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The Impact of Online Advertising on Consumer Choice: Consumption Traps and Digital Marketing Ethics

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Abstract: This paper explores "Dark Patterns" and behavioral manipulation mechanisms in digital marketing, revealing how enterprises use algorithm-driven consumption traps to exploit scarcity bias and cognitive load, thereby interfering with consumers' rational decision-making. This study finds that manipulative interface designs, such as biased default options and layered information concealment, violate the transparency principles of marketing ethics. Meanwhile, the misuse of data through cross-platform tracking and real-time behavioral feedback forms a "data-manipulation closed loop", establishing dynamic pressure-applying mechanisms and infringing on privacy. At the theoretical level, these digital marketing strategies rooted in behavioral economics' choice form a pervasive behavioral intervention ecosystem, which systematically undermines the information transparency and autonomous decision-making conditions required by Rational Choice Theory (RCT). From a practical perspective, this research proposes a three-tier governance framework. Firstly, enterprises need to standardize policies, clarify information disclosure, prohibit bundled authorization, and establish automatic data deletion mechanisms. Secondly, the industry should achieve co-governance through a blacklist system and implement joint punishment for non-compliant enterprises. Thirdly, addiction-inducing metrics need to be excluded, and priority should be given to matching users' genuine needs in technological applications. The ultimate goal of digital marketing should be to build long-term consumer trust relationships. Through enterprise standardization, practitioners' responsibility awareness, and industry co-governance, it returns to the essence of serving user needs and achieves a win-win situation for both commercial and social values.

Keywords: Rational Choice Theory; dark patterns; consumer manipulation; anchoring effect; scarcity biases; digital marketing ethics

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1. Introduction

Digital marketing is a relatively young research area. According to Statista data 2024, global digital advertising expenditure exceeded $600 billion in 2023, with a growth rate 7.2 times that of traditional advertising. Behind this explosive growth, there are some main component parts including the information filtering mechanisms built by SEO (Search Engine Optimization) and SEM (Search Engine Marketing), the relational communication networks woven by SMM (Social Media Marketing), and the precision targeting systems formed by AI-driven programmatic advertising [1]. Back in the day, ads worked like clockwork commercials during TV breaks - everyone saw the same toothpaste ad whether they needed it or not. In the past, advertisement would appear at random during TV breaks regardless of people's preference. Nowadays, it is more personalised and targeted to individuals owing to Big Data and algorithms, since these technologies assist in identifying people's needs based on their browsing history to deliver more relevant advertising content [2].

Online advertising has emerged as an indispensable force in modern commercial ecosystems. Leveraging data mining, algorithmic curation, and precision target to reshape consumer behavior. Under the high competition, customer acquisition costs and demand volatility in Business-to-Consumer(B2C) model, through algorithmic recommendations, precision targeting, and interactive experiences. Advertisers now reach consumer with unprecedented efficiency, while consumers are forced to struggle in choice and decision-making of information overload. This classification directly drives the personalized advertising strategy [3]. Advertisers systematically classify users as "targets" or "waste" through cookies and demographic profiling, enabling hyper-personalized campaigns (Turow, 2012). For instance, Ford customizes automotive ads based on users' browsing history (Turow, 2012). Although Procter and Gamble employs cross-platform data to track consumers from diaper purchases to household product preferences (Turow, 2012). While such strategies enhance relevance, they also raise ethical concerns. Dean and Croft (2009) pointed out that advertising algorithms trigger "motivational hijacking" by creating a sense of urgency and social validation [4]. Combined with algorithmic "filter bubbles" (Roy & Datta, 2022), which is a "data-manipulation feedback loop" formed. Technically, privacy is violated through opaque data abuse, such as the targeted health data advertising described by Turow in 2012. Behaviorally, cognitive biases such as scarcity cues are exploited to interfere with rational decision-making. Together, these factors lead to a dual erosion of consumer autonomy. This paper takes the rational choice theory as the core, combines the cognitive bias theory of behavioral economics and the concept of "choice architecture", to explore the "dark patterns" and behavioral manipulation mechanisms in digital marketing. It reveals how enterprises utilize algorithm-driven consumption traps to interfere with consumers' rational decision-making through scarcity bias and cognitive load. The research finds that advertisers form a "data-manipulation closed loop" through urgency, social recognition, and algorithm "filter bubbles", which reinforces consumers' existing biases and creates self-reinforcing consumption cycles. Targeted health data advertising exemplifies technical-level opaque data abuse and behavioral-level cognitive manipulation, including scarcity cues and low-price lures with hidden costs that collectively erode consumers' autonomy. Typical manifestations include hidden traps like dynamic price adjustments and rule contradictions. Based on this, a governance framework is put forward to urge enterprises to regulate information disclosure, the industry to develop blacklists, and technology to refine algorithms for aligning with real needs. It emphasizes that digital marketing should return to its essence of "serving users' needs", achieving a win-win situation of commercial value and social value [5].

