

The architecture of distrust: A heuristic evaluation of deceptive patterns in brazilian pharmaceutical marketplaces

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Abstract

The accelerated digitalization of the healthcare sector has driven the emergence of pharmaceutical marketplaces. However, the information architecture of these platforms frequently incorporates "deceptive patterns"—design choices that subvert user autonomy in favor of commercial metrics. This paper presents the preliminary results of a technical audit conducted on one of the largest health marketplaces in Brazil. Using an inspection method based on risk heuristics and the ontology of Gray et al., the evaluation quantified the presence of manipulation tactics. The results show a high density of "Sneaking" and "Forced Action" patterns, with an alarming index of financial loss risk for the consumer. The ethical responsibility of design is discussed in the face of interfaces that operate not as neutral tools, but as agents of economic coercion and data capture.

Keywords

Deceptive Patterns, Ethical Design, Dark Patterns, Marketplace. Digital Product

1. Introduction

E-commerce in Brazil has experienced unprecedented growth, catalyzed by the COVID-19 pandemic context, consolidating the internet as a primary channel for acquiring essential goods. In this scenario, pharmacy marketplaces have emerged as complex platforms that integrate the sale of medicines, health services, and personal data management. However, the technological mediation in these platforms is not innocuous; it is frequently designed to maximize conversion and engagement through persuasion techniques that cross the ethical line, constituting what the literature calls deceptive patterns. This article critically positions itself on the responsibility of design in the construction of these interfaces. If, as Papanek (2000) argues, design is the most powerful instrument for configuring tools and environments, demanding high moral responsibility, the systematic presence of manipulation in health interfaces represents a crisis of trust.

The objective of this work is to present a detailed technical evaluation of the interface of a large Brazilian pharmaceutical marketplace (henceforth called "Marketplace A"), demonstrating how the architecture of choice is manipulated. This research positions itself with specific conceptual and methodological innovations. Methodologically, it adopts a heuristic inspection approach to quantify risks and typify design strategies that prioritize profit over consumer-patient autonomy, using a structured tool to refine the analysis of financial risk as the critical severity metric. Unlike studies focused on user perception, the main conceptual advance lies in applying and validating a hierarchical ontology (Gray et al.) in a context of high vulnerability and social relevance in Brazil (the digital pharmaceutical sector), transforming the identification of deceptive patterns into a technical risk audit with regulatory implications.

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2. Theoretical Foundation

2.1. From Persuasion to Manipulation

The concept of dark patterns, coined by Harry Brignull in 2010 and renamed as deceptive patterns by Gupta (2021) to avoid negative language connotations, refers to interfaces intentionally designed to induce the user into actions that do not serve their best interests. The analysis is based on the hierarchical ontology proposed by Gray, Bielova, Santos, and Mildner (2024), which structures these patterns into three levels:

- **Macro Level:** Global manipulation strategies, such as Obstruction, Sneaking, and Forced Action
- **Medium Level:** Operational tactics, such as "Bait and Switch" .
- **Micro Level:** Specific interface implementations, such as false countdown timers.

2.2 Deceptive Patterns in Digital Pharmacy Marketplace Solutions

The exponential growth of e-commerce has driven the proliferation of digital marketplaces, complex ecosystems that connect consumers to a vast range of sellers and products. In these environments, deceptive pattern tactics are frequently employed with the primary goal of maximizing crucial metrics, such as sales conversion, customer retention, and engagement time, often to the detriment of user autonomy and well-being (Brignull, 2023; Gray et al., 2018). The convenience and accessibility offered by online pharmacy marketplaces have profoundly transformed how patients and users seek and acquire medications and health products. However, this apparent ease can conceal significant traps for the unwary consumer. The analysis of deceptive patterns present on these platforms benefits from the critical perspectives of specialists such as Harry Brignull (2023) and Chris Nodder (2013). These authors, each from their own perspective, offer valuable findings on how pharmacy marketplaces can, intentionally or not, induce the user to purchase more expensive products, subscribe to unwanted services, or provide personal data without explicit consent.

A common and insidious practice, widely documented in the literature, is the display of extremely attractive initial prices, while additional fees, such as shipping, taxes, or service costs, are skillfully concealed or postponed until the final checkout step. This technique, insidious and effective, exploits the psychological phenomenon of "sunk cost," also known as the "sunk cost fallacy." In this context, consumers, having already invested time and energy in the purchase process, feel compelled to conclude the transaction, even in the face of unexpected additional costs, to avoid the feeling of losing the initial investment (Gray et al., 2018).

