fully automated or because decisions made by marketers are based on them. In both cases, algorithms play an important role as agents. The imbrication of algorithms with both human and nonhuman agents leads to two affordances, as observed in the case study. More precisely, the findings show that marketing work can be regarded as a sociomaterial imbrication between humans and objects, resulting in two affordances (Fig. 2): *fragmented consumer tracking* (from the imbrication of personas, algorithms, and managers) and *organic branding* (from the imbrication of brands, algorithms, managers and consumers). In the next two sections, each affordance is detailed along with its related potentialities as well as its actualization in marketing work at FoodCorps.

6.2. Effects of the imbrication of algorithms, personas and managers

6.2.1. Affordance 1: Fragmented consumer tracking

The imbrication of managers, algorithms and personas produces an affordance referred to as *fragmented consumer tracking*, which stems from possibilities to instantaneously but partially track and interact with consumers. Technology now makes it possible to greatly increase consumer knowledge by combining data and experience into personas, which synthesizes data deluge. This provides access to a larger part of the consumer journey and multiplies the touchpoints. It thus affords numerous new opportunities to engage with consumers and provides technical solutions to deal with them, as Gina testifies:

There is no longer one single way to convey a message. It used to be like that: "What do I want to communicate to my consumer? How do I want him or her to perceive it?" And then I played with the GRPs to deliver it. It was pretty simple at the time. Now, for [the consumer] to perceive this message, there can be 10,000 ways, 10,000 touchpoints, and then it may not necessarily be us who deliver the message but an influencer. In this sense, things have become more complex because they've become more fragmented, and the consumer has a much more critical view. (Gina).

However, the consumer journey remains incomplete due to intermediation. For instance, in legacy firms, key episodes such as purchases in retail channels remain untracked at the individual level, as Daniel underscores:

It's not each and every consumer [that we track] of course, but after all, such a thing doesn't exist. We realize that for the past two years, we have had, I think, much more direct access to consumers - especially in the FMCG market, because it has always been a problem in this business. We always had a very good global understanding of the upstream of consumer motivations, but as well a kind of discrepancy between the messages we sent upstream and the transformation in the purchases, because there are retailers in the middle, panels, black boxes sort of, which means that we analyze a posteriori and not directly. (Daniel).

To fill the gaps in this fragmented consumer journey, marketers rely heavily on personas developed both from the data and from their own experience. At FoodCorps, the persona stands almost on an equal footing with managers during meetings, providing a shared consumer perspective across functional departments and external providers. Monica explains how she succeeded in reaching a collective decision thanks to *Lucie*, a persona, during a meeting with multiple internal and external stakeholders:

I started telling them, "See, if we do that [using a persona], we can approach the consumer differently." At that time, I was working with consultants, and I'd asked them to give me a consumer journey. I used it to tell them: "See, Lucie, she has two children, she's a working mom, she's athletic, she runs, and her parents are a little old." We showed where she could interact with our products throughout her consumer journey. And then I managed to get them on board. They understood."

This imbrication of algorithms, personas and managers occurs as follows. Algorithms record and predict consumers' behaviors and attitudes at a massive scale and reduce the complexity of consumption, thereby allowing personas to be sketched and fragmented consumer journeys to be mapped and inspiring managerial action. Managers design and produce the algorithms that trigger appropriate actions toward consumers to influence consumption. Managers invent personas from both data and their own experiences to simplify market complexity and fill the gaps in the consumer journey (Fig. 1). Although fictional, personas interfere in the course of action at two levels. First, they synthesize the data deluge to make consumer knowledge actionable. Second, they facilitate relationships among a variety of internal managers and external agencies so they can make informed marketing decisions from a consumer perspective.

Fragmented customer tracking translates into three potentialities: behavioral visibility, effective customer centricity and efficient activation through iteration, as shown in Fig. 1 and further illustrated in Table 2.

