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Chapter 1: Mapping the digital consumer: Behavioural models and experience engineering in online environments

1.1. Introduction

The rise of the modern informational economy has shifted the primary focus of marketing from a mind-centered to a brain-centered domain and has made data the essential currency of digital marketing. On the other hand, technological advances and the increasing digital sophistication of consumers have given consumers an unprecedented power of visibility, choice, and voice creating paradoxical and conflicting pressures on the role of marketers (Arora et al., 2008; Grewal et al., 2017; Bleier et al., 2019). Businesses, not-for-profits, and governments are generating huge amounts of data that are valuable for decision-making. Yet within this abundant resource, how can we disentangle genuine global truths, mapping our collective preferences at scale, from the environmental noise of our unfiltered digital behavior? How can we employ big data analytics tools to effectively and efficiently reveal the relative importance of various search functions and shopping-related cues for individuals and the segmented markets they belong to?

By integrating models and ideas from different domains – economics, psychology, neuroscience – and combining predictive modeling with human 'in-the-loop' behavioral design approach via the so-called 'experience engineering' paradigm we seek to help digital marketers and organizations accomplish two critical tasks: (1) disentangle signal from noise and analyze at work the various drivers of how and why consumers are making specific choices at any given point of the consumer journey; and (2) engineer personalized, always-on, feedback-mediated and dynamically tailored digital experiences that capitalize on connectionism-based learning effects, that is the collective intelligence and 'mutual modeling' capabilities of specific segments of the digital journey population to optimize the online experience over time (Lemon & Verhoef, 2016; Hoffman & Novak, 2018).

1.1.1. Overview of the Digital Marketing Evolution

In the last part of the second millennium, digital and information technologies were rooted in various sectors of the economy. The development of the Internet and, shortly thereafter, of the World Wide Web represented a decisive turning point. New technological solutions in network infrastructure and in the use of hardware and software devices have changed relationships in society and, above all, in business establishment. With the development of digital relationships, new paradigms have been introduced, enriching those who consider communication an essential tool for exchanging information and for success in the market. Hence, new rules of interaction and new marketing techniques and processes were born. In particular, new business models are mainly based on the ability to provide content, products, and services defined and personalized according to the market segment and the specific target customer they address.

Fig 1 . 1 : Digital Marketing Evolution

The digital revolution was not only the affirmation of new technologies applied to the market but also a new vision of business management that merely considered, in addition to information flows, the need to consider the consumer a fundamental element of the whole company. For this reason, several scholars have highlighted the risk of considering Digital Marketing as the new evolution of traditional Marketing. The evolution of marketing in the digital age becomes a more complex activity characterized by new themes and specializations, which require the involvement and preparation of new actors and absolute operating modes and effectiveness times. In this perspective, at different times, various definitions and concept maps of Digital Marketing have been

proposed with the aim of providing a vision and a conceptual reference for the design and implementation of Digital Marketing strategies. However, today, we have reached a good level of consensus that profits, market share, and brand image are the three main objectives of Digital Marketing and are as valid as traditional Marketing.

1.2. The Digital Consumer Landscape

1. Defining the Digital Consumer

Conceptually, the digital consumer can be located within the perspective of hybridized consumer identity defined by contemporary consumer studies. In this sense, the digital consumer is a product of the fusion between the conventional contemporary consumer and the digitally connected user who engages with online digital artifacts. By extension, digital consumption is understood as a combination of physical consumption of goods, products, or services and digital engagement with media, content, platforms, or applications. The hybridization hypothesis is strengthened by the fact that social, economic, cultural, or experiential elements associated with all consumer behaviors are not independent or dissociated when analyzing the digital dimension. In other words, consumerism has not suffered digital disruption and segmentation as user-centric theories would postulate. Consumers do not separate the digital from the physical environment in the same way that they do not segment affordances relative to functions or levels of engagement. The imaginary division of consumer identity is thus uncommonly applicable within the digital domain.

2. Trends in Digital Consumption

A first consequence of model hybridization is an interconnected ecosystem where the physical and the digital are path-dependent within a process of interaction. Physical and digital consumption are interlinked and mutually constituted facets of a unified digital consumption experience continuum. Such a continuum is characterized by the omnipresence, ubiquity, transience, paleontology, fragmentation, and simultaneity of digital consumption experiences across extended periods. In short, consumers not only transcend but also transform time and locality within their transitive patterns of consumption. Digitalization shapes consumer time. Digitalization shapes locality. Yet consumers shape digitalization! Such a model of omnichannel consumption has important implications for conventional consumer-focused communications theory. The analysis of microbehavioral elements through multi-disciplinary studies suggests that digital and physical consumption behaviors cannot be completely understood in silo as they reflect a set of hybrid patterns and processes characterized by simultaneity and rapid transition.