Furthermore, pharmacy marketplaces frequently resort to scarcity indicators, such as messages like "x people are viewing this product now" or "last units in stock," to create a false sense of urgency. Empirical studies such as Luguri & Strahilevitz (2021) have consistently shown that this practice significantly increases conversion rates, inducing users to make impulsive decisions, motivated by the fear of losing a perceived unique opportunity. Not infrequently, marketplaces also adopt the strategy of blocking checkout access for unregistered users, forcing them to create accounts. This approach, while seemingly harmless at first glance, aims to increase metrics such as active users and facilitates the implementation of cross-selling and up-selling practices, potentially leading to unintentional purchases (BRIGNULL, 2023).

Regarding the services offered on pharmacy marketplaces, the use of pre-checked boxes to enroll users in recurring subscriptions or the implementation of obstacles to make the cancellation of these subscriptions difficult is common, a practice known as "force and block" (Gray et al., 2018). This tactic, often combined with unclear renewal notices or complex cancellation notifications, aims to keep users tied to services they may no longer want, generating continuous revenue for the platform. The combination of these strategies can create a digital environment where users feel pressured and manipulated, compromising trust in the platform and potentially leading to negative experiences. The analysis of these deceptive patterns in pharmacy marketplaces reveals the need for greater transparency and responsibility in the design of digital interfaces, aiming to protect the rights and autonomy of consumers.

3. Objectives and Methodology

This study aims to identify in a Brazilian major pharmacy digital marketplace design practices that manipulate users and compare the findings with ethical standards and legal regulations such as the General Data Protection Law (LGPD) and the Web Content Accessibility Guidelines (WCAG). The choice to select and analyze the Droga Raia marketplace is related to its national scope, ensuring that the readers of this study could identify with similar moments when using the marketplace to consult or acquire a pharmaceutical product. Four critical pages of the purchase journey were audited: (P1) Home, (P2) Product Page, (P3) Shopping Cart, and (P4) My Account.

For this purpose, a specific website evaluation tool was used, which was developed by the IDA (Ideas Digitales Aplicadas) design team from Santiago - Chile, inspired by the Sirius heuristic matrix by Olga Carreras (2019) and adapted by the researcher to the reality of the Brazilian scenario, with the objective of assisting in the performance evaluation of individuals in various areas. It offers a clear and objective structure so that evaluators can provide constructive feedback and identify points for improvement and potential. This tool quantifies the identified deceptive patterns and enables the construction of a panorama to demonstrate the impact that the marketplace has on our daily lives and the urgency of how the topic must be addressed by society. The example of the applied tool can be found in the Appendices. I learned about this tool at the Interaction Latin America 2023 international design conference. The sequence of the evaluation approach involves:

- **Definition of Criteria:** establishing the evaluation criteria relevant to the function.
- **Scoring Scale:** using an objective scoring scale for each criterion.
- **Descriptive Comments:** providing descriptive comments that justify the assigned scores.
- **Constructive Feedback:** offering feedback that is specific, timely, and focused on the development of the evaluated subject.

In this research, we chose to follow the indirect method, simulating the use and purchase of medicines on the Droga Raia marketplace (NIELSEN, 1993). The evaluator navigated the marketplace being instructed to actively search for all deceptive patterns described in the ontology of Gray et al. (2024), applying the detailed criteria of the IDA tool. The time spent on each stage was the time necessary for the exhaustive search and classification of the micro patterns, without limitation. The collection of patterns and their scores was performed immediately during the simulation (real-time observation) and recorded in the form, using screen capture and interaction recording tools, avoiding reliance on memory. To mitigate the potential bias of "evaluators eager to find deceptive patterns," the audit was framed as an objective technical audit, based strictly on the application of the objective and quantifiable criteria of the 54 micro-criteria of the IDA tool. Since it was a single evaluation (single-rater), maximum consistency was ensured by the rigorous application of the ontology, making an inter-rater agreement index calculation unnecessary.

The identification and classification of manipulation tactics, through the application of the deceptive patterns evaluation, revealed a specific set of problems that required further investigation. The typologies of deceptive patterns found, along with the quantification and qualification of their impacts, outlined a path to explore designers' perceptions of their role in implementing these practices.

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The tool consists of an online form, containing specific sections for each evaluation criterion. Each criterion is accompanied by a scoring scale and/or descriptive comments, organized as follows:

- **General Data:** initial spreadsheet for recording basic information about the evaluated website, such as URL, number of analyzed pages, and evaluator data. The complete filling of this spreadsheet was crucial for the correct interpretation of the results.
- **Evaluation Spreadsheets by Typology:** six distinct spreadsheets, each dedicated to a macro typology of deceptive pattern: Nagging, Obstruction, Sneaking, Interface Interferences, Forced Action, and Social Engineering. Each spreadsheet contains a series of specific criteria for the identification of deceptive patterns of that typology, which were evaluated and scored individually.
- **Results:** final spreadsheet that consolidates the data from the evaluation spreadsheets by typology, generating an overall score for the evaluated marketplace and presenting statistical data relevant to the analysis.

