Marketing Intelligence: Boom or Bust of Service Marketing?

Jan Lies*

FOM University of Applied Science, Dortmund (Germany)

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Abstract

Marketing intelligence fosters two major developments within digital service marketing. On the one hand, a boom of services seems to have evolved, accelerated by the opportunities of marketing intelligence. It has contributed to the optimization of customer experiences, e.g., supported by mobile, personalized, and customized marketing services. On the other hand, (digital) self-services are likely to pervert the term "service". Lifecycle marketing, including annoying marketing communication in real-time, automated price adjustment and programmatic advertising based on artificial intelligence, affects the vision of fully standardized marketing automation. Additionally, there are incentives to pollute the digital information in order to manufacture opinions. Fake news is one popular example. This leads to the (open) question if marketing intelligence means service boom or bust of marketing. This contribution aims to elaborate the boom-and-bust aspects of marketing intelligence and suggests a trade-off. The method applied in this paper will be a descriptive and conceptual literature review, through which the paradigmatic thoughts will be juxtaposed from the perspective of service.

Keywords

I. Introduction

MARKETING evolves. Contemporarily, a marketing 5.0 debate is underway, integrating the "values view" of marketing 3.0 and a "digitization view" of marketing 4.0. In retrospect, this debate ideally shows a development that focuses on human-centric progress through digitalization [1]:

- Marketing 1.0: The core competence of marketing is focused on a product and its distribution (since the 1950´s).
- Marketing 2.0: Marketing shifts to the consumer (beginning in the 1970´s).
- Marketing 3.0: Human centered marketing with the focus on people (from the 1980´s onwards).
- Marketing 4.0: The focus here is on digitalization (from approx. 2010 onwards)
- Marketing 5.0 is characterized by the integration of human centricity and digitization (forthcoming).

Marketing 1.0 originally and traditionally is product related. The core "p" of the traditional marketing mix means "product". Thus, a "breaking free of product marketing" and a shift to values became necessary [2]. The notion of servitization of marketing and beyond evolves [3]. It requires the opening up of the traditional "4p" (product, price, place, promotion) with additional "p"´s, specifically "persons" (e.g. sellers, vendors, stakeholders), their "problems" (e.g. needs, values) and processes (e.g. interactions, dialogues) in regards to services [4]. Meanwhile, the interdependence of service quality and

* Corresponding author.

E-mail address: jan.lies@jan-lies.de

customer satisfaction are discussed as a core concept of the marketing management [5]. Marketing intelligence contributes to marketing 4.0 and shapes digitized data-driven marketing. The term "digital marketing" has evolved with the emergence of the instruments of digital communication, channels and processes [6]. It supports marketing decisions by the analysis and application of digital customer data – even in real time. Moreover, web-based cloud branding, search engines, recommender and customer review systems, as well as the semantic web are part of the digitized marketing evolution. They enable an "explosion in the number of technology solutions" [7], i.e., marketing services.

To characterize services today, two dominating logics have to be mentioned: the goods-dominant logic views services in terms of an intangible good. The service-dominant logic views services as the fundamental objective of economic exchange which needs to impact marketing thinking [8]. Interactive relationships shape this view of service thinking. The value-in-use notion not only includes information, but also product transfer, upgrades, problem solving, etc. [9]. This service-dominant logic of corporations is not reduced to marketing but is "an all pervasive part of their strategic mission and corporate planning" [10]. This customer-driven development is called servitization. Here, this term is understood as a portmanteau of "service" and "digitization" that ideally impact three dimensions of services: 1. Services as added values of market outcomes; 2. Intangible outcomes; 3. Services as logics dominating corporate behaviour.

Thus, the idea of services means more than the shift from producing (tangible) goods to (intangible) added services. A constituting characteristic of services is the participation in the production. It has become an impacting factor of the dominant logic of service marketing. Thus, service marketing fosters mutually beneficial relationships between a firm and its customer(s) and, if possible, also society [11].

On the one hand, the current popularity of "content marketing" contributes to and represents this development. On the other hand, contemporary developments like data-driven performance marketing or marketing automation mean anything but customer centricity.

Against the background of the marketing stages the question arises *if the evolving (digital) services are really as customer-centric as customer- and value-oriented marketing 5.0 supposes.*

In order to answer this question, the text will be structured in the following way. First, marketing intelligence will be presented as service-boom, along with the corresponding marketing paradigms (section II). Subsequently, marketing intelligence will be conceptualized as zombie-marketing (section III). Through this a trade-off will become visible from the perspective of service.