1.2.1. Defining the Digital Consumer

The term "digital consumer" describes the generation of people who have grown up in a digital environment, comfortable negotiating relationships online. These consumers are always online, digitally functional, and bold, wanting results. They see the whole world as a digital environment, more informed than bored. They expect brands to earn their loyalty, and in return, they are comfortable advocating their favorites and spreading the word online. They are curious consumers, seeking to know more about products but also about the world at large. These traits have persisted through the generations, and these attributes apply to people of all ages who actively use technology to enhance their consumption experiences. They may be tech-savvy young adults or even baby boomers.

An individual consumer is the unit of analysis in consumer behavior. Dimensions such as motives and goals, social influences, executive control processes, situational influences, and consumers' expressiveness and experience are considered. Consumers can be drawn to an online experience because of its engaging, entertaining, and fun environment. Digital consumers are highly empowered individuals who seek product-related information and feedback from personal networks or even from a broader audience. Companies have to know what their customers want from them when they use new technologies and act accordingly, which means satisfying a wider range of needs than simply buying-related or offering choices to local tastes that may trigger a trip to the interactive kiosk. We adopt the view that considers consumers digital, i.e., people who engage in consumption-related actions in a digital environment or using digital technologies. These people, traditional consumers or digital consumers, are collectively digital consumers.

1.2.2. Trends in Digital Consumption

As digital consumption increasingly becomes more integral to that of the consumers, digital commerce generates a wider array of opportunities for both B2B and B2C market industries. Brands are now capable of accurately and nearly instantaneously reaching global scale markets and niche segments specifically tailored to their product's unique attributes, for either end of the spectrum of transaction value. This phenomenon has triggered both new commerce business models for existing markets as well as completely new markets evolving as a result of the trends in digital consumption.

Global B2C e-commerce sales surpassed $2 trillion in 2020. It is estimated that worldwide, more than 2 billion people purchase goods online. Ignoring the possible overestimate, the demand is here. With the pandemic accelerating the rate at which consumers shift toward using digital commerce channels to purchase products, online retail is booming, with consumer adoption reaching levels not expected for at least

another five or more years. Nearly half of global consumers shop online at least once a month. To capitalize on this wealth of opportunity, brands must build a digital commerce presence that provides their customers with the experiences they demand. Today's consumers already expect this and will continue to do so once the pandemic comes to an end.

However, digital commerce is not only about setting up a "shopfront" and waiting for the customers to purchase. Brands have been increasingly combining digital commerce with digital brand marketing, developing integrated experiences where consumers may easily navigate between brand websites and commerce apps utilizing personalization and digital assistance. It has gradually become a method for establishing brand credibility. Brands are also integrating digital commerce with experiential marketing, gamifying the shopping experiences for consumers by offering engagement-based rewards. Moreover, influencers are taking an increasingly larger role in the digital consumption process, and many brands are turning towards this marketing tactic to present products to consumers.

1.3. Behavioral Models of Digital Consumers

One of the best approaches to understanding and modeling the intentions and behaviors of consumers is based on cognitive psychology and research on mental processes. Although diverse psychological frameworks have been proposed to address a diversity of phenomena in consumer behavior, some of its main pillars are utilitarian needs and hedonistic needs, seen by many as indicators of a rational vs. an emotional orientation. According to the utilitarian approach, decisions are based on overall judgments of the evaluation of the predicted consequences, which leads to expected utility-maximizing patterns of behavior. Conversely, the hedonistic approach suggests that affective feelings and emotions are primary determiners of any reaction and therefore act as antecedents of online decisions. This means that consumers will be driven to maximize their affective-related outcomes and motivations and that attitudes towards online shopping, as expressed through the dimension of pleasure and arousal, will impact decisions while mediating the choice between shopping online and face-to-face. The five-dimensional model provides a meaningful and reliable framework for understanding consumer behavior in online environments. These dimensions are: (1) value-expressive; (2) functional; (3) epistemic; (4) social; and (5) hedonic.

Behavior is also largely influenced by sociocultural development. That is the maturity of social ties and the achievement of social status. Moreover, what people want to be can be more important than what people want. In consideration of this, it is possible that, from a sociocultural point of view, the impact of virtual consumption on behavior is currently redistributing the concerns and significance of the social dimension of consumer choice. According to the theory of planned behavior, behaviors are internally

constructed, in that they are a direct result of internal cognitive functions. However, in a broader sense, it has been shown that social norms act as antecedents of individual motivation and, ultimately, behavior.

1.3.1. Psychological Frameworks

The increasing significance of online environments has renewed interest in research that aims to explain how people make decisions in these settings. Some of the foundations of behavioral consumer research were laid by studies focusing on the cognitive capabilities of users. Most of the early frameworks specified some model of search and choice behavior. A key component that studies predominantly focused on is the range of cognitive capabilities involved in the process of a digital consumer making a decision. These studies have emphasized the limited cognitive capacities of users, both in themselves and when compared to more powerful – or seemingly omniscient – digital devices. Idea-centered accounts of digital consumer behavior tended to emphasize the informational inputs of the decision process. A unidirectional model suggests that marketing messages stimulate internal decision processes via attention and memory to create a purchase decision.