6.2.2. How the fragmented consumer tracking affordance is actualized into marketing work

The *fragmented consumer tracking* affordance has three consequences for marketing work at FoodCorps: (1) task parcelization and hyper-specialization, (2) time compression and (3) power shift toward sales and IT.

First, *fragmented consumer tracking* parcels out the tasks and causes hyperspecialization among the agents, as discussed by John: "*marketing used to be a one-stop-shop; now, it is performed by a multitude of centralized or decentralized actors*". As an illustration, in a meeting observed in SBU1, Claire sets up a simple communication operation that still requires coordination and meetings with many agents inside and outside FoodCorps: the media buying manager, the owned media manager, the website manager, the CRM manager, the community manager, and several external agencies. Hyperspecialization is reflected in changes in job titles and profiles (from the study of organizational charts), from generalist product managers to a mosaic of specialized digital profiles that are often very data-oriented (the "aliens" in Aurélie's words), whose integration is experienced as complicated.

Second, time compression changes the agenda of the marketing tasks, which were initially forecasted long in advance in yearly marketing plans. As Alex says, "*the challenge is really to drive and optimize, to do a lot of testing and learn about digital technology because there are a lot of things that evolve very, very, very, very quickly*." This comes at the expense of planning, as Gina laments:

Accelerating time and increasing constraints – for me, that is something that forces us to work differently. What I was telling you, test and learn, go to the market much faster, and see how it goes rather than taking the time to do it step-by-step like we did before.

Table 2
Affordance potentialities of fragmented consumer tracking.

Potentialities	Description	Illustration
Behavioral visibility	Possibilities to influence directly consumer behaviors (versus attitudes and intentions)	<i>Now, what datafication allows is that, all of a sudden, you can say, the people I want to target, I can actually touch them, I can hit their buying behaviors directly. (Ethan)</i> <i>Digital is a way to have access to the consumer in a direct way, a way that we never had, because distributors and media were in the middle [...]. We talk about data all the time. That's what's at the heart of digital. Data, in fact, in less barbaric terms, are the consumer, the consumer's behavior. So, today, information on consumer behavior is everywhere. (Mark)</i> <i>The second thing to be solved is the organization, by products or by customers. It's very complicated, companies are organized by brand, product, and product manager, but at some point, the customer of L'Oréal Paris shampoo is also the customer of Maybelline mascara and potentially also the customer of Lancôme skincare and of Garnier shampoo. (Niels)</i> <i>What is happening is that we have moved from product orientation to customer centricity. So, for me, before, we used segmentation, and I think that in the consumer goods industry, it was pretty bad [...], we had a very hard time linking segmentation with the purchase act, so we were really far away... (Ethan)</i> <i>For 20 years we've been saying, "the company is customer centric", but in fact, this has never been the case. In reality, this is all false for many reasons – cost savings to begin with. But the big revolution is that today, it becomes true, because it comes from the customers themselves. Whether you like it or not, today the consumer is in the company. And if you make shit products, you end up with a bad buzz on social networks. (Denis)</i>
Effective customer centricity	Possibilities to link touchpoints for one and the same consumer (versus product orientation -pushing products similarly to predefined consumer segment)	<i>Anyway, the recipes are changing..... In a year, it will taste different. And don't freeze the recipe. You have to be able to try things. To me, the secret right now is to be able to try things. You have to integrate trial and error. That's for sure. (Michael)</i> <i>Timelines are getting shorter in projects. We need to be ever more reactive, quicker on the market because environments are changing much faster. So yeah, I would say that it forces us to work differently... as I was telling you, to test and learn, to</i>
Efficient activation through iteration	Continuous reactivity to market needs and test and make adjustments (versus planning – executing – measuring)	

Table 2 (continued)

Potentialities	Description	Illustration
		<i>go much faster on the market and see how it works rather than take the time to do it step by step as we did before. (Gina)</i>

Third, the balance of power shifts gradually from marketing to other departments; for example, the focus on the customer journey gives more weight to sales and the controlling functions supported by IT specialists, as Walter acknowledges:

Profiles are changing... Interestingly, it will create gateways because you need profiles that have strong affinities with numbers. Very analytical. So, you see, I'll take an example from another SBU: The boss is a former finance executive. He's a former management controller. He's supported by a whole team of sales profiles. You have to strike the right balance.