II. Marketing Intelligence as a Boom of Service Marketing

A. Introduction

The term marketing intelligence refers to developing insights obtained from data to optimize marketing decision-making. Data-driven service marketing mainly refers to the use of data in order to inform and optimize the ways through which market activities are carried out. Big data enables digital marketing to analyze digital large (from terabytes to exabytes) and complex (from sensor to social media) data and to react in real time. This is one of the core capabilities of digital marketing techniques. Currently, practices are experiencing the shift from "big data to big impact" [12]. Data-driven marketing evolves from creativity, e.g., designing advertisements, to marketing technology, e.g., block chains to increase digital trust [13].

The digitized world provides lots of data sources, such as e-mail-marketing, clicking behavior on websites, individual and brand community-driven social and mobile media data, cars' sensor data, and many more. This data is likely to increase customer insights and deliver even personalized services in real-time: digital self-services like check-in terminals, digital delivery status services, insurance rates based on driving behavior, alerts to bank customers for unusual account activity, customized mobile adds, car connected sensory maintenance services, new digital interaction channels, as well as conversational commerce are the range of services which directly or indirectly depends on big data growth. Agile service marketing requires at least three dimensions. It means the acceleration of marketing management to provide outcomes faster, by means of agile management processes (e.g., scrum or hackathons applied to marketing). It depends on an agile mindset (i.e., a culture of digitality, which is inspired by the opportunities provided by digital technologies), and it needs the application of agile marketing tools (e.g., automated or real time marketing tools) [14], [15].According to the examples and structure of the services above, the following table shows some data-driven services (see Table I).

In the following, selected data-driven or data-impacted services will be introduced that view marketing intelligence as a drive of a service marketing boom.

B. Marketing Intelligence as a Customer Service Journey

The touchpoints of the customer journey are viewed as a source of big data: Each touchpoint can not only represent a service point, but also provide data for further service optimization. In this way, big data, marketing intelligence and AI provide new opportunities: marketing intelligence seeks to map the touchpoints to understand customer experience and optimize marketing services, as well as customer experience, by providing added values.

Customer experience indicates the perception and evaluation of a customer's interactions with a company across all of its touchpoints – including employees, channels, systems, products and services – connected to the customer lifecycle contribute to the resulting perceptions about the brand [16]. Additionally, touchpoints contribute to the perceived service quality. Product presentations that combine the real product with virtual reality are perceived more positively than those that can only be perceived virtually [17]. Another example are targeting technologies. They are one important data-driven marketing technique to optimize customer experience and, thus, marketing services. Mobile technologies enable marketers to identify and address specific customer communities and/or customers personally. This procedure is known as "mass customization" which refers to group-related or even individualized mass production: the individualized car, the personally branded chocolate, or the personally configured sports shoe [18]. This means that the consequence of micro targeting is micro marketing. In the specified application of geo marketing, micro marketing involves small segments, down to the personal level (segment of one).

C. The Customer Lifecycle as a Service Journey

"While the product lifecycle, which is often contained in conventional marketing textbooks, follows standardized mass marketing, the customer lifecycle emphasizes individual, personalized customer interaction." [19] The marketing concept of lifecycles is derived from biology. The individual lifecycle enables marketing to

TABLE I. Marketing Intelligence as a Service Marketing Boom; Source: own Table

Marketing Service	Marketing Intelligence as a boom of services
Services as added values of products	• The customer journey as customer analytics to derive new services • Big data to enhance customer retention • Big data as provider of ample opportunities to organize services on the customer journey • Voice-based interaction within the (digital) customer journey • Personalized and targeted online and mobile ads • Mobility information for transportation management in urban areas
Services as intangible outcomes increasing customer satisfaction	• The internet, its search engines and data as (inter) corporate services • Recommender systems generate personalized predictions about product liking to increase customer satisfaction by decreased complexity in decisions • The customer journey as provider of interaction opportunities and perceived service quality • The semantic web with speech recognition technology to provide messaging services and virtual assistants • Evolving conversational commerce • Mobile marketing and services as the "mobile revolution"
Service as dominating logic of stakeholder exchange	• Big data to optimize digital customer experience management • Touchpoint management connected to the customer lifecycle in order to enhance brand perception • Viral processes as the outside-in paradigm of marketing

address customers specifically. Digital self-services, e.g., in the process of service delivery or self-service terminals, are adapted to enhance the e-satisfaction of customers [20]. Thus, the idea of customer relationship management (CRM) has entered a "new era" [21] in which it is able to address customers in an automated way, relevant to their personal stage within the lifecycle. Data analysis assists marketing, for instance in acquiring new customers, making existing customers create more profits and maintaining valuable customers [22]. Hence, CRM becomes an analytic approach by tracking data to derive new customer insights from it, and to apply new services. Those technologies may enhance customer centricity. "Gaps between what marketing textbooks prescribe and the real-world confronting marketers need to be narrowed." [23]