Recent contributions claim that the process of using and consuming particular websites or digital devices is better represented as an interactive experience over time and place, rather than as a sequence of decisions momentarily vivid to the consumer. The temporal sequence accounts draw their roots from earlier research in other domains. Unlike idea-centered frameworks, experience-centered analyses seek to provide richer accounts of the decision process. Idea-centered decision frameworks provide the bulk of the explanations currently available for digital consumer decisions. Most attention to this field has centered on the proposition that digital devices and platforms exhibit a level of capability much higher than that of consumers. This leads to a widening gap between the two elements. Given that the design and management of systems mean that particular cognitive processes are triggered, rather than curbed, they create temptations that consumers may find hard to resist.

1.3.2. Sociocultural Influences

Sociocultural influences include significant others, situational influences, culture, and subculture. Some advertising and other types of promotional messaging contain salient references to significant others, whose influence extends from parents to peers and all sequentially significant others through the various development stages. This facet of influence has a rich heritage in sales promotion. Some products are explicitly tied to a group of users who are ideally representative of the intended target audience.

Promotional displays may offer attractive incentives to make a trial purchase. Depending on the product category and the types of connections previously established between the actual and prospective consumers and the peer group, the communication may be designed to depict lower degrees of brand loyalty or higher noted loyalty on the part of actual consumers. The positive nature of previous peer group acceptance or negativity reference can favorably or negatively discriminate against potential consumers during the decision process stage.

Situational references can consist of a recommended action consisting of a more or less immediate response to a shift from one or more of the decision process's preceding stages. This action may or may not correspond to a brand transfer, but it is advocated in the name of savings in time and effort. The consumer is encountering boredom between consumption episodes and a marketing communication depicting an exceptional offer. Visual displays accentuating the probable scarcity of available quantity serve to stimulate impulse intervention. An enhanced perception of social acceptance can help sway the consumer toward purchase. In these situations, promotional displays containing time-limited price discounts, gift offers, or sweepstakes, as well as in-store sampling sessions, act as persuasive forces.

1.3.3. Economic Factors

Digital experiences of producers and consumers are embedded into a common engagement infrastructure. Consumer interactions with either producers or other consumers are not independent of one another. These interactions generate positive externalities that increase the value of the engagement infrastructure for all actors and can change notably during the engagement cycle. High levels of interaction generate large shared networks that provide a wealth of data. By pooling the data of many consumers, producers can use econometric models to identify the most influential consumers and target them with incentives. Because these incentives reduce the search costs of consumers, those influences can reinforce the positive externality associated with word-of-mouth effects and internalize the incentive deviations associated with traditional models of industrial organizations. This is why the behavior of the market facilitator is so important: the facilitator must act to pay consumers for interacting with other consumers to reinforce the external effects that create consumer interest in using the digital experience in the first place.

Of course, influencing others to buy a product or to visit a retailer can be done through compensation, because the producers' services are now seen as zero-price items. By saturating social networks, producers can rob the digital experience of its informational value and use a marketing gimmick to sell products at a price premium in the retail store. The idea of creating an experience enters into conflict with the idea of providing

consumers with something useful. Digital experiences should be a consumer service provided by the producer to compensate consumers for the costs of allowing their activities to be used to help go-do decisions.

1.4. Data Analytics in Understanding Consumer Behavior

Consumers generate massive quantities of behavioral and transactional data as online assets. The proliferation of inexpensive data capture technologies and analytics software has ushered in the age of Big Data. From a marketing perspective, the wide variety of datasets generated opens new avenues to understanding how consumers identify and interact with brands, and how ecosystems of various on- and off-line brands shape an individual's purchase behavior. This section discusses data analytics advantages, and how consumer understanding enhances experiences. Consideration is given to the challenges of size, complexity, uncertainty, and data veracity of consumer message and transaction data, and the enhancement of such insights to a more holistic behavioral model through cognitive and affective analytics.

Big Data describes an increase in exponentially growing datasets, consisting of traditional consumer transaction datasets, but also of variety, velocity, veracity, and variability of unstructured behavioral data, ranging from web and mobile browsing to social media sharing and searching, with e-mail, daily deal, and display advertising clickstream datasets falling in-between. These datasets, described as combining what consumers say, do, and feel, present new potentials for brands wanting to achieve deeper consumer relationships by using behavioral analytics to augment traditional CRM models with predictive analytics. This section reviews the research within the analytics field, and the growing interest in a better understanding of consumer behavior as new technologies generate massive volumes of detailed low-cost data on consumer behavior across five generations of online shoppers.

1.4.1. Big Data and Consumer Insights

We have witnessed tremendous growth in Internet technologies and techniques that result in the generation and collection of consumer information in and around online and physical commerce contexts. This is because organizations nowadays store most of their business data in electronic form and have increasingly massively adopted and depended on digital environments to conduct transactions, promote visibility, enhance brand image, and pursue marketing communication. Streams of interaction data are generated every second, which today allows the use of digital signatures to pinpoint customers' unique preferences, support forensics, and track their precise online activities on the basis of their logged transactional history. Additional customer attributes can be inferred

from this process, such as modifying circumstances, associated purchase behavior, brand switching, planned purchases, and external events and actors that may influence purchase timings. Together with attributes collected by other methods, including shopping basket analysis and web-event analysis, economists and marketers can leverage data analytics modeling infrastructures to further deepen customer insights.