The evaluation was conducted by a senior evaluator, an expert in Interaction Design and heuristic evaluations, acting in a technical audit. The evaluator navigated the marketplace being instructed to actively search for all deceptive patterns described in the ontology of Gray et al. (2024). The time spent on each stage was the time necessary for the exhaustive search and classification of the micro patterns, without limitation. The collection of patterns and their scores was performed immediately during the simulation (real-time observation) and recorded in the form, using screen capture and interaction recording tools, avoiding reliance on memory. To mitigate the potential bias of "evaluators eager to find deceptive patterns," the audit was framed as an objective technical audit, based strictly on the application of the objective and quantifiable criteria of the 54 micro-criteria of the IDA tool. Since it was a single evaluation (single-rater), maximum consistency was ensured by the rigorous application of the ontology, making an inter-rater agreement index calculation unnecessary.

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The study followed an action roadmap (script) simulating a typical purchase journey: (1) Navigate the home page (P1), (2) Search for an item, (3) Initiate the transaction on the product page (P2), (4) Analyze the shopping cart (P3), and (5) Attempt to manage account settings (P4). The evaluator navigated the marketplace being instructed to actively search for all deceptive patterns described in the ontology of Gray et al. (2024), applying the detailed criteria of the IDA tool. The time spent on each stage was the time necessary for the exhaustive search and classification of the micro patterns, without limitation. The collection of patterns and their scores was performed immediately during the simulation (real-time observation) and recorded in the form, using screen capture and interaction recording tools, avoiding reliance on memory.

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The evaluation aims to identify design practices that manipulate users, analyze their impacts on consumer experience and business results, and compare the findings with ethical standards and legal regulations. To do this, tools for capturing and recording screen interactions will be used, as well as legal and best practice references, such as the General Data Protection Law (LGPD) and the Web Content Accessibility Guidelines (WCAG), which are international accessibility guidelines. Four critical pages of the purchase journey were audited: (P1) Home, (P2) Product Page, (P3) Shopping Cart, and (P4) My Account. The maximum possible severity score in the tool is 394 points; the higher the score obtained, the greater the presence and severity of deceptive patterns. The identification and classification of manipulation tactics, through the application of the deceptive patterns evaluation, revealed a specific set of problems that

required further investigation. The typologies of deceptive patterns found, along with the quantification and qualification of their impacts, outlined a path to explore designers' perceptions of their role in implementing these practices.

4. Results

The information from the spreadsheet was consolidated in this research chapter, presenting a brief scenario about the different deceptive patterns present in the marketplace and supporting the justification of the work. The initial approach involved the precise definition of the evaluation criteria, which must be relevant to the website's function or area of activity. The scoring scale was established objectively for each criterion, allowing for a standardized quantification of the evaluations, which was reviewed and followed the criterion proposed by the authors. The structure of the deceptive patterns evaluation focuses on three levels of patterns (macro patterns: 5 main categories, medium patterns: 19 intermediate categories and micro patterns, for a total of 54 specific and tangible categories) and 5 associated risk factors (Annoying and frustrating, Uncertainty and misinformation, Addictive behaviors and Financial loss).

For the score assignment, each risk factor receives a grade from 1 to 5, directly proportional to its severity. This individual score for each risk factor is crucial because it is used to calculate the final score of the micro pattern under analysis. Consequently, micro patterns related to more severe risk factors, such as financial loss or compromise of personal information, will receive a greater penalty in the overall site evaluation, reflecting the greater severity of the potential harm to the user. This evaluation structure allows not only for quantifying the presence of deceptive patterns (data that will be detailed below) but also for supporting an interpretive analysis of how these patterns manifest in the specific context of Droga Raia. Each score and identification of a micro pattern was interpreted in light of the expected user behavior and ethical design principles, connecting the findings to norms such as LGPD and WCAG. This interpretive dimension is crucial to go beyond mere counting, revealing the intentionality and impact of these tactics on user autonomy and their reliability in the service. The second stage, the application of the evaluation tool, comprised the steps of completely filling out the "General Data" spreadsheet, and then starting the evaluation of the chosen sequential pages (home page, product page, shopping cart page, and my account page) meticulously analyzing them in light of the predefined criteria and recording the deceptive patterns evaluations that were found in the viewing of the referred page and the score that it entered in the specific spreadsheet for each of the six typologies. The interpretation of the results was consolidated in the "Results" spreadsheet, which provided an overall score for the marketplace and statistical data on the incidence of each deceptive pattern typology, allowing for the identification of problematic areas and listing important considerations.