One opportunity for lifecycle marketing is retention services. Customer retention means to avoid their defection, aiming at optimizing the lifecycle. One approach for this is the improvement of service quality which requires outside-in thinking or inbound marketing. Instead of interrupting advertising, it is based on interactivity and commitment. This mode became popular as pull marketing. Here, the initiative comes from interested parties [24].

D. Content Marketing as Interaction-Based Services

At first glance, content marketing is not driven by big data as "content" is generated by the sharing, liking, and posting of individual social media users. A second glance reveals that content marketing and big data are closely interlinked by the algorithms of search engines. From a media management point of view, the popularity of social media crucially depends on the ability of search engines which recognize that users contemporarily prefer social media sites to interact with each other, topics, or brands they (dis-)like. Search engines recognize the related web-traffic. Ranking high in search results makes them attractive for social media advertising. Thus, social media platforms are marketing intelligence-driven services [25].

Social media is much more than "media" to perceive content. From a customer's point of view, they provide service rooms for interaction with other users and corporations. Accordingly, they are digital service institutions. Characteristics like contexts, aesthetics, emotions, and symbolic aspects of customer experiences have to be taken into account as soon as they are likely to generate values for the customer [26].

The service management of brands can attempt to leverage social media's connectedness and get consumers to play the brand's game, by creating branded artefacts, social rituals, or cultural icons on behalf of the brand [27]. Hence, social media operates as a foundation for the value fusion of brands. Value fusion is defined as a value that can be achieved by consumers and firms simultaneously, just by being on the mobile network [28]. This fusion of values enlarges and applies the notion of the "value-in-use" idea of services, which supplements the "value-in-exchange" approach, i.e., perceiving values by consumption. Values-in-use emphasize the meaning of added values like services, ideas, information, customer service and payment, as well as invoicing procedures [29]. They provide another source of "creative value creation". Corporations currently depend on digital agile methods to synchronize corporate with societal values [30]. Service as interaction and the convergence of media also lead to converging requirements of service and reputation management.

E. Semantic Marketing as Conversational Services

The Semantic Web represents a revolution for the form of access and storage of information. From a marketing strategic point of view, a crucial change from web 2.0 to web 3.0 is the recognition of "meaning". The benefit of semantics consists in bridging nomenclature and terminological inconsistencies to include underlying meanings in a unified manner [31].

A central popular function of semantic marketing are chatbots (a blending of words derived from "chat" for "chatting" and "bot" for robots). "The goal of chatbots is to have a conversation with humans, so communication with humans is the primary role of chatbots. It is desirable that access to information be as easy as possible for the person and the messaging platforms are selected as convenient platforms for people to use for daily communication." [32] Chatbots operating with artificial intelligence enable marketers to create highly personalized customer experiences. It increases an organization's responsiveness and solves customers' problems.

Chatbots are one example for semantic marketing. They are able to recognize meaning. Artificial intelligence, speech recognition technology, messaging services as well as virtual assistants allow this evolvement of chatbots [33]. Consequently, customer experience becomes enlarged as brands can be perceived through voice-based interaction, which enables personal dialogues within the (digital) customer journey [34]. This development has to be seen as a part of the ongoing developing conversational commerce. This trend entails preparing, accompanying, and executing purchasing processes by (digitized) voice. "Conversational commerce may involve human interaction as well as bots." [35] Absence of conversation is a big barrier to making brand experience become social.

F. Mobile Marketing as Mobile Services

Mobile devices, especially the smartphone, accompanied by the semantic web (web 3.0) enable internet-based services to interact with web users by means of voice recognition. They have also made marketing mobile. Proximity technologies, e.g., near field communications, frame the backbone of mobile touchpoints within the customer journey.