Data analytics offer the tools needed to recognize hidden patterns in the collected data and are starting to be actively used not just by retailers, but by advertising and state detailing agencies as well. Predicting and responding to changing consumer preferences and actions in reaction to stimuli have the ability to provide businesses with knowledge that will allow them to gain a competitive advantage. However, making predictions when sufficiently large amounts of data are applied may provide significant insight into what makes a consumer decide, although those accurately trained and tested models still must be included as input-filtering steps in the user-querying process. To do this, companies currently collect two types of data analytics: data sourced from sources they own, and big data sourced from third parties that compile different sources of personal and purchase history information.

1.4.2. Predictive Analytics

The advancement of predictive analytics has transformed businesses' analytical capabilities. Whereas early analytics explored historical data, a company's past performance, and key performance indicators, predictive analytics combines a company's historical data with both external and internal factors to custom-build models that allow for the forecasting of customer behavior and the product, service, or experience that will trigger a reaction. This modeling process uses machine learning, artificial intelligence, decision trees, or other leading techniques to discover patterns in data and learn from those patterns. Predictive analytics can take companies using traditional descriptive analytics methods to a new level by delivering helpful insights that allow for changes in operations, marketing, and product management for improved results. Predictive analytics can enhance many areas of business operations, including marketing, sales, people, risk management, product improvements, and supply chain.

Predictive analytics has become critical in marketing. Businesses use predictive analytics in marketing to understand how to optimize acquisition costs and build loyalty in their existing customer base. Such analysis allows marketers to ascertain the right message and medium for each customer interaction, whether in email campaigns, web content and promotions, or targeted ads. Analytics take into consideration a customer's history, demographics, and buying patterns to predict the probability of future propensity toward actions such as purchase, response to online offers, and subscription to services. The insights provided by a predictive model allow marketers to become results-focused

and optimize campaign response and profitability. Predictive analytics is also being used to relay insights such as which customers and potential customers might be at risk for churn.

1.5. User Experience (UX) Design Principles

Although it is well known that a product's design principles strongly influence the overall commercial success, product UX design is still too often considered a not-so-important practice. It is often estimated that between 15% and 40% of project budgets or development costs are spent on designing the UX, while some software design methodologies recommend UX design to be treated as an integral part of the overall software development process. In addition, the overall success is still more frequently estimated on the specific product's functionality, reliability, scalability, efficiency, and costs/price, while UX is often ignored, even though it usually provides important discriminating factors in favor of some alternative products. Overall, it can be said that most products are poorly equipped with UX design features.

1. Fundamentals of UX Design

Several basic notions and objectives are interconnected with product experience: perception, sensorial experience, communication, experience, affective design, interaction, and usability. The notion of product experience has recently entered into the design vocabulary. A product can trigger an emotional response during its use, stimulating both physical/physiological levels and cognitive levels. Sensorial experience relates to perceived reality. Traditional research refers mostly to vision and touch but includes also other factors. Communication reveals properties of UX that facilitate a communicative function because they broadcast important information to the designer/producers, the user, the customers, and the stakeholders. Products can advertise corporate identity and encourage corporate growth.

2. User-Centered Design

The notion of user-centered design (UCD) refers to a particular type of design process, while UX design is linked to product achievement at the end of its design process. According to UCD methodology, every effort must be applied in order to unveil and satisfy real user needs through the appropriate application of design principles because they influence UX effectiveness.

Fig 1 . 2 : UX and Product Success

1.5.1. Fundamentals of UX Design

UX design is a relatively new field that has only recently begun to develop a cohesive set of principles and guidelines to help practitioners navigate this complex and interdisciplinary activity. As the name implies, UX design is primarily concerned with designing for the user experience. UX is an interdisciplinary practice that brings together aspects and practices of many different domains. UX designers may be responsible for market research, competitive analysis, task-flow analysis, design information architecture, developing wireframes, specifications, and prototypes; conducting usability testing; and acting as a bridge between user research and the visual design process. Whatever the specific activities, UX design is inevitably what issues the user directly experiences about a product or service, and often influences what the visual designer will be able to create. It focuses on all aspects of user interaction and is not limited only to the design of the user interface.

Despite the diversity of activities and perspectives, a lot of consensus is emerging in the UX literature on a number of broadly defined principles or guidelines that may act as a coherent set of heuristics for guiding UX design. These principles have their origin in classic HCI and product design but are often elaborated on and interpreted in new ways with a focus on experience. In the foundation chapter of the International Encyclopedia of Human-Computer Interaction, 11 high-level UI guidelines are defined that cover user-related, content-related, system-related, and socio-political principles. They closely resemble the 10 UI Principles that were formulated on the basis of a textual analysis of

a set of basic books and resources in what was then a discipline in emergence. Different versions of these principles may be found in many other textbooks as well.