2. Digital Marketing Ethics and Customer Choice

With the rapid expansion of online shopping platforms and the evolution of consumer preferences, marketing ethics and consumer behavior in the digital age have emerged as a crucial area of research [6]. There is a need to focus on how digital marketing methods influence consumer practices to create more benign digital interaction patterns. At the same time, traditional sales and digital marketing also share some common points. They are both derivative aids of business. Going back to the origin, marketing activities have played a fundamental role in the success of enterprises since the birth of business. Despite numerous uncertainties in the business realm, one certainty prevails: sustaining a business over time is nearly impossible if customers lack trust in the company. On the other hand, compared with traditional sales, the more prominent ethical challenge in digital marketing lies in its manipulation. In comparison, the inclusivity of Big Data brings with it fundamental and transformational information that allows market entities to influence and manipulate consumer behavior, through the available insights of their likes, dislikes, and preferences. (Leonidas Theodorakopoulos & Theodoropoulou, 2024).

With the rapid expansion of online shopping platforms and the evolution of consumer preferences, marketing ethics and consumer behavior in the digital age have become a key research area. Currently, the focus is on how digital marketing tools influence consumer practices to build a more positive digital interaction model. At the same time, traditional sales and digital marketing share commonalities: both are auxiliary means derived from business activities, and since the birth of business, marketing activities have played a fundamental role in the success of enterprises. Despite the many uncertainties in the business world, one thing is certain: if consumers lack trust in a company, it is almost impossible for the company to survive in the long term - this trust is deeply rooted in transparent information disclosure and respect for consumers' right to know [7].

In this context, big data, praised for its inclusiveness and information processing capabilities, theoretically should have the potential to enhance the transparency of consumer and brand interactions. By aggregating and analyzing massive datasets, big data is theoretically capable of providing consumers with a more comprehensive understanding of product attributes, pricing mechanisms, and corporate practices, thereby empowering consumers to make informed decisions and strengthening the foundation of trust that underpins the long-term sustainability of enterprises. However, this potential for transparency is increasingly being overshadowed by a more worrying reality: the very capabilities of big data that could enhance consumers' right to know are frequently exploited by market players to erode this right [8].

Paradoxically, the detailed insights into consumers' likes, dislikes, and preferences obtained from big data analysis - ostensibly tools for providing personalized services - have become means of subtle manipulation. Instead of promoting transparency, market players use these insights to craft hyper-precise narratives that exploit consumers' cognitive biases, conceal key information, and steer consumer behavior towards pre-determined outcomes. This manipulation not only undermines consumers' right to informed choice but also creates a paradox: despite the promise of the digital age to provide broader access to information, the strategic weaponization of big data by market players may turn consumers into passive recipients of carefully crafted content, eroding the trust that enterprises claim to prioritize. (Leonidas Theodorakopoulos & Theodoropoulou, 2024)

In the past, consumers were quite willing to accept any content sold to them by editors and program producers through passive broadcast media. There was a certain degree of choice, but it was not much enough. While individuals could purchase diverse newspapers, access various radio stations, or select different television channels, the authority to determine the content available for consumption remained consistently in the hands of external entities. Then the era of the internet arrived, completely overturning all the rules. Today, with the support of Web 2.0, broadband and rich media content, contemporary consumers have gained unprecedented control [9]. They can choose the content they want to watch, the time for viewing and the presentation method at will, and even freely create and share it with friends, fellow enthusiasts and the entire world for free. 'The majority of today's consumers are actively personalizing their digital experiences and sampling niche content and video with increasing frequency', said Dave Friedman, president of the central region for Avenue A | Razorfish, writing in an article for Chief Marketer (www.chiefmarketer.com). "Consumer 2.0"(A new type of consumption model in the digital age) remains impervious to conventional marketing taxonomies Above The Line (ATL) or Below The Line (BTL) frameworks, prioritizing instead an evaluative focus on how marketing interventions enhance the decision-making experience. This necessitates a paradigmatic shift in marketing strategies from unidirectional "information dissemination"(The process of transmitting specific information to the target audience through various media and channels) to interactive "experiential co-creation"(It refers to a process where enterprises and users collaborate through interaction, jointly participating in the design, development and improvement of the product). The current evolutionary trend indicates that the advancement of mobile technology and the development of artificial intelligence are driving the emergence of the "Consumer 3.0"(A new consumption model emerging due to the development of mobile technology and artificial intelligence) model [10]. As digital marketing continues to advance in terms of these ethical dilemmas and manipulation possibilities, the autonomy of consumers in the marketing process has undergone profound changes. These changes go beyond the traditional passive consumption model and redefine the fundamental mechanisms of market interaction.