Mobile devices are adapted to enrich this journey: Researchers analyzed the log data in location-based networks to uncover user profiles; these automatically discovered user profiles have the potential to be subsequently applied to location-based targeted marketing. Through analyzing the dynamics of local communities or customer habits, it is possible to predict their changing product/ service preferences. Here, one step towards the integration of mobile online and traditional offline marketing, e.g., shopper marketing or in-store marketing, becomes apparent and confirms the idea of servitization. A fusion of values between brands and their products and/or corporations across entire social networks is accelerated. This development sometimes is called "mobile revolution" and indicates a major shift within marketing [36].

G. Geomarketing as Proximity Services

The mobility of marketing itself is not new [37]: From today's perspective, marketing on the radio represents an early form of mobile marketing [38]. In contrast to the early mobile marketing the digitized (geo-) marketing era enables content-specific, individualized, visual and/or conversational as well as geo-located marketing. Smartphones are usually equipped with GPS (Global Positioning System) which enable customized one-to-one marketing. This development led to geomarketing. It uses geographical concepts and instruments, maps, statistics, and information technology. These technologies have opened the opportunity to develop marketing and service marketing strategies and instruments which aim to increase customer satisfaction with local and/or situational marketing measures [39]. Thus, geomarketing makes mobile services become spatial marketing [40].

Recommender systems benefit from mobile services. They provide personalized predictions about product liking by filtering the past behavior and preference statements of consumers. Mobile social media marketing is the digital platform for influencer marketing and a source of big data at the same time. Traditional advertising methods

are shifting toward methods of personalized and targeted online and mobile ads. Another important feature is to apply mobility information for transportation management in urban areas. Marketing began to individually accompany the customers almost everywhere: in the car, at work, in the fitness club, etc. It provides room for geomarketing as creative communication, campaigning and/or services [41].

H. Customized Content as Individual Services

Within internet marketing, online targeting represents the target group-specific display of offers and advertising measures, i.e., customized content. From a service point of view targeting is the basis to provide location-dependent communication, e.g., sports advertising in stadiums or taxi advertising after busses have been delayed and the delay has been digitally recorded online by the local transport companies. This (creative) potential is supported above all by mobile devices. "It is becoming easier to spot market opportunities and solve customer problems more efficiently and cheaply. That's why it's becoming increasingly important to foster disruptive thinking and ignite creativity." [42]

There are many more digital targeting technologies, e.g., retargeting (visitors to an online shop and/or a website are again addressed with advertising on other websites) or photo targeting. Companies such as Pinterest and Snapchat are already designing targeting solutions based on photos posted. Microtargeting approaches analyze consumer variables using statistical techniques and/or machine learning to identify individuals most likely to engage in specific behaviors or respond to marketing in specific ways. For example, marketers use micromarketing to identify customers most likely to respond to tailored advertising campaigns [43]. For example, all credit card users who comment on a certain hashtag on Twitter can be addressed individually. In the specified application of geomarketing, micro marketing involves small segments, right down to the personal level (segment of one).

I. Marketing Intelligence as New Service Paradigm

Looking back, marketing 4.0 and web-based services contemporarily represent a central aspect of service marketing and create a boom of services in marketing intelligence. The broad range of data-driven service opportunities even initiated new business models, e.g., search engines or social media/mobile providers. They contribute to and sustain consumer-based customer management. This implies marketing 3.0, i.e., people-focused thinking. Instead of planning inside-out, the power of viral processes requires the community paradigm of marketing, i.e., the transformation from inside-out to outside-in [44]. All in all, the methodological convergence of marketing and public relations as reputation has to be mentioned, as content marketing means to apply ideas and measures of public relations management (author). Digital service marketing depends on several paradigmatic

thoughts, to turn data into customer-centric services: people-focused thinking, agility as well as interactivity are just three crucial thoughts (see Table II). They make digitization become a service culture of "digitality", i.e., a culture shaped by digitization.

In the following, it will be shown that these paradigms are essential for marketing 4.0 to contribute to customer-centric servitization, since the downside of marketing intelligence hasn't been mentioned yet.

III. Data-Driven Zombie Marketing: Marketing Intelligence as Bust of Service Marketing

A. Introduction

Service is not just service. The (digital) evolvement of marketing services have a downside which heavily impacts services. At least since the popularity of so-called "self-services", especially within retail, banking, transportation or hospitality, it goes without saying that marketing services broadly become perverted. The first aim of these services is to reduce costs and not to satisfy customers. Also, the digital call center technologies, established since about the 1990s, were introduced as customer relationship management. Contrarily, these technologies meant the end of the personal customer manager in many sectors, they represent a loss of personal contact. Research finds that customers are less satisfied with the call center services than they are with the more traditional office-based (in-person) services [45]. "While the ways firms interact with customers have changed dramatically, customer' desire for good service have not changed." [46] This leads to some broad research, e.g., in waiting time. "The problem of waiting is important in service activities when customers are passive, often standing in a queue." [47] Vandermerwe and Rada [48] admit that self-services are part of the servitization, but also mean that costs are passed on to the customer. Against this background, Howard and Worboys [49] ask if "self-service" is an oxymoron, i.e. a term that contradicts itself.