This makes it less necessary to use marketers, as the marketing function can then be performed by other managers inside the organization. When comparing the two business units, the affordances are quite similarly actualized, which first reinforces the validity of the findings themselves, and second derives quite logically from the pressure exerted by datafication. However, what varies between the two is the degree of actualization. Indeed, SBU2 manages a brand at a global scale, which increases the level of complexity and leads to a larger data deluge and greater fragmentation. This results in even more parcelization of tasks and specialization in SBU2. This is amplified by a mirror organization of the main suppliers, which multiplies both the number of specialized profiles and the layers that require coordination.

6.3. Effects of the imbrication of algorithms, brands, managers and consumers

6.3.1. Affordance 2: Organic branding

Organic branding refers to the possibility of spreading a brand story at a global level while adapting to diverse and heterogeneous communities, possibly by cocreating with consumers and other stakeholders. As Monica puts it, “marketing, today, is community marketing.” This imbrication involves managers, consumers and two other agents: the brand and algorithms. The platforms on which social networks are based allow brands to interact with very different thematic communities that they could not reach before. Algorithms inform managers of how brands are perceived through social listening. Informed managers produce stories about the brand. These stories are shaped by the platforms’ technical features and pushed to appropriate touchpoints through the same platforms’ algorithms, as technology has expanded the possibility of telling stories in terms of both reach and formats. Thus, brands emerge as a social object cocreated among multiple stakeholders.

Organic branding embraces three potentialities: direct interaction, content production and social listening, highlighted in Table 3.

6.3.2. How the organic branding affordance is actualized in marketing work

Organic branding is actualized through four practices that change marketing work at FoodCorps: (1) management of cocreation, (2) engagement with multiple communities, (3) power redistribution between local and global teams and (4) e-reputation management.

Cocreation management stems from the fact that third parties can now also interact and produce content. A recent success story that is widely shared at SBU2 is about a user-generated campaign that achieved more than 13 000 active participations and amounted to eight cumulated hours of videos created by consumers. Similarly, Alex explains how they involve bloggers in the marketing process and engage in the cocreation of content:

Table 3
Affordance potentialities of organic branding.

Potentialities	Description	Illustration
Direct interaction	Brands (shadowed by managers) can engage in one-to-one conversations with consumers and conversely (vs. mass-market communication). Individual consumers and communities are made visible to managers by the properties of social networks	<i>We have to work a bit like a chief editor with local editorial managers, and editorial conferences around the brand. “Omo washes whiter”¹ is a monologue. A dialogue is about listening and talking. It involves a conversation, with modulations, talking about yourself, the other person, the brand, the zeitgeist...It’s very different from what brands were doing back then. (John)</i> <i>We need to engage in real conversations and create a true connection with the brand. Today, which consumer is saying “I fell in love with my deodorant’s brand”??? I don’t think there are many of them... But there are real [brand Y] lovers, people who say “I only drink brand Y, I only like brand Y, and I hate the other water’s brands”. It’s not a matter of taste, because one can get used to almost any taste of water, it’s a matter of love for the brand. This requires us to have very special conversations with our consumers, and to give them the impression that we are listening to them, understanding them, understanding their desires, understanding that they like to run naked in the wild if this is the case. (Lucas)</i>
Content production	Almost anyone can share, comment, transform, and produce content by using the possibilities given by technique at close to no cost with a quality of execution previously limited to professional communication agencies.	<i>During the interview, Alex shows examples of content in a multitude of new formats (video, image, text) adapted to the technological features of each different platform in terms of length, size, font, etc. As he puts it, “Today, the challenge is definitely to develop video content adapted to the requirements and formats of social media platforms”.</i> <i>There is one last important aspect for marketers, it’s the notion of data... it’s truly taking into account that all this information that circulates, what consumers say, what journalists say, all these elements that talk about the brand and don’t emanate from the company, need to be collected in order to be able to measure how my brand is perceived, and whether potential crisis problems need to be anticipated... (Sally)</i>
Social listening	Managers can take the pulse of their brand by listening to the conversations on social networks and can instantly evaluate the likeability and performance of their communications.	