1.5.2. User-Centered Design

Designing for user needs or applying a user-centered approach to design is intrinsic to the art of UX design. User needs and goal-directed behavior influence design decisions that determine the experience of the design. Designers who generate a design solution outside of this knowledge base place the end-user at risk of incurring an experience that does not fulfill their intended needs. For this reason, trusted brands operate from a position of user knowledge, or understanding, and design their products accordingly. Understanding intended end-user needs within the context of use and goal-directed behavior is therefore crucial to fulfilling that objective. Perhaps, the most important question that designers must afford to reflect upon is, "What is it like to be this person?" Holistic user or empathy maps provide an excellent vehicle for the response – and there lies the answer.

The objective of user-centered design is to create products and environments that so completely match the needs, goals, and behavior of users that they are virtually undetectable. A user-centered design process is one that involves users throughout the design, development, and implementation processes in order to ensure that information, products, and environments are easy to use. Making user-centered products easy to learn, remember, and navigate is just one of the many methods for creating user-centered information systems. The goals of user-centered design can be stated as usability, credibility, value, quality, and desirability. However, these goals are not met simply through a checklist of user-centered requirements at the end of a project. Instead, user-centered design emphasizes methods such as user testing early and often with users in the environment in which the product will be used, providing feedback to users regularly, asking them if the information they see is useful, and presenting them the way they use it.

1.6. Experience Engineering Strategies

There are a plethora of tactics and approaches for adding life to the digital consumer experience. We will describe here three important aspects that have proven useful in increasing the experiential quality of online environments. Personalization techniques, which build on core knowledge about mapping consumer behavior usually performed previous to website launch and/or during a period of time considered sensible in terms of site usage activity. Gamification, which inserts game-like characteristics into consumer experiences, especially those related to prolonged engagement, in order to

increase enjoyment levels and prolong actively. And engagement, which stems from an effort-seeking approach to designing experiences.

1. Personalization Techniques

A keyword in experience engineering on the web is personalization, which grounds the ability to recognize a visitor's essential properties and functional needs, enabling content retrieval and delivery that best fits what the user is looking for. Personalization can prioritize the determination of known user preferences, such as interests and tastes, or the discovery of new preferences through tracking observable behavioral aspects in the course of user interaction. Personalization can also contribute to the initiation of a relationship with the user, which is the most critical point in the customer experience cycle. To the initiation stage, the use of registration screens, preferably user-friendly, social interaction features, such as the ability to create public profiles or community forums, which require people's participation to be successful, and attendance for normal operational malfunctioning of a website can be important activities.

To keep the relationship it is advisable to keep the registration to functional profiling at initial engagement low-key or restrict it to handy general knowledge about crucial user causal traits, like the intended use of the website. Another form of recognition used in e-commerce is transactional history, where the knowledge of what, when, and how much users bought on the website is essential in times of shopping pains. Other commercial uses of transactions may relate to third-party placement of customer product interest tracking to retarget customer marketing efforts. Personalization targets the attributes of core functional value, relational, and symbolic value, and its benefits increase satisfaction levels and sales levels.

1.6.1. Personalization Techniques

Personalization is the art of making digital experiences more meaningful, effective, and pleasurable for users. It encompasses a wide variety of techniques, from recommending the best items to a user based on her previous activities to applying meticulously crafted templates to optimize conversion in the entire purchasing process. Personalization can optimize the entire consumer experience but it can also hinder it, and it is critical to identify the right balance for each situation. Personalization techniques can rely on explicit or implicit information. Explicit information refers to data points provided by the user via forms, surveys, or social media profiles, while implicit data points arise from user behavior. In most cases, the data is a mix of explicit and implicit inputs. Although more and more digital businesses are interested in using explicit information to further improve their business, the reality is that they make it available in extremely limited ways. Digital businesses rely mostly on implicit information about consumer

preferences. Moreover, one important trend in the area of data collection is the introduction of privacy regulations, limiting the use of specific implicit data collection techniques.

Consumer data collection and processing techniques can be applied to inform a wide variety of personalization techniques. Predictive analytics can anticipate which items will be of interest to a particular user and recommend them in real-time or proactively send her emails highlighting relevant purchases. Simple visitor segmentation enables sites to show different templates depending on the characteristics of visitors. For example, an e-commerce company selling gifts can present a different template on Christmas Eve, focusing on "last-minute gifts" recommendations based on customers' previous visits to the website. Another technique is user-generated content: brands collect reviews, user images, or videos to build a more reliable and emotional brand experience. Personalization is also present in email and content marketing automation, whereby companies analyze previous online and offline user behavior and decide the right product or content to show at the right time.