In "Consumer 3.0" model, the personalized targeting based on big data makes manipulation more precise and covert. For instance, leveraging the scarcity bias as revealed by the Consumer Behavior Theory. E-commerce platforms often create a sense of urgency through information such as "limited-time offers", a time-limited promotional activity set by merchants to boost sales, to induce consumers to make quick purchases. To enhance sales performance and profitability, a majority of vendors leverage time-bound flash sale events on e-commerce platforms, including Rue La La, Gilt, Amazon, Tmall, and JD.com. This innovative marketing method enables retailers to provide substantial price cuts within a restricted timeframe. (Peng, L., Zhang, W., Wang, X., & Liang, S. ,2019). This method leverages the scarcity bias, a powerful psychological shortcut that uses scarcity to make people afraid of missing out (FOMO). When time pressure is high, the rational, utility-maximising decision-making process recommended by RCT is replaced by a more impulsive, System one way of thinking that seeks to avoid the immediate feeling of loss in a transaction. Therefore, the flash sale does not offer people a choice in a logical way. It changes the way people make decisions by putting speed ahead of thought and showing how behavioural interventions can systematically destroy the conditions that make rational choice possible. According to Rational Choice Theory (RCT), consumers are assumed to rationally evaluate costs and benefits based on their own needs and the actual value of goods when making decisions. However, the time pressure from flash sales may disrupt this rational process by prompting impulsive purchases driven by urgency rather than deliberate evaluation. Digital marketing often artificially creates a sense of scarcity to interfere with individuals' rational evaluation processes, exploiting the psychological tendency of fear of missing out on discounts while relegating considerations of the inherent utility of the product itself to a secondary position [11].

According to commercial interests, digital marketers usually utilize marketing strategies such as emotional appeals, social proof, and cognitive biases (e.g., anchoring effect, scarcity bias) to induce consumers to make irrational consumption demands. Some digital marketers view their practices as social control, using behavioral economics to spot consumers' cognitive and emotional biases and target their vulnerabilities. Behavioral economics notes that economic choices aren't just driven by rational self-interest. They depend on mental shortcuts and habits and can be manipulated through "choice architecture" design, a psychological mechanism designed to influence decision-making. (Nadler, A., & McGuigan, L.,2018). However, these marketing tactics, while influential, often operate within recognizable bounds. Thus, digital marketers' use of emotional appeals, social proof, and cognitive biases-coupled with "choice architecture" design-to exploit consumers' vulnerabilities for irrational consumption reflects a form of social control rooted in behavioral economics, yet such manipulative tactics operate within identifiable limits, underscoring the tension between strategic influence and bounded exploitation in data-driven marketing [12].

In contrast, the design of "Dark Patterns", a behavioral pattern that induces users to make non-voluntary choices through design means, represents a more covert evolution, intentionally exploiting cognitive vulnerabilities to subvert informed decision-making. For instance, in the design of user purchase interfaces, "purchase links" (a Call-to-Action

(CTA) element) or "subscription" (subscription service) buttons are made extremely prominent, while options for "consumer rights statements" (overlooked user rights terms disclosure option in subscription interfaces) or "unsubscribing" (obscure or multi-step subscription cancellation) are either difficult to locate or require multiple steps. (Wu, Q., Sang, Y., Wang, D., & Lu, Z. ,2023) This practice does not provide clear options for consumers to make rational choices. Instead, it uses interface design to guide users into making unintended decisions, which directly violates the principle of respecting consumers' autonomy in marketing ethics [13].