¹ The interviewee refers to a famous sketch by the French stand-up comedian Coluche in 1979, which mocks the traditional persuasive advertising of washing powder by hijacking the advertising campaign of Omo, a Unilever brand.

We work with a network of bloggers who also bring us a lot of insights. More and more, we try to coconstruct with these bloggers, who are not representative of all consumers because bloggers are a specific type of consumer. But to start with, they allow us to coconstruct.

Carlos describes how this is changing how they work on Brand Y. His role today, similar to a talent scout, is to identify new media and mom influencers. He approaches these influencers, establishes mutual trust, feeds them content and lets them express themselves freely in discussing the brand. This is a revolution for a company that is used to formal procedures of approval. This also has concrete implications for the creative process, which was previously mostly the domain of external advertising agencies and is now partly reinternalized. As the organization charts show, in the most recent reorganization of the marketing department, FoodCorps splits product development and communication into two distinct teams, recruits digital experts from external agencies and digital native companies, and allocates free time to allow those involved to cultivate their creative side outside the company. As testified by several interviewees, this goes against corporate culture and causes internal turmoil.

The second practice stemming from this affordance is engagement with multiple communities, which is both enabling and constraining to marketing work. As Lucas explains, because of social media platforms, they can now engage with communities and targets they would never have reached before, such as runners or gamers.

Runners like to watch videos of trails of people going for races in the mountains. We created 100% adapted ads, small five-second formats, which said at the beginning, for example, “when you’re about to run a marathon, [brand tagline]”.

However, later in the interview, he acknowledges the difficulties induced by this atomization.

Likewise, that’s what’s complex. We have a lot of small, fragmented communities that all require as much work as if we had a large group, and which also require specific levers and content, because otherwise they don’t even look at what we push to them.

The third consequence for marketing work is that organic branding reshuffles the balance of power between global and local teams. This actualization occurs only in SBU2, which is the only SBU managing a global brand. As stated in internal documents, the current process is that the global marketing team unifies brand storytelling around the world while local “activation teams” adapt it to the communities with which they are engaged. This results in a two-way movement, with centralization and localization occurring simultaneously.

The dialogue with the consumer remains local in most cases. That is to say, the community managers, the social media part... Even though we realized very quickly that it was in our interest to make the content central, because we would be able to do things of greater quality and more engaging, we also realized that responding centrally to consumers in 143 countries does not make sense. So we leave the dialog to the local level. (Mark).

Local teams are even in a position to challenge the global team since they have the knowledge about and relationships with local communities. This creates room for bottom-up approaches, such as when Lucas proudly narrates how their local campaign on Snapchat was adopted at a global level.

The last practice addressed by the study involves e-reputation management. Since consumers can now publicly express their opinions and confront brands and managers, reputation can be very quickly damaged, as Nadia notes.

People are so influenced today by everything that is happening and by the amount of information that they receive that it makes our work even harder. Because, you know, one thing today is that anyone on the Internet can explode your brand or kill your brand. I mean literally. The world is open today – even in the closed countries – there are tools for that.

To manage this risk, FoodCorps invested in a social media intelligence tool based on artificial intelligence. Here, again, this potentiality

both enables and constrains marketing work. Indeed, although there is a dedicated team in charge of monitoring brand reputation, Nadia feels compelled to check the content relating to her brands very regularly, as previously mentioned.