Alluding to the rising threat of so-called "zombie corporations", these services are called "zombie services" to distinguish them clearly from customer satisfaction-related services. Zombie companies keep on operating even though they are dead, as they are generating persistent negative equity [50]. They operate at the expense of others, represent a threat by lacking digital customer protection [51] and endanger the trustworthiness of management and brands. These aspects are congenially shared by these "zombie services".

In the following, some insights into these facets of marketing intelligence as performance marketing are detailed, to elaborate the downside of data-driven marketing shaping zombie services (see Table III).

TABLE II. Marketing Intelligence as Service Marketing; Source: own Table

Paradigmatic Service Thoughts	
People-focused/ thinking	Marketing 3.0 as the paradigmatic frame of evolving digital customer-centric marketing services
Agile Thinking	Digitality as a highly dynamic environment requiring steady marketing and branding innovation, e.g., using agile marketing methods like scrum marketing or serving viral processes by social media marketing,
Interactive Thinking	Digitality as an updated understanding of market competition, e.g., crowds as co-designers, crowdsourcing, co-operative thinking
Customized Thinking	Digitality as an opportunity to apply data for personalized communication, products and services
Retention Thinking	Marketing Intelligence to enhance customer retention services
Outside-in Thinking	Digitality as a power to steadily shift demands of stakeholder threatening market positions
Marketing 3.0 Thinking	Digitality as values e.g., serving the manifold social media challenges to prove brands' community compatibility, fashion trends, purpose-led brands

TABLE III. Marketing Intelligence a Service Marketing Bust; Source: own Table

Zombie Marketing Service	Marketing Intelligence as burst of services
Services as subtracted values of products	• Self-services as oxymorons [73] • Dynamic pricing as common practice on the web [74] • Data-driven marketing automation as annoying marketing [75] • Data-driven marketing as "party crashing" interactive marketing [76] • Data-driven creativity of marketing techniques as creepy marketing [77]
Services as intangible outcomes increasing customer dissatisfaction	• Digital channels as a loss of personal interaction [78] • Migrating customers to online channels as a force creating resistance and customer dissatisfaction [79] • Programmatic native advertisement as deception and misleading [80] • "Customer reviews" as incentives for manipulation [81] • Data algorithms making social media a fertile ground for the virality of fake news [82] • Recommender systems as major culprits of misinformation [83] • Social and mobile media a self-feeding data farms [84]
Service bust as dominating logic of stakeholder exchange	• The notion of marketing automation is its repeatability in which marketers do not have to intervene [85] • Social media as a new era of "information warfare" [86] • Digital key performance indicators with new attention as marketing is coming under pressure to succeed [87] • Marketing practitioners are under increasing pressure to demonstrate their contribution to the firm's performance [88] • Marketing intelligence as lean marketing [89]

B. Digital Self-Services as Zombie Services

At first glance, research regarding e-satisfaction seems to confirm the service boom of digital marketing, as there is a positive relationship between the e-CRM activities on a website and customer satisfaction with the website. A second glance of the same research reveals: "If e-CRM is related to satisfaction, the relationship is not strong. Thus, failure of CRM implementation may not be because the implementation is a failure but because there just is not much that can happen." [52]

"Automated and online migrations present cost savings opportunities as well as risks to customer satisfaction and brand health. More specifically, migrating customers to online channels may create resistance and customer dissatisfaction, as customers may feel forced to use new channels." [53] Research shows that forced use leads to negative attitudes toward using digital services [54]. "The irony is that the more hi-tech our world gets, the more our clients value a personal touch. Our clients don't want group spam — they want to be treated like individuals." [55]

Research asks which factors influence the acceptance of such new technologies: usefulness, ease of use, enjoyment and anxiety are exemplified factors impacting the design of technology acceptance models [56]. Depending on the digital readiness, these services contribute to the e-satisfaction, i.e., consumers' judgment of their digital experiences [57]. The service research mentioned in the previous chapter supposes that established services are appropriate and designed to increase satisfaction.