The evaluation revealed that the Droga Raia marketplace exhibits a high quantity of deceptive patterns, with a total score of 197 out of 394 possible points. This quantitative metric shows that the marketplace in question presents a considerable number of manipulative tactics, placing it in the '6-4' category on the IDA tool's severity scale, which indicates a high incidence of deceptive patterns.

The following table summarizes the general evaluation results:

Table 1
General evaluation results

Results	Score	Description
Score Obtained	197	-
Total Score	394	-
Rating	6-4	The site presents a high quantity of deceptive patterns.

The analysis of risk factors, presented in Table 2, categorized and quantified the potential impact of the identified deceptive patterns. The factors were evaluated on a scale of 1 to 5, reflecting their severity. The most alarming data refers to the nature of the risks imposed on the user. Unlike interfaces that only cause frustration, the analyzed marketplace directly attacks the user's financial assets and privacy. The factor "Financial loss" obtained the highest score (29 out of 36), indicating a high risk of economic prejudice for users. "Annoying and frustrating" (26 out of 44) and "Compromise of personal information" (15 out of 22) also presented high scores, evidencing the multifaceted nature of the risks involved. The table below presents the results of the risk factor evaluation:

Table 2
The analysis of risk factors

Factor	Presence	Total
Annoying and frustrating	26	44
Uncertainty and misinformation	13	26
Addictive behaviors	3	14
Financial loss	29	36
Compromise of personal information	15	22

The evaluation structured the deceptive patterns into three levels: macro, medium, and micro, allowing for a hierarchical analysis of the complexity and impact of the tactics. The analysis demonstrated that the platform's design strategy relies majorly on Sneaking and Forced Action. The "Sneaking" category totaled 105 points, being the most recurrent tactic. This is manifested through medium-level patterns such as "Hidden or disguised advertising" and "Deceptive calls to action." The platform deliberately mixes editorial/organic content with paid advertising, making it difficult for the user to distinguish between them. The "Forced Action" (86 points) appeared as the second most critical category, driven by the medium-level pattern of "Forced Registration, Communication, or Disclosure" (76 points). This indicates that the platform creates artificial barriers that compel the user to surrender data or register to proceed with simple tasks. The following table presents the results of the evaluation by pattern level:

Table 3
Hierarchical analysis of the complexity and impact of the tactics

Macro level	Points	Critical medium level	Points
1. Nagging	38	5.2 Forced Disclosure	76
2. Obstruction	44	4.1 Manipulating Visual Archit.	42
3. Sneaking	105	3.4 (De)contextualizing Cues	34
4. Interface Interferences	51	3.2 Hiding Information	33
5. Forced Action	86	3.1 Bait and Switch	31
6. Social Engineering	16		

The analysis of the incidence of deceptive patterns on specific marketplace pages (Table 4) revealed that the distribution of patterns throughout the user journey is not uniform; it is concentrated at critical decision points.

The home page (P1) was the page with the highest density of patterns (135 total points). The predominant tactic is Sneaking (48 points), through banners that mimic health recommendations but are paid advertisements, and Interface Interferences (27 points), using false visual hierarchies to highlight more expensive products. On the product page (P2), the focus shifts to Social Engineering. Countdown timers and scarcity messages ("x units left in stock") were identified, generating artificial urgency (mental triggers), totaling 8 points in this specific category, but permeating the entire purchase experience with induced anxiety.

On the My Account page (P4), a "Roach Motel" was revealed. The Forced Action category scored 42 points and Obstruction 21 points. The audit found extreme difficulty in deleting the account or managing privacy data, while registration and sign-up are facilitated (asymmetric friction). And on the shopping cart page (P3), the presence of Forced Action (25 points) was observed, including the automatic renewal of recurring product subscriptions without clear prior explicit consent. The table below presents the results of the evaluation by page:

Table 4
Analysis of the incidence of deceptive patterns on specific pages

Page	Nagging	Obstruction	Sneaking	Interferences	Forced Action	Social Engineering
P1	22	18	48	27	12	8
P2	16	5	40	18	7	8
P3	0	0	17	6	25	0
P4	0	21	0	0	42	0
Total	38	44	105	51	86	16

This detailed and quantified analysis of the evaluation results provided a solid basis for understanding the extent and nature of the deceptive patterns present in the Droga Raia marketplace. The meticulous evaluation of the Droga Raia marketplace revealed a complex web of problematic persuasive tactics, categorized and detailed below, with specific examples found during the analysis.