1.6.2. Gamification in Digital Environments

Gamification consists of techniques that promote engagement in an activity through the introduction of game-like elements. Originally employed mainly in serious game contexts, and subsequently in the design of general-purpose serious games, it has now been widely adapted for employment in all sorts of digital interfaces that are associated with non-game related activities. The introduction of competition, rewards, leaderboards, levels, and badges enhances the enjoyment of a whole host of everyday activities, from exercising to pursuing education or even carrying out work tasks.

Online setting designers, marketers, and app developers started to take advantage of this phenomenon, embedding elements from games into the user interface designs of webpages, apps, and digital systems in general, in order to increase user engagement during the otherwise tedious experience of information searching, studying, or filling paperwork. They rapidly balked at the sheer power of these techniques in terms of boosting user engagement, resulting in such a prolific design trend that a few short years later they started to be employed in almost all sorts of websites and applications, from e-commerce, social media, and email platforms to even business enterprise collaboration environments.

The challenge posed to those who seek to apply these techniques is to understand that the elements chosen, their design, and the way they are embedded within the user experience have to be carefully thought out and tailored to the specific context and users involved, lest the use of sprinkles from the gamification toolbox become a sour, bland,

or even disgusting experience. In a few cases, their excess use, either globally or locally, resulted in adverse effects that sabotaged the core objectives of the application. Warnings popped up stating that when goals are misaligned and rewards are mishandled excess would backfire, ultimately defeating the purpose of gamification.

1.6.3. Enhancing Engagement through UX

Web development has progressed beyond mere functionality and ease of use since the introduction of the World Wide Web. The development of improved technologies has helped exploit the visual dimension and improve mutual interactions in relational spaces. Internet use is no longer technologically restricted to relatively few technologically learned individuals. Most people now appear to carry out everyday activities in digital environments without conscious thought as they scroll, swipe, and reflexively touch personal devices. Despite the usability of digital technologies, there are still sensitive differences in the experience users have with these spaces. Often these experiences are negative, creating frustration, regret, annoyance, and a desire to abandon targets. What can be done to prevent this?

In order to answer this question and specifically solve problems of engagement in digital environments, relevant literature has emphasized the contributions of User Experience (UX) in explaining the appeal of some websites and their ability to create addictiveness in the use of others. The goal of UX is to improve satisfaction by creating positive experiences with design, interactions, and technology development. Together, UX and its study of user-centered design and usability help foster favorable interactions with consumers for products, services, or brands. Using principles of UX raises critical questions. What do we know about UX? What do we mean by UX? What follows is a short overview of the main concepts or principles of UX, and UX studies that most apply to mapping the digital consumer and her behavior. Following this overview, we present some studies that summarize UX's general, factorial, antecedent, and domain-specific models.

1.7. Impact of Social Media on Consumer Behavior

The success of a company is usually conditioned by some factors that it cannot influence on its own, such as market demand, especially in the early stages of the life cycle of a new product. In contrast, demand can be shaped and modified by the impact of social opinion or social proof that affects the rest of the members of the community or the group with which they are or want to be associated. In short, social proof is the tendency to copy the behavior of experts or opinion leaders, or to copy the actions of a greater number of people when evaluating a situation, or the degree of similarity with the actors

of such behavior, or to look for indications about what is correct when faced with ambiguous scenarios. Social networks are undoubtedly the most important source of social confirmation, where large communities interact and where unanimously approved behaviors are highlighted.

This effect is closely related to upper or lower trust of the content shared by any user; how many users liked, commented on, or echoed in any way a post on social media; or how many contacts share a reaction. The quantity and quality of likes and comments about a post made by people a user considers close associates determine the reputation of the creator of that post. When fans share reactions or comments on the publications of influencers, they are indirectly guided towards the acquisition of those products and brands. Influencers on social networks are virtual figures or persons, who have become media channels in their own right and have gained notoriety and fame on the Internet by providing information and/or entertainment about a certain area. Their function is to comment on or share information, opinions, exclusive news, photographs, or videos about fashion, travel, beauty, health care, home, and garden, etc. for large numbers of followers.

1.7.1. Influence of Social Proof

Social media influences all of us and calls upon a world of experiences, images, and references from which we can all draw to help us, in our decisions and choices and even to help define who we are. It convinces us, sometimes subtly so and sometimes not, that we are not wholly individual; that what we like and appreciate has to be reassured amongst a shared community of specific others – of personal contacts, or of individuals who merely echo our expressed tastes and interests or of a wider pool of individuals who, for obvious reasons, together champion or opt for experiences in common. This conclusion is supported by the data from unconsciously enacted physiological evaluations which speak in favor of an evolutionary motivation in some people towards seeking acceptance in others.

More explicitly, such behavior is generally thereafter described as the “social proof” principle. Social proof is an influential behavioral model that explains how consumers use the experiences and emotions of others to determine the most valuable solution. This theory suggests that we rely on others for social navigation and that social influence serves as a sign of correctness, as we determine what is right by looking at those around us, at least when we are in doubt. In shopping and e-commerce, customer reviews act as social proof. The theory is that people are more likely to make a purchase decision when they see others have done so and are satisfied. This theory essentially attempts to explain conformity to social influence. Our desire to have others agree with us relates back to the need to maintain proper relationships within ongoing social interactions. Social

media has created mechanisms for establishing who these reference points are in diverse hierarchical matters and for enacting social navigation.