If research aims at identifying zombie services, it depends on analyzing customers' dissatisfaction: rude employees, poor attitudes, overall poor service, employees socializing, not paying attention to customers as well as slow service are fruitful research findings [58]. Today, the term "service" must be clearly distinguished in customer-oriented services and zombie services, which are developed to reduce costs at the expense of customers. Whether marketing and public release management methodologically converge, this clear distinction is important for the success of management to keep reputation, trust, and customer satisfaction.

Self-services are one popular example for the rising problem of zombie services which are "dead" as they are vitalized by the opposite of customer-centric thinking and service dominant logics. And there are more examples as the following will show.

C. Data-Driven Marketing as "Party Crashers"

"The Web was created not to sell branded products, but to link people together in collective conversational webs. As more branding activity moves online, marketers are confronted with the realization that brands are not always welcome in social media." [59] In this regard, brands and marketing services could be viewed as "party crashers".

Marketing and branding as party crashing zombie services can be exemplified with advertising clutter. This is something already prevalent in offline advertisement and has increased in the digital age. The degree of advertising pressure put on consumers in a particular medium is indicative of advertising clutter. It includes variables like overload, intrusiveness (reactance) and competitiveness (interference) [60]. This clutter is one light version of social media crashing that evolves through the quasi optimization of data-driven advertising.

Programmatic advertising, for example, is one development within data-driven marketing. It applies real time targeting and describes the data supported trading of online advertising spaces. Advertising can be booked fully automatically and adapted situation-specifically for mobile recipients. This digital service means customized advertising on the one hand. On the other hand, it contemporarily leads to annoying, deceptive, and even misleading advertisement. The downside of customized advertising is the risk of being perceived as intrusive [61]. Customized marketing can be perceived as an invasion of privacy, repetition of personalized messages and aggressive tactics which turn creative marketing into "creepy marketing" [62]. Advertisement is adjusted to the personal interests and click behavior of web users. Messages that interrupt a consumer's online activity create feelings of ill will towards the brand [63].

Native advertising is a "try harder attempt" to increase the acceptance of digital ads. It involves "(...) presenting online content to consumers with advertisements that resemble, in format and content, the non-advertising content that is published on the same platform." [64] This advertising is called "native" as it adjusted its look and feel to its "natural environment", e.g., the design of social media posts. Native advertising includes a wide variety of advertising formats, e.g., one-off videos, series of articles, blocks of hyperlinks or social media posts. This type of automated and data-driven advertisement is criticized as deceptive and misleading for customers. It thus contributes to the evolving zombie services.

The basis for marketing intelligence is digital data. As mentioned above, customers provide it along the customer journey. Social and mobile media operate as data farms. "Mobile phones and social media are two examples of big data farms steadily seeded by the users." [65] "Social media have a kind of dual nature: they are public, but often feel private." [66] This automatically leads to questions regarding data protection and the abuse of private data. Is social media intelligence adapted to meet customer needs of private data protection? Block chain technology is discussed to keep data within defined and authorized platforms [67] and will probably shape marketing 5.0 as an era of digital trust to regain reputation.

D. Social Media as (Data-Driven) Fake News

Native as deceptive and misleading marketing seems just to be the tip of the iceberg of "zombie marketing". "The openness and timeliness of social media have largely facilitated the creation and dissemination of misinformation, such as rumor, spam and fake news." [68] With the popularity of the web and especially of social media, a new era of "information warfare" has arrived. Various actors, including state-sponsored ones, are weaponizing information on social networks to run fake news, rumors or clickbaits as campaigns with targeted manipulation of public opinion on a specific topic. The actors include digital bots, political organizations as well as corporations, (paid) activists, "true believers" or "useful idiots" [69]. This digital landscape has provided a fertile ground for fake news to become viral. The algorithm on social media allows accounts to target like-minded individuals based on their browsing and interaction behavior, e.g., clicks, shares or posts [70].

Customer reviews of hotels, restaurants, online shops, etc. are a ubiquitous component of online commerce that impacts customer decisions. "Recommender systems have been pointed as one of the major culprits of misinformation spreading in the digital sphere" [71]. There is an incentive to pollute these reviews, toward promoting one's products or in degrading the ones of competitors. This pollution has been identified as a growing threat to the trustworthiness of online reviews [72]. "Fake it till you make it" [73]. The credibility of reviews is fundamentally undermined when businesses commit review fraud, creating fake reviews for themselves or their competitors. It is estimated that up to one third of all "consumer" reviews on the Internet are fake and, thus, lead to "manufactured opinions" [74]. Machine learning approaches are necessary to make fair recommendations [75].