4.1 Nagging

Droga Raia employs various nagging strategies to direct user behavior. The use of modals/pop-ups is frequent, interrupting navigation and demanding specific actions, such as registering an email to receive offers or accepting terms of use. This tactic, by itself, is not necessarily problematic, but it becomes so when combined with the lack of options to refuse or postpone the action. Additionally, the system repeatedly requests permissions, such as access to location or notifications, without offering the option to disable future requests ("Don't ask again"). This practice generates frustration and can lead the user to grant unwanted permissions just to get rid of the repetitive requests, evidencing a clear intention to direct user behavior in an unethical manner.

4.2 Obstruction

The user experience on the Droga Raia marketplace is frequently obstructed by barriers that hinder natural progression on the platform. Navigation is conditioned on the acceptance of cookie delivery, preventing access to content without agreement with this policy. This practice, although common, becomes problematic when there is no clarity about the use of collected data or when the cookie policy is excessively long and complex, making it difficult for the user to understand. Moreover, the execution of certain actions, such as finalizing a purchase or accessing contact information, is made difficult by the superposition of modals/pop-ups or by the insertion of distracting elements, such as advertising banners

or related product offers. These elements divert attention from the main objective and induce less conscious choices, harming the user experience and potentially leading to impulse purchases.

4.3 Sneaking

Sneaking strategies are used to obscure relevant information and confuse the user on the Droga Raia marketplace. Hidden or disguised advertising is mixed with organic content, making it difficult to distinguish between genuine information and promotional messages. For example, sponsored products may be displayed in a manner very similar to organic search results, without proper identification as advertising. Ambiguous or deceptive calls to action were also identified. In some cases, the "Buy" button might lead to a product details page instead of directly to the shopping cart, or a "Cancel" button might be intentionally small and discreet, making it difficult to locate. These tactics frustrate user expectations and undermine confidence in the platform, as it becomes difficult to distinguish between genuine information and attempts at manipulation.

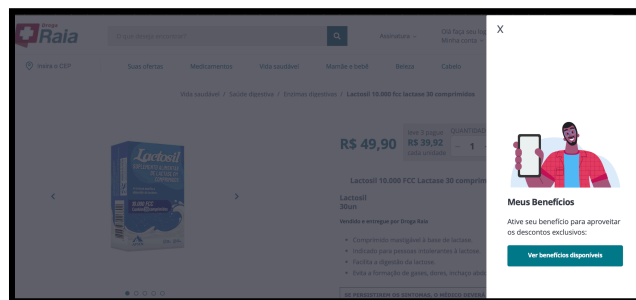


Figure 1: Example of sneaking on the Droga Raia website (source: www.drogaraia.com.br).

4.4 Interface Interferences

Interface elements are used to manipulate the user's decision-making process in the Droga Raia marketplace. Graphic resources that distract or direct the gaze towards specific elements are employed to influence choice. For example, a product with a larger discount may be highlighted with vibrant colors and animations, while other similar but higher-priced products are displayed more discreetly. The offer of packages that combine products or services with "special prices" is also used to encourage excessive consumption and make the individual evaluation of each item's value difficult. This tactic can lead the user to acquire products they do not need or that do not fit their budget, simply because of the appeal of the package discount.

4.5 Forced Action

The Droga Raia marketplace imposes actions on the user, limiting their autonomy and freedom of choice. Automatic renewal of subscriptions without prior consent constitutes an abusive practice, as the user may be charged for a service they no longer wish to use. The mandatory requirement to create an account to access the service or product also impedes free access and creates a barrier to platform exploration. This practice can deter users who do not wish to share their personal data or who simply want to make a quick purchase without the need to create a registration.

4.6 Social engineering

Social engineering tactics exploit psychological triggers to influence user behavior in the Droga Raia marketplace. The presentation of countdown timers for offers creates a sense of urgency and scarcity, leading to impulsive and less rational decisions. For example, a banner may indicate that "only 3 units remain in stock" or that "the offer ends in 10 minutes." These messages can lead the user to buy a product without much thought, for fear of losing the opportunity, even if they don't really need it.



Figure 2: Example of social engineering on the Droga Raia website (source: www.drogoraia.com.br)

This detailed and quantified analysis not only provided a solid basis for understanding the extent and nature of the deceptive patterns at Droga Raia, but also served as the starting point for constructing the interview script, allowing us to explore the designers' perspectives on these problematic practices in a real context.

These analyzed examples demonstrate the complexity and variety of the problematic persuasive strategies used in the Droga Raia marketplace. The evaluation results revealed that deceptive patterns are present across several layers of the marketplace, from visual elements to business strategies. These tactics, which range from nagging and obstruction to sneaking and social engineering, ultimately affect user autonomy through the examples listed at the medium and macro levels, harming the browsing and purchasing experience, eventually undermining trust in the platform, and leading to less conscious purchase decisions. These patterns were implemented across various layers of the marketplace, indicating that problematic persuasion is an integral part of the business strategy.