1.7.2. Role of Influencers

The role of influencers in our social landscape has changed immensely since the earliest days of social media. Today, major influencers have built global followings, earned enormous incomes, and emerged as important players in the cultural zeitgeist of their generation. So-called "influencer marketing" has grown to be one of the fastest-growing forms of digital marketing in recent years, with global spending on influencer marketing expected to reach $16.4 billion. New and legacy companies alike have embraced spending marketing dollars on "getting in touch with" the right influencers to help promote their products and services to the influencer's audience. However, the landscape is quickly maturing, leaving marketers to wonder how best to understand and utilize the power of influencers, even as platforms expand the available scope of what can be marketed. While companies can now interact with their audience through platforms such as TikTok, Snapchat, and even Discord, influencers can also be found on these growing new platforms as well as more established ones like Twitter, Facebook, YouTube, and Instagram.

Yet research is still lagging behind this transformative aspect of marketing in the digital age. In examining influencer marketing closely, researchers have uncovered some interesting dynamics to consider when deciding how to engage influencers. Here we highlight three facets of influencer promotion worth taking into account: influencer authority and expertise; the authenticity of the influencer-follower relationship; and influencer narrative style. Each of these characteristics can help brands evaluate the potential of an influencer to persuade their audience and drive sales, and as such could be considered guiding principles of how to use an influencer to achieve business goals. When combined with more common measures of influencer reach and accessibility, these additional qualities could be the foundation of a comprehensive model for driving influencer marketing.

1.8. Ethical Considerations in Digital Marketing

As digital marketing matures, more exhaustive theoretical frameworks and strategies to increase the effectiveness of digital efforts are being developed. Nonetheless, enhanced effectiveness does not equate to moral justification. Marketing practices are increasingly under scrutiny, and the defense that they exist to satisfy and serve the consumer is losing traction. At the same time, digital technologies gather, store, and analyze increasing amounts of data about consumer behavior, habits, preferences, networks, and motives

for interacting with brands. As a consequence, the risk of negative effects resulting from digital marketing efforts is increasing. In this section, we explore the ethical implications arising from employing the ideas presented above. In doing so, we mostly draw on the consumer welfare perspective to norms and behaviors that have been paramount to marketing.

In the consumer welfare perspective, marketing is contributing to competition in markets, creating conditions for increasingly abundant product endeavors, while refining the efficiency with which companies respond to and solve consumer problems. When used justifiably and appropriately, consumer behavior theories should help marketers better serve consumers and society at large. The problem, however, is two-fold. On one hand, there is a risk of tools and theories being used for consumer manipulation at all costs, which can blur or erase the line that separates appropriate technology use from manipulation. On the other hand, the increasing availability of objective behavioral models and the amount of data used to inform them are creating escalated commercial power asymmetries, increasing said risk of manipulation. Thus, it is appropriate to increase the knowledge base related to ethics issues in marketing. Digital marketing presents specific properties, creating a need for increased scrutiny, new knowledge, and possibly new tools for ethical assessment.

1.8.1. Privacy Concerns

When consumers use online services and connect their smart devices, they generate vast amounts of personal information, and they do so almost habitually. Unfortunately, most people do this without knowledge or understanding of the potential danger to their privacy or how their data will be used. The incredible ability to collect and store massive datasets means that those who have access to this information can know details about us that we may not even be aware of – our influence, motivations, fears, likes, dislikes – and our ability to manage our lives. The inherent risks that accompany a widespread collection of personally identifiable information reach far beyond the traditional concept of privacy. At stake is not only the consumer's right to keep information confidential. Rather, the benefit of such data collection as it impacts consumer choice, government accountability, and the vibrant marketplace ultimately will be co-opted by those with the most nefarious of intentions.

The organizations that collect all of this data are capitalizing on their ability to create in-depth, highly effective campaigns that can influence behaviors. However, these organizations face a dilemma: they are walking a thin line that balances significant benefits for the company and the consumer against a potential backlash resulting from the confrontation of privacy concerns. Overreaches into the domain of intrusiveness have recently blown back into the social consciousness as a negative phenomenon. Major

leaks of personal information demonstrate the potential pitfalls of the perverse side of the digital economy and its focus on the consumption of content by audiences with overlapping interests.

1.8.2. Transparency and Trust

Data-driven marketing enables marketers to deliver targeted communications to the right customers at the right time, thus overcoming the inherent waste in traditional advertising methods. Since establishing customer trust is vital to the success of relationship marketing, companies must be careful about how they use customer data. Issues surrounding data privacy and customer control have become front-shelf concerns, especially in the online environment, where the use of anonymous browsing and cookie tracking characterizes customer behavior. They have been amplified by the growing incidence of security breaches, including theft of customer financial data, and the use of deceptive practices by a small number of online companies. As customers become more informed about the online environment and the availability of tools to combat unwanted email, for example, they may respond negatively to email marketing. This is potentially harmful for large advertisers who have relied on email to build customer relationships.