Therefore, the actualization of the *organic branding* affordance places creativity back in the spotlight. Carlos told us about the “*big idea*” that was developed for the global, powerful brand Y. This revolutionary and creative idea completely reversed the market and created a common thread throughout all markets and communication devices: TVC and smartphone app at the global level but also many local social networks campaigns and pack designs inspired by the “*big idea*.” In this configuration, the main skill expected of marketers is their ability to create compelling stories and give meaning. This enhances the creative side of marketing, as Mark explained:

I think the role of marketing has become clearer over time. We were part scientists, part analysts, part salespeople. We could be anything and everything. And I think we're storytellers. We tell a story, and in fact, our job is to tell a great story about a brand and ensure that the story is not just talk but really exists.

In summary, the actualizations of affordance *organic branding* tend to clarify and reinforce the marketer's position in the organization, assigning him or her a key role as an integrator. The two affordances offer new possibilities for action but also constrain marketing work, which is profoundly reshaped. They are actualized in both SBUs in a rather similar way, although to a greater degree in SBU2 with regard to the *fragmented consumer journey*. Moreover, the power redistribution between local and global teams in *organic branding* involves only SBU2.

7. Discussion

7.1. Theoretical contributions

7.1.1. Contributions to sociomateriality and affordance theory

This research introduces *agents of fiction* as a new type of agent characterized by a symbolic and immaterial nature in addition to technological and human agents. This provides a useful theoretical anchor to understand how datafication is reshaping marketing work and offers a contribution to sociomateriality and affordance theory. Indeed, this framework has greatly helped explain how technology is incorporated in the work of managers and how the never-ending polarization between agents (managers) and systems (organizations) can be overcome to find the right course of action (Leonardi, 2011, 2013; Orlikowski & Scott, 2015). However, the focus on the agency of technologies and tools has discounted the role played by agents of a more immaterial nature. This study shows that although immaterial, *agents of fiction* (e.g., the persona or the brand) play a role in a sociomaterial imbrication. Some might object that symbolic, immaterial objects have no agency by themselves because they are created by humans. However, as in Pygmalion's myth where the creature Galatea escapes her creator, *agents of fiction*, which are initially socially coconstructed by a handful of human agents, may gradually emancipate themselves. The best example in the studied case is the brand, which was once a product of the organization, whose meaning and expressions are now cocreated, shared, and negotiated among multiple communities inside and outside the company (Kornum et al., 2017; von Wallpach et al., 2017).

7.1.2. Contributions to the marketing-as-practice perspective

The present research contributes to a deeper understanding of marketing work as a result of the dynamic imbrications between human and nonhuman agents, in line with the marketing-as-practice perspective (Skålén & Hackley, 2011; Svensson, 2007; Zwick & Cayla, 2012). This work unveils two affordances produced by datafication, namely, *fragmented consumer tracking* and *organic branding*. When actualized, these affordances change marketing work in many respects, including

constantly adjusting instead of planning and interacting with individual consumers at various touchpoints, which renders many mass-market techniques useless. This is consistent with recent developments on marketing agility, which has been theorized as “the extent to which an entity rapidly iterates between making sense of the market and executing marketing decisions to adapt to the market” (Kalaighnanam et al., 2021, p. 36). It also echoes De Luca et al. (2021), who conceptualize three “actualized” big data marketing affordances in the service sector – *customer behavior pattern spotting*, *real-time market responsiveness*, and *data-driven market ambidexterity*. However, the aforementioned affordances do not stem from an observation of practices but from the literature. Using a case study allows us to give greater consideration to human agents and agents of fiction and, in doing so, to obtain a richer account of actions that are less predictable or less rationally bounded. More precisely, this leads to five contributions to the understanding of marketing work from a marketing-as-practice perspective:

First, the uncovering of the *fragmented consumer tracking* affordance raises questions regarding the reification of consumer data (Thompson, 2019), which more broadly relates to the issues addressed by the sociology of quantification (Espeland & Stevens, 2008). Proponents of a deterministic vision would argue that it is only a matter of time, as the growing sophistication of algorithms and the exponential increase of data will inevitably lead to such fine-grained consumer knowledge that predictions will become fully accurate. Pushed to the extreme, this will eliminate any differentiation of the offer and leave room for monopolistic positions – from companies that will best master data and therefore respond perfectly and in real time to customers' every desire. However, this research shows that fragments of the consumer journey will probably remain uncovered due to market intermediaries or privacy concerns. Additionally, *organic branding* affordance counterbalances this deterministic vision, as it places creativity and relational capacity back in the spotlight (Leefflang et al., 2014). This leaves the ground for even more differentiation while responding to consumers' demands for choice.