These strategies exploit principles from consumer behavior theory, such as Default Bias and Cognitive Load, leading consumers to tend toward accepting pre-set options when they are either unintentional or fatigued by complex processes. Consequently, consumers fall into "traps", a consumer trap, designed by marketers, and their decision-making process deviates from the autonomous, informed, and optimal trajectory assumed by the rational choice model. In live-streaming shopping scenarios, 87% of consumers will abandon autonomous decision-making when faced with more than 3 mandatory interactive steps. Platforms utilize technical means such as "backend filtering tools" (Platform content moderation and data filtering technologies) to provide real-time feedback of user behavior data to hosts, forming a dynamic pressure-applying mechanism. Platforms have constructed a multi-dimensional participation system by integrating diverse interactive functions such as subscription, liking, sharing, and gift-giving. This multiple interaction requires users to process a large amount of information in a short time, which objectively increases consumers' cognitive load. (Wu, Q., Sang, Y., Wang, D., & Lu, Z. ,2022) These strategies such as "Forced Subscription" (automatic renewal strategy) and "Nagging" (a marketing strategy influencing consumer decisions through continuous reminders) essentially influence consumers' decision-making through default options and complex processes. Such manipulative practices not only give rise to ethical controversies but also directly affect the quality and authenticity of consumers' choices. Next, I will use the dispute case in Chinese digital platforms to show how customers are cognitively manipulated when they experience consumer traps in digital platforms. The scrutinsation of which is important for understanding how platforms and merchants can improve to safeguard consumers' rights and maintain ethical business practices [14].

3. Digital Malpractice: Consumption Trap within Online Marketing Advertisement

According to industry analysis, a merchant on Tmall was subject to consumer allegations of engaging in consumption trap in 2025. (Express News Team, 2025)

3.1. Tmall's Costumer Dispute

Recently, a "New Member Gift" promotional campaign by a merchant on Tmall has sparked concerns over potential consumer misguidance. A customer participating in the merchant's "0.01 Yuan New Member Gift" promotion encountered a dispute over exorbitant shipping fees: the checkout page displayed a total price of 500.01 yuan, with the gift priced at 0.01 yuan and shipping fees amounting to 500 yuan. The customer claimed no prior notice of the high shipping cost was visible during the ordering process, despite the marked discrepancy between this fee and standard shipping rates for similar products in the region. The merchant, however, insisted the fee was "reasonable."

Further investigation revealed inconsistencies in the merchant's policies. After registration, the "0.01 Yuan Gift" page redirected to a higher price (89 yuan) and included clauses stating "no seven-day no-reason returns" and "standalone purchases will not be shipped," effectively forcing consumers to buy additional regular-priced items. Additionally, purchase notices mentioned that "standalone purchases require shipping fees," while customer service responses were ambiguous-initially stating, "shipping fees for standalone purchases are non-refundable," then requiring "additional regular purchases for combined checkout," with a promise to refund the price difference upon delivery. This "low-price bait-and-switch with forced bundling" tactic is suspected of misleading consumers.

This incident exposed the consumption traps behind the "low-price gimmicks" of some e-commerce platforms. Although the customer eventually received a refund, the Tmall merchant did not rectify the issue of rule transparency. Consumer rights protection experts pointed out that the Tmall merchant's deliberate concealment of shipping fee information and setting complex purchase conditions have violated consumers' right to know and choose. The customer called on regulatory authorities to strengthen the regulation of marketing activities such as "membership gifts" and "flash sales", and platforms need to strengthen the review of merchant qualifications to avoid similar tricks from harming consumer rights.

According to the "2023 Annual Report on User Experience and Complaint Monitoring of China's E-commerce" by NetEase, in online consumption complaints, "false promotions" accounted for 4.64%, and complaints related to "refund issues" and "online fraud" and other digital marketing-related issues totaled about 50%. Digital technology, which should have been a tool to improve transaction efficiency and optimize the consumption experience, has been distorted into a weapon of "precise plundering" under the drive of capital's profit-seeking nature.