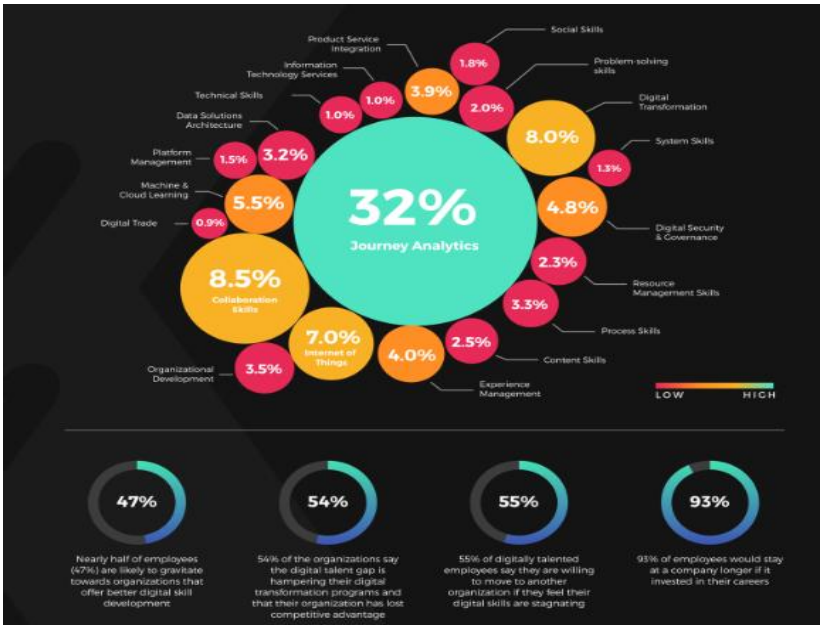

Fig 1 . 3 : Transforming the Digital Experience via Customer Journey Mapping

1.9. Conclusion

The editors of this book compiled the collected work with two objectives in mind. The first objective was to create a synthesis document with a multidisciplinary perspective to map what does or could "being digital" means for consumers, brands, and organizations. The second was to provide a compass of how this synthesis could be useful to practitioners willing to use it as a roadmap to drive the actions of their organizations. Different sceneries are presented in the chapters of this book. In general, they talk about and celebrate the advantages that being digital allows. Digital marketing is about creating experiences, improving life or brand interaction, innovating new processes or specific products, generating attention and engagement, or communicating efficiently with the target public. Not everything is as bright. Several other chapters point to the dark sides of the digital consumer experience, including privacy-related issues, algorithmic control of consumer behavior, and the negative effects of being too digital in consumer life. The digital experience of the contemporary consumer is not homogeneous, nor entirely positive or negative. Thus, to make proper marketing decisions, marketers have to map the different sceneries a digital consumer can experience. Digital platforms embedded in a support digital environment have allowed and facilitated the co-creation nature of marketing. However, brands and marketers have been largely unprepared and undisciplined for this responsibility. The current need to point out ethical considerations in consumer-brand relationships is evidence of that. It is well-accepted that ethical marketing is about doing the right thing and conforming to the existing codes of society, such as the legal ones. Now the discussion has moved about the need for meeting higher-level expectations. They are about not damaging stakeholders in any way. In the digital world, this includes diverse forms of being "contaminated" by the brand, such as fake news and filter bubbles.

1.9.1. Final Thoughts and Future Directions in Digital Marketing

Digital marketing, as a discipline, is in constant evolution. Research from different disciplinary angles enhances our understanding of digital consumer behavior and its antecedents and consequences. Domain knowledge generated by scholars from industry expertise data mining in top companies, building models to optimize profitability from digital media, is steadily translating into best practices. Industry leaders continue to argue that best practices in the sector continue to evolve. And solutions dated even a few years ago are viewed today as obsolete. Amidst the backdrop of a cerulean horizon, practitioners in the industry seek academic validation for models, practices, and approaches. Researchers retort by rebuffing the lack of robust academic research.

Consumer-centricity as an operative principle is still his map for navigating this vibrant space. It humanizes our approach to digital marketing today and in the future. That being

said, the future of the field is in stagnation if digital marketing as a field of study is limited to the best practices argument of tomorrow enriched by the generation of domain knowledge. What difference will that be to creative and imaginative ways to interpret our database of digital consumer behavior? What prescriptions will that store for how to facilitate that process? How will it differ from the future of data-driven models in the commercial sector? What role will signify for marketers and brands? What role will be denied? Digital marketers at any level of company brand marketing structure will need domain knowledge from both avenues of research for a fully descriptive and prescriptive approach to making decision models and deploying tools. As empirical data increases on the openness of consumers' minds to online environments for persuasion.

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