Second, a major consequence of the highlighted affordances is the atomization of marketing work, which is now spread across an array of people, technology and objects that imbricate and disimbricate in dynamic ways. This makes marketing work less tied to specific job positions, such as product or brand managers, and less of what used to be a “one stop shop” (Aimé et al., 2018). This is in line with Homburg et al. (2015) and Kopalle et al. (2020), who envision marketing as an ecosystem bringing together several actors in networks. This is also consistent with the research indicating that marketing work is often performed by amateur part-time marketers – employees performing marketing tasks in nonmarketing positions (Grönroos, 2020; Gummesson, 1991). The present research goes one step further by showing the fundamental role of nonhumans (technologies, tools and agents of fiction), which constitute the “glue” in this sociomaterial imbrication, thereby contributing to the view of marketing work as a social construction advocated by the marketing-as-practice perspective (Skålén & Hackley, 2011; Svensson, 2007).

Three, the *organic branding* affordance reveals that communication discourses are forged in a sociomaterial imbrication that includes human agents – internal actors and consumers – as well as nonhuman agents such as brands and social media platforms driven by algorithms. This is in line with discussions on the cocreation of brands by different stakeholders that challenge the hegemony and top-down conception of brand management (Black & Veloutsou, 2017; Kornum et al., 2017; von Wallpach et al., 2017; Wider et al., 2018). In particular, it highlights how the technological features of social networks, brands characterized by their identity (Da Silveira et al., 2013) and heritage (Pecot et al., 2019), and discussions about brands at the micro levels in multiple communities – including internal communities (Devasagayam et al., 2010) – come into play as much if not more than decisions made by professional marketers.

Fourth, affordances involve not only potentialities but also

constraints; therefore, understanding how datafication reconfigures marketing work implies the study of local resistances and detours. As sociomateriality is indicated in other contexts, a technology is not adopted only because it is available and technically efficient (Barrett et al., 2012; Kellogg et al., 2019). This involves not only the potential resistances or inertia of managers but also the agency of nonhuman elements – for instance, the limitation of the number of characters in a Tweet constrains the content; responsive design formats photographs into squared visuals. Technological features are not neutral: they potentially dictate or orient human behaviors outside their judgments. This necessitates a more nuanced view of the appropriation of technological tools by marketers, which should be studied in context and at the micro level. This is where sociomateriality and affordance theory can fruitfully enrich the marketing-as-practice perspective, whose main focus has been on the performativity of marketing work, although somehow at the expense of technological agency.

Five, another lesson from the case study is that the radical shift anticipated by the current research on the datafication of marketing (Cluley et al., 2020; Gielens & Steenkamp, 2019; Singh & Hess, 2017) is still a long way off. This may be explained by the focus of scholars on service and digital native companies (De Luca et al., 2021; Rust, 2020a) rather than legacy firms, which nonetheless represent a substantial share of the economy. This conclusion is consistent with the recent research in organizational theory, which bemoans scholars' focus on studying change rather than stability – even though, in reality, a considerable part of managers' work is dedicated to stability and routine (Feldman et al., 2016; Langley et al., 2013). Indeed, legacy firms must deal with tangible factories and intermediaries, mainly retailers, and thus far, their business models have not been fundamentally disrupted. Additionally, although a handful of specialized profiles have been hired, they mainly choose to upgrade current employees' expertise rather than replace them.