Congenially, "crowdturfing" evolves. This trend is a counterpart to the opportunities of "crowdsourcing". Crowdturfers leverage human-powered crowdsourcing platforms to spread malicious URLs in social media. The term "crowdturfing" is derived from "astroturf" campaigns which are artificially generated publics [76] and manipulate search engines, ultimately degrading the quality of online information and threatening the usefulness of these systems [77]. Bot generated, artificial consumer reviews and crowdturfing exemplify the increasing significance of digital fake news.

Marketing, e.g., within digital brand management, can interact both directly and indirectly with fake news. In some instances, brands are the victims of fake news. At other times, they are the purveyors. Directly, brands can either finance fake news or be the targets of it. Indirectly, they can be linked via image transfer where either fake news contaminates brands or brands validate fake news. "Searching for greater reach, brands tend to associate themselves with the most popular stories– whether these are true or fake." [78] Research reveals that fake news marketing is likely to increase interest in products [79]. Nevertheless, they belong to the category of zombie marketing as they are artificial, and likely to damage reputation.

E. Performance Marketing as Automated Marketing Cost Optimization

Every day, customers voluntarily generate and provide data by detailing their interest and preference regarding products or services in the public domain, through various channels [80]. They generate data pursuant to their personal stage within their customer lifecycle. Marketing automation uses this data to develop new marketing standards. Marketing automation can be characterized as the methodology by which process design and technology may be harmonized, to enhance both the efficiency and effectiveness of marketing execution [81]. The term "marketing automation" was introduced into the digital age by Little at the 5th Invitational Choice Symposium at UC Berkeley in 2001. The nucleus of marketing automation is an automatic "customization" or "personalization" of marketing mix activities, applied to the customer´s specific lifecycle. Due to the enhanced relevance of the information provided, it is assumed that customers will show increased involvement and pay more attention to the brand's communication [82].

However, the core value of automation is different. It means the repeatability of (digital) marketing measures in which people do not have to intervene. Head stated as early as the 1960s that new methods of automation would make marketing information available much faster than before and provide data that was not previously available [83]. The broad range of digital marketing technologies indicates that branding as operations is gradually becoming digital. This may enhance customer centricity – or the opposite may occur, as marketing automation processes indicate. "Digital marketing may be facing a black cloud on the horizon. There is mounting concern that consumers find some forms of digital marketing to be intrusive and, thus, annoying" [84]. Marketing automation "[…] does not mean that you sit back and let technology do all the work" [85]. The key to the success of marketing automation is understanding the astute preferences of customers, spotting relevant communication triggers, and converting these into relevant, targeted and timely messages that drive more profitable customer behaviour.

One popular technique in which digital customer data is used are automated price adjustments. Dynamic price adjustment is a popular practice on the web. Amazon is considered a pioneer here. It is assumed that users accept this as long as the offer and service are right [86] and exemplify lacking customer centricity.

F. Marketing Intelligence as Performance Marketing: Digitized Lean Marketing

Contemporary digital zombie services are part of the key performance debate. Automation often implies a strong link to data-driven marketing and performance marketing. Data-driven marketing and marketing automation is closely linked to web analytics [87]. Digital marketing, the collection and analysis of web-based campaigns as well as targeting even in real time, increase the ability to measure the performance of marketing. (Digital) key performance indicators are becoming more and more popular, as marketing budgets increasingly need to be justified [88]. "As pressure for accountability cascades through an organization, every functional group is under scrutiny, and those who cannot quantify their impact on generating satisfactory returns on investment are placed in a vulnerable position" [89]. Research shows that some companies use short-term performance indicators at the expense of measuring long-term factors [90], e.g., regarding campaigns. "If you are going to fail, fail fast" [91]. "Performance marketing in its purest form is purely success-oriented. Successful campaign modules (such as texts, keywords, tools and advertising media) are accelerated and expanded. Less successful ones are optimized and eliminated if the defined goals are still missed"[92]. However, hitherto it is not finally clear what kind of metrics will count. Another danger is that the selected media are so far often too obscure. Moreover, there are ad frauds manipulated by bots which fake impressions.

This performance debate is probably as old as marketing itself and represents the updated lean marketing of the 1990s. Lean management is traced back to automotive industries, especially Toyota, which introduced lean thinking in order to reduce non-value activities. This approach can adequately be applied as lean marketing in the form of continuous improvements to eliminate inefficiency, speed up production cycles and increase professionalism [93].