This evaluation of deceptive patterns sought to identify and analyze the deceptive practices used in pharmacy marketplaces to understand their impact. The structured methodology served to test a tool that was not well-known and to concretize most of the examples seen in Chapter 1, demonstrating the tool's potential for use in other digital projects to identify and classify the deceptive patterns found. The results from the spreadsheet also supported the production of the interview questions script. The finding that problematic persuasion is an integral part of the marketplace's business strategy reinforced the importance of investigating the perceptions and challenges faced by designers working in this context.

5. Discussion

The evaluation of the pharmaceutical marketplace revealed an information architecture that operates in dissonance with the fundamental principles of usability and ethics. The severity score obtained (197 out of 394 points) classifies the platform in a zone of "high quantity of deceptive patterns," confirming the hypothesis that technological mediation in this sector is not neutral, but designed for aggressive conversion to the detriment of user autonomy.

The most critical finding of this investigation lies in the predominance of the risk factor "Financial Loss," which reached 29 out of 36 possible points. Unlike entertainment platforms, where deceptive patterns may only result in "Annoyance" (a factor that also obtained a high score: 26/44), in the health context, the manipulation directly targets the vulnerable consumer's assets. The high incidence of Sneaking patterns—the macro category with the highest score (105 points)—embodies the concept of "evil design" proposed by Nodder. The platform uses tactics such as "Sneaky Addition to Cart" and "Hidden Costs" to exploit user inattention. By hiding price information or adding unsolicited services, the interface ceases to be a health support tool and becomes a mechanism for value extraction, validating Maldonado's critique of design as an instrumental market tool that ignores its social responsibility.

The second most prevalent category, Forced Action (86 points), exposes a deliberate asymmetry of power. The evaluation identified the recurrence of "Forced Continuation" and "Difficulty of Cancellation" (Barriers). The interface creates a "Roach Motel": it is extremely easy to enter (subscribe to a service, accept cookies), but labyrinthine to exit. This architecture violates Bonsiepe's principle of complexity

reduction. Instead of a transparent interface that "opens possibilities for action," the user encounters "interface interferences" (51 points) that insert cognitive noise to coerce them into staying. The audit on the "My Account" page (P4) demonstrated that data deletion is treated as an unwanted exception, not a right, forcing the user to navigate obscure menus or contact human support, while sign-up is instant and automated.

The analysis of the Home page (P1) revealed an intense use of Nagging (22 points) through *modals* and *pop-ups*. Although the LGPD (Brazilian General Data Protection Law) requires clear consent, the interface reverses this logic through saturation. The user is bombarded with permission requests that do not offer the "Don't ask again" option, leading to "consent fatigue." Design is used to wear the user down, leading them to accept data collection (Personal Information Compromise Risk Factor: 15/22) just to remove the visual obstruction. This demonstrates that the "neutrality" of design is a fallacy; the choice not to offer a simple refusal button is a political and economic decision of surveillance.

The results suggest that the presence of these patterns is not accidental but systemic. The consistency of the patterns across all stages of the journey (Home, Product, Cart) indicates a transversal business strategy. As discussed by Frascara, the designer operating within this system often finds themselves reduced to an "executor of operational tasks" or a "binary system worker," whose function is to translate conversion metrics into interface elements. Social responsibility, in this scenario, is undermined by the corporate hierarchy that prioritizes immediate profit. The designer faces a dilemma: they possess the technique to create ethical experiences but operate under a capitalist logic that rewards manipulation. The audited interface is the tangible reflection of this tension, where the "clinical gaze" reveals a pathology in the design process: commercial effectiveness was achieved through the degradation of user trust.

While most findings at Droga Raia unequivocally fall into predatory tactics, the evaluation recognizes the fine line of elements such as countdown timers and stock item counts. It is plausible that, in strictly factual contexts (e.g., accurate time or stock information), this information could be considered neutral or even useful to the consumer. However, the methodological criterion adopted (based on the ontology of Gray et al.) does not focus solely on the falsity of the information, but on its coercive framing. The classification of these elements as "Social Engineering" (Section 4.6) reflects the identification that they are employed to create artificial urgency or to exploit the cognitive bias of fear of loss, diverting the user from a rational decision, even if the underlying information is technically true. Therefore, the conceptual discussion of what constitutes a deceptive pattern is crucial: the focus must be on the intent to manipulate the architecture of choice, and not just on the punctual veracity of the data presented. The audited interface demonstrates the systemic use of these elements for aggressive conversion purposes, and not for informative transparency.