7.2. Managerial implications

This research also provides insights for marketing managers and legacy firms. The findings show a situation with two affordances that seem difficult to activate simultaneously. *Fragmented consumer tracking* may help consolidate standards through a greater accumulation of knowledge and a push toward a higher level of professionalization. However, this professionalization would benefit new positions, such as data scientists, more than marketers, who may no longer be referents of customer knowledge and be replaced by a configuration integrating sales and customer care managers with data scientists and algorithms. Conversely, *organic branding* makes marketing more of a function for people who do not necessarily have prior skills in marketing. In this affordance, the marketer position is maintained in legacy firms but aims to create compelling stories to sustain the differentiation of the offer.

As highlighted in this research, legacy firms engage in building new digital capabilities, which implies the acquisition of cutting-edge digital skills. This echoes Rust's (2020a, p. 24) recent recommendation that companies “avoid seeking the past” and “demand abandoning business models and practices that used to be successful and profitable.” There indeed seems to be little future for companies that are not able to implement efficient consumer tracking, as agility appears to be a pillar of marketing excellence (Homburg et al., 2020; Kalaignanam et al., 2021; Lewnes, 2021). Based on the affordances presented here, this research suggests two possible scenarios for marketing in legacy firms with a continuum between the two since practices are “context equipped” (Gheradi, 2012, p. 98):

- (1) For a company actualizing only the *fragmented consumer tracking* affordance, the strong agency of algorithms will drive customer value by enhancing the customer experience. The sales department can monitor all touchpoints along the customer journey without marketers, who will lose their dominant position, as

suggested by Homburg (2015). In short, customer managers may replace marketing managers. However, the risk is adopting a short-term view with only an outside-in perspective based on predictions of future profits (Rust, 2020b). This may lead to forgetting about long-term consumer satisfaction (Day & Moorman, 2013) and/or losing brand identity and differentiation (Kalaignanam et al., 2021).

- (2) A second scenario consists of reconciling both *fragmented consumer tracking* and *organic branding* affordances. It represents a trade-off between an inside-out and outside-in perspective and seems to be the best option for legacy firms. In fact, most such firms already possess strong brand assets representing a valuable source of competitive advantage and a differentiation tool (Mu et al., 2018). Those companies should “see brands as a resource and a strategic hub of the company” and satisfy customer needs and wants within the brand framework rather than adopt a strict market orientation focused on customers (Urde et al., 2013, p. 14). To do so, one solution could be to keep brand managers differentiated from customer managers in a somewhat ambidextrous organization, similar to what O'Reilly and Tushman (2004) recommend to foster innovation. Another option is that the marketing team retains control over consumer data management, as they seem more qualified than IT or sales departments to understand and respond to consumers' needs (Rust, 2020b). As a result, capitalizing on a strong brand identity while acquiring marketing agility (Kalaignanam et al., 2021) and reaching a customer-centric organization could lead such firms to marketing excellence, as defined by Homburg (2020). Today, however, very few legacy firms manage both affordances successfully, as noted by the interviewees and the literature. In this respect, Nike is mentioned as one of the few to offer seamless service for customers due to datafication while developing a strong brand image (Kopalle et al., 2020).

7.3. Implications for marketers' education and careers

The findings also challenge marketing education, as they suggest that two paths are emerging, in line with Cluley and colleagues (2020). First, *fragmented consumer tracking* requires the mastering of STEM (science, technology, engineering, and math) skills together with the regulatory framework on data management. This echoes Wedel and Kannan's recommendation (2016, p. 21) to develop specific master's programs in marketing analytics for students already trained in “mathematics, statistics, econometrics or computer science.” Doing so can lead to the professionalization of marketing.

In contrast, *organic branding* converges more with the arts and humanities, with disciplines such as semiology, art history, design, literature, and philosophy, to develop creative fiber in junior profiles and charisma and vision in more senior profiles. This evolution does not require generalist diplomas in marketing but rather specialized master's degrees. It also calls for an update of current textbooks, which tend to center on marketing as traditionally practiced in legacy firms.