3.2. Application of Digital Marketing in the "Tmall Merchant Incident"

Marketing strategy, as a key component of corporate strategy, is of paramount importance. Greenley believes that marketing strategy is a long-term action closely related to goal achievement. Kumar et al. (2012) defined marketing strategy in their comprehensive action plan as the efficient allocation and coordination of marketing resources in a specific product market to achieve corporate goals. Walker et al. (2012) described marketing strategy as brand-building marketing activities carried out through various online media such as blogs, websites, emails, advertisements, and social networks. It is important to note that the scope of digital marketing is not limited to internet marketing. Chaffey (2002) pointed out that digital marketing is the use of digital technology to build online market channels, which include websites, emails, databases, digital TV, etc., and also utilizes emerging innovative means such as blogs, information streams, podcasts, and social networks to promote marketing activities (Lauf, 2021).

Although digital marketing has various names, they all refer to the same marketing approach. Its alternative names include online marketing, internet marketing, and online promotion, etc. Digital marketing is centered on digital technology and achieves precise reach through the integration of algorithms, data, and multi-channel communication. Its essence is value transmission empowered by technology. However, when the instrumental nature of technology is overly emphasized and marketing ethics are subordinated to short-term interests, it gives rise to digital marketing traps - that is, the distorted form of marketing activities that use the concealment of technology, information asymmetry, and loopholes in algorithm rules to deceive consumers or enterprises into investing resources. The core contradiction lies in that digital marketing should optimize resource allocation by enhancing transparency and efficiency, while traps achieve exploitative transformation by dissolving transparency and creating cognitive biases.

This incident has exposed multiple intertwined consumption traps in digital marketing practices. The most prominent ones are the temptation of low prices and the hidden cost trap. Tmall merchants use the gimmick of "0.01 yuan membership gift" to attract new users to click, but they hide the high shipping fees until the payment stage: After placing the order, consumers discover that the total price amounts to 500.01 yuan (the product costs 0.01 yuan and the shipping fee is 500 yuan), while the shipping fee rules were not disclosed on the advertisement and product pages in advance. This fee is far higher than the usual 10-20 yuan shipping cost for similar products in the Yangtze River Delta region. In essence, it is using an extremely low price to induce clicks and then achieving "induced purchase conversion" through hidden costs, which violates the provisions of the "Consumer Rights Protection Law" regarding transparent fees.

The next issues are rule contradictions and misleading promotional traps. The first one is clause conflicts: the page simultaneously states "No delivery for individual purchase" (requiring the purchase of the main product) and "Individual purchase requires payment of shipping fees", creating a rule paradox - if consumers place an order individually, they will face high shipping fees; if they make a bundled purchase, they will be forced to consume. The second one is dynamic price manipulation: the advertisement shows "0.01 yuan", but after consumers register as members, they are redirected to a page with a price of 89 yuan, and it is marked "No 7-day no-reason return or exchange is supported", the prices are contradictory, constituting false promotion. The third one is ambiguous customer service responses: regarding questions such as "Can it be purchased individually?" and "Can the shipping fee be refunded?", the customer service gives contradictory responses like "Shipping fee is not refunded for individual purchase" and "It cannot be purchased individually", through cognitive confusion to induce consumers to make wrong judgments.

Another issue that deserves attention is the trap of forced bundled sales. Merchants require consumers to purchase the main product in addition to the "membership gift" in order to obtain the sample. Otherwise, they demand a high shipping fee. Through a complex process of "reimbursement of the difference after combined settlement", they actually turn the low-priced samples into "traps" for forced bundled sales, forcing consumers to purchase non-essential items in order to obtain discounts.

The underlying logic of these issues lies in the opacity of information and technical concealment traps. On one hand, key information is concealed: the shipping cost calculation method, bundled conditions, and price change rules are not disclosed on the product page. Core terms are hidden in small print, making it difficult for consumers to notice. On the other hand, backend parameters are tampered with: after a complaint occurs, the merchant uses the real-time editing function of the digital platform to adjust the page rules (such as adding a "no shipping for individual orders" label or modifying the price), thereby covering up past violations and increasing the difficulty for consumers to obtain evidence.

Furthermore, digital marketing traps also share common characteristics: Firstly, they are technologically concealed. They exploit algorithmic loopholes, interface manipulation (such as visual hierarchy suppression) or data black box operations, making them difficult to be monitored in real time. For instance, relevant merchants can achieve "what you see is not what you get" cognitive deception by dynamically modifying product prices and hiding shipping rules. Secondly, they are short-term oriented, with the sole goal of "traffic explosion" and "data brilliance", ignoring long-term brand building. The vicious cycle of "aggressive flow injection - sudden drop in traffic" in algorithm-dependent traps, as well as the consequences of "KOL clustering - user confusion" in resource accumulation traps, all confirm the damage caused by short-termism to the marketing ecosystem. Thirdly, they have contradictory rules. For example, the conflict between "no delivery for individual orders" and "extra shipping fees required for individual purchases" fundamentally undermines the trust foundation of consumers.