Finally, the severity of the findings (Rating 6-4) points to the insufficiency of purely voluntary codes of ethics. The existence of "good practices" did not prevent the implementation of 197 severity points of deceptive patterns in one of the largest pharmaceutical chains in the country. This reinforces the urgent need for robust external regulation, similar to the initiatives observed in India and the European Union, so that social responsibility ceases to be an individual choice for the designer and becomes a legal requirement of the interface. Trust, the foundation of digital interactions, will only be restored when transparency ceases to be an option and becomes the norm.

6. Conclusion

This paper presents empirical evidence that health marketplaces in Brazil use deceptive patterns in a systemic and aggressive manner. The research showed that mechanisms such as "sneaky addition to cart" and the creation of "privacy labyrinths" are not usability flaws, but successes of a predatory design strategy. In the health context, where the user frequently finds themselves in a state of vulnerability, this manipulation corrodes the notion of reliability, transforming the healing service into a vector of financial and informational insecurity. It is concluded that the mere existence of ethical codes in design is insufficient in the face of business metric pressure. The information architecture analyzed is hostile to

human autonomy.

It is recognized that this research was limited to auditing a single market player, although a sector leader. As future work, it is suggested to expand the audit to other players in the sector to verify if this is a pattern of the digital pharmaceutical industry as a whole. Additionally, longitudinal studies could measure the real impact of removing these patterns on customer loyalty, proving that ethical design can also be economically viable. It is imperative that the design community and regulatory bodies treat the interface not as a static storefront, but as a dynamic process that requires continuous auditing and legal accountability.

Declaration on Generative AI

Either:

During the preparation of this work, the author(s) used Gemini4.0 in order to: Grammar and spelling check. After using these tool(s)/service(s), the author(s) reviewed and edited the content as needed and take(s) full responsibility for the publication's content

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Appendices

Appendix A - Deceptive Patterns Evaluation Spreadsheet: Structure and Scoring

Estrutura e pontuação								
Análise está estruturada em 5 Padrões macro, 19 Padrões meso e 84 Padrões micro. Simples último dia de especificar e tangível, por ser muito aquelas que procuramos em avaliar o site. Cada padrão meso está ligado a pelo menos um dos cinco tipos de ruse que propomos serem básicas as usar padrões enganosos. Baseado na dimensão dos padrões, cada tipo de ruse tem um grau de gravidade, impacto e permanência no tempo como:								
1. Inocência e falta de experiência (Ba)								
2. Inocência e falta de experiência (Ba)								
3. Comportamento automatizado (CV)								
4. Ponto de atenção (PT)								
5. Comprometimento de informações pessoais (CIP)								
Assim, um padrão meso é atribuído uma pontuação (1, 2, 3, 4, 5, respectivamente) para determinar a pontuação final do padrão meso. Assim, os padrões que estão relacionados a ruses mais graves receberão uma pontuação mais alta na análise final do site a avaliar.								
Nível meso	Nível meso	Nível meso	Ruses Associadas				Pontuação	
			Inf (Ba)	Inf (CV)	CV (CV)	PT (Ba)	CIP (CV)	
1. Navegação: Cozimento e apresentação de informações	11 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	11.1 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
	12 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	12.1 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
	13 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	13.1 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
	14 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	14.1 Navegação Irregular: O usuário não consegue navegar de forma adequada para acessar as informações desejadas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7
2. Obtenção de dados pessoais	21 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	21.1 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
	22 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	22.1 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13
	23 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	23.1 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
	24 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	24.1 Obtenção de dados pessoais: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9
3. Disseminação de informações	31 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	31.1 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7
	32 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	32.1 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
	33 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	33.1 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7
	34 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	34.1 Disseminação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12
4. Identificação de informações	41 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	41.1 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12
	42 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	42.1 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9
	43 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	43.1 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
	44 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	44.1 Identificação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
5. Ação Final: Conclusão	51 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	51.1 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
	52 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	52.1 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
	53 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	53.1 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
	54 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	54.1 Ação Final: Conclusão: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7
6. Experiência Social: Cozimento e apresentação de informações	61 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	61.1 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
	62 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	62.1 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
	63 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	63.1 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14
	64 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	64.1 Experiência Social: Cozimento e apresentação de informações: O usuário não consegue obter as informações desejadas de forma adequada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10

Appendix B - Deceptive Patterns Evaluation Spreadsheet: General Data

Avaliação de Padrões Enganosos para websites

Dados gerais

Website avaliado	https://www.drogaria.com.br/
Tipo de website	Loja online ou ecommerce
Pessoa avaliadora	Rafael Poiate
Data de avaliação	20/12/2024
Navegador que utilizou	Safari