G. Marketing Intelligence as a Lean Inside-Out Paradigm

In retrospect, several paradigmatic thoughts occur, shaping marketing intelligence as digital performance marketing. Analytic or lean thinking make apparent that performance marketing focuses on the roots of marketing 1.0 with markets as sales institutions (Table IV):

TABLE IV. Marketing Intelligence as Performance Marketing; Source: own Table

Paradigmatic Performance Thoughts	
Performance Thinking	Measuring valuable metrics, e.g., key performance indicators like customer engagement, churn rates or conversion rates
Analytic Thinking	Prioritizing evidence-based marketing measures proved by key performance indicators, e.g., using big data to detect new metrics like ratios "selling sentiment".
Lean Thinking	Eliminating inefficiencies, e.g., long-term marketing and/or branding campaigns serving reputation or image management without direct returns
Process Thinking	Identifying value-creating processes, e.g., the customer journey as the process from perception to action of customers and the identification of the customer-specific lifecycle
Automation Thinking	Establishing repeatable (digital) marketing measures in which people do not have to intervene, e.g., marketing automation solutions
Inside-out Thinking	Conceptualizing, planning and controlling due to the traditional thinking of management analytics
Marketing 1.0 Thinking	Referring to the sales paradigm of marketing and at the same time customer value centricity which is currently limited

The vision of big data alongside the automated customer lifecycle is to systematically eliminate inefficient marketing measures in real time. Ideally, digitized performance marketing 4.0 integrates marketing 1.0 by selling as much as possible, and additionally serves marketing 3.0 by optimizing customer needs through big data analysis. However, the reality is different and leads to the first current incompatibility: Digitization as automated marketing represent cost savings opportunities and risks to customer satisfaction. Besides, it is appropriate to damage brand reputation. Nonetheless, marketing seems to meet its limits when research findings show the annoying impacts of marketing. Hence, the status quo of marketing intelligence research is still considered to be in its infancy and is occasionally even described as "embryonic" [94]. Performance marketing as marketing 3.0 still doesn't perform and seems to persist as marketing 1.0.

IV. Conclusion: Marketing 4.0 as a Trade-Off Between Boom and Bust of Services

In review, service marketing is impacted by many digitized techniques. A broad range of technologies have evolved to increase customer satisfaction, e.g., by customized services. This area of digitization may contribute to service marketing or in fact operate as the opposite when they are primarily designed to reduce costs and/or increase sales. Technologies that contribute to performance marketing by automation on the one hand, and the incentives to pollute the digital landscape by attempting to manufacture opinion on the other hand, lead to "digitality" which seeds zombie services. Zombie services operate at the expense of customer satisfaction. At least since the advent of self-services and call center technologies, it has become popular to pervert the term "service" which is contemporarily a rising threat for (digital) marketing and branding. Against the background of zombie services, marketing 4.0 is likely to disappoint stakeholder expectations and, thus, damage brands. Consequently, the question whether marketing 4.0 means the boom or bust of marketing remains open.

Marketing science and practice need to integrate the elaborated paradigmatic thoughts with the aim of balancing performance requirements and stakeholder values. The digital landscape, shaped by the opportunities of performance marketing and the incentives to pollute the digital environment, require an initiative to foster digital trust which may also impact marketing 5.0. Service marketing needs to embrace a holistic approach, integrating performance marketing, customers, and the claims of other stakeholders [95].

Thus, customer centric marketing 3.0 is a requirement which has still not reached its full application. The need of holistic marketing in order to optimize service and performance is addressed, but marketing intelligence today is lacking in the non-digital and psychological parts of the customer journey. Studies attempt to measure the (non-) financial return on social media investments. However, even the optimistic representatives of "social media return on investment measurement" need to admit: Digital behavior cannot be completely and accurately traced [96]. Marketing intelligence is still in its infancy. Contemporarily, this means that digitized service marketing as a factor of corporate success crucially depends on digitality, i.e., the culturally determined applications of marketing techniques in order to avoid the downside of marketing digitization.

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Jan Lies

Prof. Dr. Jan Lies has a doctorate and postdoctoral habilitation in economics. Since 2013 he has been professor for business administration, with a focus on corporate communications and marketing at FOM University of Applied Science in Dortmund, Germany. His research involves evolutionary and behavioral economics, as well as digital marketing, PR-management and change communications. Digital marketing is one of his research areas, which demonstrates the heavy impact of evolutionary processes on corporate success.