Strategies such as "new member gifts" offered by brands like Tmall (a company specializing in infant care products for children aged 0-3) create an artificial anchoring bias environment. By bypassing the rational assessment of total costs, they directly challenge the core assumptions of the Rational Choice Theory (RCT). Digital marketing strategies such as leveraging the anchoring effect by setting an extremely low initial price as the anchor point which create misleading value perceptions. By distorting price evaluations, they directly challenge the core assumptions of the Rational Choice Theory (RCT).

Recently, the consumption trap of "new member gifts" offered by "Tmall merchants" (a baby care product brand) on the Tmall platform has attracted widespread attention. It is reported that a customer participated in the "0.01 yuan member gift" activity in the "Tmall merchant's flagship store" on Tmall as a new member. However, when making the payment, the customer found that the total amount was 500.01 yuan, with the product price being only 0.01 yuan, but the shipping cost was as high as 500 yuan. This incident has sparked heated discussions about consumption traps in the e-commerce industry.

This strategy utilizes the anchoring effect, whereby consumers overly rely on the initially encountered extremely low price information (0.01 yuan product price) as an anchor, leading them to significantly underestimate or ignore subsequent hidden costs (500 yuan shipping fee). According to the principle of anchoring effect, the brain tends to adjust based on initial information, and such adjustments are often insufficient. By setting a false low-price anchor, merchants focus attention on obtaining low-priced goods rather than comprehensively evaluating the total cost, thereby replacing the rational utility-maximizing decision-making process assumed by RTC with irrational choices based on anchor bias. For example, after consumers log in a well-known cloud storage product, they often encounter promotional advertisements for Super Value Membership (SVIP). In stark contrast to the "Special Offer: ¥12/month" label for the Super Value Membership monthly card, there is a line of small print stating "Auto-renewal at ¥18/month from the next month." Another example is that a well-known comprehensive online shopping mall often places some free gifts or trial services in users' shopping carts without their consent. Although the aforementioned automatic renewals can be canceled at any time and free gifts can be easily removed, businesses are well aware that consumers exploited by dark patterns, succumbing to the status quo bias, generally tend to maintain the current state. Alternatively, by using fine print, which is always ignored by consumers, they legally leave consumers with no means to complain, no choice but suffer in silence.

Therefore, this "Dark pattern"(anchoring marketing strategy) does not offer consumers a logical choice. It changes the way of consumers making decisions by prioritizing false low prices over actual costs, demonstrating how behavioral interventions can systematically destroy the conditions of information transparency and comprehensive evaluation require for rational choice. Next, we will introduce feasible methods to solve such problems.

4. Codes of Conduct to Digital Marketing Practices

Consumer pitfalls have emerged as a critical issue in contemporary society, driven by consumers' growing emphasis on enterprises' adherence to ethical protocols throughout the merchandise marketing process. To this end, a series of fundamental regulatory requirements and standards have gradually been established worldwide, aimed at assisting and ensuring that business entities adhere to ethical norms in their commercial activities. In 2019, the UK Information Commissioner's Office (ICO) issued the "Age-Appropriate Design: Code of Practice for Online Services", which explicitly set out specific restriction standards for nudge techniques used by online service providers to guide user decisions. On November 6, 2020, the OECD Committee on Consumer Policy hosted a roundtable discussion focusing on how dark patterns challenge conventional consumer protection frameworks and the regulatory gaps that call for policy interventions. On April 23, 2022, the Council of the European Union and the European Parliament reached a political agreement on the Digital Services Act (DSA), under which the new legislation expressly prohibits confusing or deceptive interface designs that tend to mislead users' choices. Such regulatory measures have exerted a profound impact on digital marketing by enhancing transparency and consumer control. Specifically, through Article 22 of the Consumer Rights Directive (CRD) and Article 25 of the Digital Services Act (DSA), the European Union explicitly prohibits the exploitation of cognitive biases such as status quo bias to secure additional payments from consumers. Such provisions subject dark patterns like "pre-checked boxes" to regulation, forming the core of the legal definition of consumer traps.