This may also lead to changes in career paths. Until recently, the ultimate goal for a marketing career was to work for fast-moving consumer goods companies where marketing was invented. After a short stint in a sales team to learn about “real life,” young graduates had a well-defined career path: product manager, marketing manager, then – for the most talented – marketing director and, eventually, managing director. However, today, legacy firms are no longer the most attractive option and are struggling to recruit talented candidates. The results of this study suggest that careers can be reinvented, possibly with moves either to expert digital positions such as data scientists or to creation or communication positions such as strategic planners. This, however, raises the problem of experts' (as opposed to managers') career paths, with the need for continuously updated skills, which is a long-standing issue in the world of engineers.

7.4. Avenues for future research

This research has a few limitations, which also serve as avenues for future research. First, the paper focuses on a single case of an FMCG company. Other cases of legacy firms operating in the areas of services or durable goods, such as the car industry, could be valuable as case studies to improve the external validity of the findings. Moreover, the data collection, although in line with most studies using sociomateriality, is based mainly on the “human” side through interviews of practitioners, which is a partial account of the interaction between humans and nonhumans. Other more practice-based methods could be involved in the future, such as ethnographies or third-wave methodologies with data, as recommended by Ceez-Kecmanovic and colleagues (2014). Then, future studies could address the following topics and questions focused on the evolution of marketing work: How do marketers adopt or resist data-driven technologies and practices? What kind of organizational changes and learning processes take place? How are these changes impacting the professional identity of marketers? What affordances are enabled by advanced technologies such as visual recognition or deep natural language processing? Last, *agents of fiction* such as brands and personas could be investigated further: Are there other *agents of fiction*? What are their other possible roles in sociomaterial imbrications?

In conclusion, this work uses the lens of sociomateriality and affordance theory to contribute to a better understanding of the evolution of marketing work under datafication. This research shows that the marketing function within organizations is deeply challenged and requires renovation. However, it suggests that marketing could once again reinvent itself in a more organic, customer-centered and decentralized form that will irrigate the organization.

CRediT authorship contribution statement

Isabelle Aimé: Formal analysis, Conceptualization, Investigation, Methodology, Writing – review & editing, Writing – original draft.
Fabienne Berger-Remy: Methodology, Investigation, Formal analysis, Conceptualization, Writing – review & editing, Writing – original draft.
Marie-Eve Laporte: Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Isabelle Aimé, PhD is permanent faculty in marketing at KEDGE BUSINESS SCHOOL, Paris. After ten years as a Marketing executive in FMCG companies such as Unilever and Yoplait, she began her academic career at Toulouse Business School, campus Barcelona (Spain), before joining IPAG BS in Paris and finally KEDGE. Her research focuses on branding, sponsorship and the impact of digitalization on marketing organizations. She has articles accepted in *Journal of Business Research*, *European Journal of Marketing*, *Journal of Historical Research in Marketing*, *Décisions Marketing*, *Management et Avenir*, and *Revue Française du marketing*. She has also published a book “La Marque” (Dunod) in 2016.

Fabienne Berger-Remy is Associate Professor at IAE Paris - Sorbonne Business School, Université Paris 1 Panthéon-Sorbonne and a Senior Lecturer in Management Sciences. She teaches marketing and brand management in master and MBA. She is the director of a master program in brand management and communication and a member of the scientific committee of the “Brands & Values” research chair. Her research fields focus on branding, brand management and the impact of digitalization on marketing organizations. Her work has been published in peer-reviewed academic journals and books. Fabienne Berger-Remy previously worked as marketing director in FMCG companies.

Marie-Eve Laporte is Associate Professor at IAE Paris - Sorbonne Business School, Université Paris 1 Panthéon-Sorbonne and a Senior Lecturer in Management Sciences. She teaches marketing and communication in MBA and master. She is the director of IAE Paris-Sorbonne's Health Marketing and Communication MBA and a member of the scientific committee of the “Brands & Values” research chair. Her research fields focus on health marketing, patient and consumer behavior, and the impact of digitalization on marketing organizations. Her work has been published in peer-reviewed academic journals and books. Marie-Eve Laporte previously worked as marketing and quality director in the food industry.