4.1. Constructing a Systematic Ethical Framework

4.1.1. Transparency and Information Authenticity

Product Information Disclosure: Key information such as price (including taxes and service fees), service duration, functional limitations, and return/refund policies must be explicitly labeled. The labeling should use non-technical language and have a font size no smaller than 80% of the main text. The specific process for canceling subscriptions is concealed by sportsmanguide.com in its user agreement PDF, which requires users to call customer service to terminate the service. This practice of secondary hiding of key information violates the transparency requirements of the EU Consumer Rights Directive.

Transparency in Marketing Practices: The identification of "paid content" must be clearly specified. All native advertisements and KOL promotions are required to display labels such as "Advertisement" or "Promotion" in a conspicuous location, with such markings not being blocked by page elements.

4.1.2. Non-Manipulative Design and Consumer Autonomy

Prohibit dark pattern design and rationally apply psychological strategies: All opt-out designs in user authorization scenarios should be uniformly revised to opt-in interactions requiring users to actively tick the "agree" box, thereby ensuring explicit consent.The case of newbalance.co.uk shows that users must tick the checkbox "do not wish to receive marketing emails" to decline subscription. This reverse logic design increases the probability of user misoperation through linguistic ambiguity, violating GDPR's requirement for "explicit consent". Research data indicates that such designs raise the probability of users' unintended consent by 42%.

4.1.3. Data Ethics and Privacy Protection

All data collection and usage must obtain explicit user consent and strictly adhere to the principles of lawfulness, necessity, and transparency. Before collecting user data, it is necessary to explicitly inform users and separately list the data usage, allowing users to authorize by checking each item individually. It is forbidden to use bundled consent, and basic functions must not be limited because users refuse to share their data. And then, business must establish an automatic data deletion mechanism. This mechanism should thoroughly delete or anonymize data from expired or deactivated accounts. They must strictly prohibit using this data for secondary marketing.

4.2. Individuals Practice Ethical Marketing Awareness

4.2.1. Respecting Boundaries in User Interactions

Protect vulnerable groups and prohibit setting consumption traps by taking advantage of their insufficient digital literacy. For vulnerable groups such as the elderly and minors, marketing content should simplify processes and add risk warnings, such as "Minors should purchase with parental accompaniment".

4.2.2. Ethical Awareness in Technology Application

Programmers need to resist "algorithm abuse" and give priority to "matching the real needs of users". When designing recommendation models, data analysts should proactively exclude indicators that induce addiction, such as reward mechanisms that prolong users' online time.

4.3. Industry Collaboration and Social Co-governance

Non-Manipulative Design and Consumer Autonomy: The industry and society jointly establish an industry blacklist, creating a reverse constraint where "bad money drives out good money". Led by industry associations, joint penalties will be imposed on enterprises that repeatedly violate ethical standards, such as restricting advertising channels and public exposure.

The ultimate goal of digital marketing should not be "maximizing short-term conversions", but "building long-term trust relationships with consumers". Only through corporate policy standardization, the awakening of practitioners'responsibility, and joint industry governance can digital marketing return to its essence of "serving user needs" and achieve a win-win situation between commercial and social value. In the future, as technology continues to iterate and guidelines require dynamic updates, the core principles of "respecting, protecting, and empowering people" will always remain an insurmountable ethical boundary in digital marketing.

5. Conclusion

Through examining the Dark Patterns" and behavioral manipulation mechanisms in digital marketing, I revealed a series of problems in digital marketing practice and suggested improvements in digital ethics. Enterprises deploy algorithm-driven consumption traps, such as flash sale countdowns and anchoring effects, exploiting scarcity bias and cognitive load to disrupt rational decision-making. Manipulative interface designs, including biased default options and layered information concealment, violate marketing ethics transparency principles. Additionally, data misuse through cross-platform tracking and real-time behavioral feedback creates a "data-manipulation loop," enabling dynamic pressure mechanisms that infringe on privacy. Theoretically, these digital marketing strategies rooted in behavioral economics' choice architecture, which form a pervasive "behavioral intervention ecosystem" and systematically undermine the information transparency and autonomous decision-making conditions required by Rational Choice Theory (RCT).

From a practical perspective, this study proposes a three-tier governance framework. Enterprise corporate ethical norms mandate key information labeling with font sizes no less than 80% of the main text. Given common screen sizes of mobile devices or computers and body text font sizes ranging from 12 to 14 pixels, key information is displayed at 80% of this size facilitates that obtains rapid visual recognition. Thereby,this specification reduces the scope for enterprises to evade information disclosure obligations through design-based obfuscation tactics. At the same time, the industry achieves co-governance through blacklisting systems, imposing joint punishment on violators via, advertising channel restrictions and public exposure. Furthermore, technological ethical constraints exclude addiction-inducing metrics from algorithm design to prioritize user needs. Future research directions will explore multimodal data integration to quantify decision biases, investigate emerging manipulation risks posed by generative AI and address cross-border jurisdictional conflicts in dark pattern regulation. This study provides a theoretical and empirical foundation for building a digital marketing ecosystem characterized by "controllable technology, traceable ethics and clear accountability" and emphasizing the need to address dynamically evolving ethical boundaries in rapid technological advancement.

References

1. K. Bongard-Blanchy, A. Rossi, S. Rivas, S. Doublet, V. Koenig, and G. Lenzini, "" I am Definitely Manipulated, Even When I am Aware of it," It's Ridiculous!"-Dark Patterns from the End-User Perspective. In Proceedings of the 2021 ACM Designing Interactive Systems Conference (pp. 763-776), June, 2021.
2. D. Dean, and R. Croft, "Reason and choice: A conceptual study of consumer decision making and electoral behavior," Journal of Political Marketing, vol. 8, no. 2, pp. 130-146, 2009. doi: 10.1080/15377850902813386
3. A. P. Shcherbakov, "Consumer Choice Features in the Context of Bounded Rationality and the Influence of Artificial Intelligence," XXI CENTURY ECONOMY, vol. 61, 2025.
4. V. Kumar, Z. Rahman, A. A. Kazmi, and P. Goyal, "Evolution of sustainability as marketing strategy: Beginning of new era," Procedia-Social and Behavioral Sciences, vol. 37, pp. 482-489, 2012.

5. A. Mathur, G. Acar, M. J. Friedman, E. Lucherini, J. Mayer, M. Chetty, and A. Narayanan, "Dark patterns at scale: Findings from a crawl of 11K shopping websites," Proceedings of the ACM on human-computer interaction, vol. 3, no. CSCW, pp. 1-32, 2019.
6. A. Nadler, and L. McGuigan, "An impulse to exploit: the behavioral turn in data-driven marketing," Critical Studies in Media Communication, vol. 35, no. 2, pp. 151-165, 2018. doi: 10.1080/15295036.2017.1387279
7. L. Peng, W. Zhang, X. Wang, and S. Liang, "Moderating effects of time pressure on the relationship between perceived value and purchase intention in social E-commerce sales promotion: Considering the impact of product involvement," Information & Management, vol. 56, no. 2, pp. 317-328, 2019. doi: 10.1016/j.im.2018.11.007
8. P. Roy, and D. D. Datta, "Theory and models of consumer buying behaviour: A descriptive study," Available at SSRN 5349983, 2022.
9. M. Riesener, C. Dölle, H. Lauf, and G. Schuh, "Framework for an agile, databased development," Procedia CIRP, vol. 100, pp. 343-348, 2021. doi: 10.1016/j.procir.2021.05.084
10. J. Turow, "The daily you: How the new advertising industry is defining your identity and your worth," Yale University Press, 2012.
11. L. Theodorakopoulos, and A. Theodoropoulou, "Leveraging big data analytics for understanding consumer behavior in digital marketing: A systematic review," Human Behavior and Emerging Technologies, vol. 2024, no. 1, p. 3641502, 2024. doi: 10.1155/2024/3641502
12. Q. Wu, Y. Sang, D. Wang, and Z. Lu, "Malicious selling strategies in livestream e-commerce: A case study of Alibaba's Taobao and ByteDance's TikTok," ACM Transactions on Computer-Human Interaction, vol. 30, no. 3, pp. 1-29, 2023. doi: 10.1145/3577199
13. Q. Wu, Y. Sang, D. Wang, and Z. Lu, "Malicious Selling Strategies in E-Commerce Livestream: A Case Study of Alibaba's Taobao and ByteDance's TikTok," 2022.
14. P. Fifield, "Marketing strategy," Routledge, 2012. doi: 10.4324/9780080511139