Datos generales

Quantidade de paginas a avaliar 4

Nº	Nome	Link	Estado
1	Home	https://www.drogaria.com.br/	Avaliada
2	Produto	https://www.drogaria.com.br/lactosil-10000-fcc-30-tabletes.html?ori	Avaliada
3	Carrinho	https://www.drogaria.com.br/checkout/cart	Avaliada
4	Minha Conta	https://www.drogariasapaulo.com.br/secure/account#/profile	Avaliada

Appendix C - Deceptive Patterns Evaluation Spreadsheet: Nagging Patterns

1. Insistência

Descrição

Consiste em um redirecionamento menor da funcionalidade esperada que pode persistir em uma ou mais ações. Este padrão escuro geralmente se manifesta como uma intrusão repetida durante o fluxo do usuário, onde a tarefa desejada é interrompida uma ou mais vezes por outras tarefas, através do aparecimento constante de elementos na tela.

Quantidade de telas a avaliar: 4

Nível Meso	Nível Micro	Pontuação	P1	P2	P3	P4
1.1 Navegação Irritante: Situações em que o fluxo de navegação é constantemente interrompido para persuadir o usuário com uma mensagem.	1.1.1 O site insiste constantemente em uma ação por meio de um modal/pop-up.	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1.1.2 O site solicita permissões repetidamente sem a opção de 'Não perguntar novamente'.	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Interface Interrompida: Situações nas quais uma ação em particular é obstruída ou condicionada por meio de elementos distrativos.	1.2.1 O site não permite a navegação sem antes aceitar a entrega de cookies por parte do usuário.	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1.2.2 O site obstrui uma ação por meio de modais/pop-ups ou elementos de distração.	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10	16
6	
12	22
10	

22 16 0 0

Appendix D - Deceptive Patterns Evaluation Spreadsheet: Obstruction Patterns

2. Obstrução

Descrição

Obstrução consiste em impedir o fluxo de uma tarefa, provocando que uma interação com a interface seja mais difícil do que deveria ser, com o fim de dissuadir uma ação em concreto.

Quantidade de telas a avaliar: 4

Nível Meso	Nível Micro	Pontuação	P1	P2	P3	P4
2.1 Motel de Baratas: Situações em que é fácil entrar, mas difícil sair. Isso com o objetivo de reter os usuários e impedi-los de abandonar um produto ou serviço.	2.1.1 O site apresenta links quebrados ou links que não estão mais disponíveis.	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.1.2 O site dificulta de forma exagerada a exclusão de uma conta ou o cancelamento de uma assinatura.	13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.2 Criando Barreiras: Situações em que são impostos obstáculos para dificultar a compreensão completa do serviço, com o propósito de facilitar a aceitação de suas condições.	2.2.1 O site dificulta a comparação de produtos, preços e suas características.	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.2.2 O site impede que as informações específicas do produto ou serviço sejam copiadas e coladas.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.2.3 O site não aceita pagamentos com moedas convencionais e, em vez disso, usa uma moeda digital exclusiva, que é adquirida por meio de uma transação com a moeda tradicional.	9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2.2.4 O site não permite a devolução de dinheiro em moeda convencional, em vez disso, fornece uma moeda digital que só pode ser utilizada dentro do comércio específico.	10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Adicionando Etapas: Situações em que a arquitetura da informação é complexificada para dificultar a localização de conteúdo específico.	2.3.1 O site apresenta navegações mais longas do que o necessário, de modo que os usuários ignorem informações/controles relevantes ou desistam de procurá-los.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3	16
13	
10	20
0	
0	
10	
8	0

18 5 0 21

Appendix E - Deceptive Patterns Evaluation Spreadsheet: Sneaking Patterns

3. Dissimulação

Descrição

Dissimulação consiste na ação por parte dos responsáveis pelas interfaces de ocultar, disfarçar ou retardar informação relevante para o usuário. Isso é feito com o propósito de encobrir dados chave ou induzir ao erro, com o objetivo de obter benefícios comerciais.

Quantidade de telas a avaliar: 4

Nível Meso	Nível Micro	Pontuação	P1	P2	P3	P4		
3.1 Isca e Troca: Situações em que é evidenciado que uma ação específica terá um resultado determinado, mas na realidade provoca um resultado diferente, possivelmente indesejado.	3.1.1 O site apresenta publicidade oculta ou disfarçada que confunde os usuários.	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	31
	3.1.2 O site possui botões pequenos difíceis de clicar e atrás deles há publicidade.	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	3.1.3 O site apresenta calls to action que convidam a uma ação e, ao clicar, mudam para outra opção indesejada.	12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24	
3.2 Ocultando Informações do Produto: Situações em que o acesso a informações relacionadas aos produtos ou serviços oferecidos é ocultado ou dificultado.	3.2.1 O site adiciona itens ao carrinho de compras sem consultar o usuário.	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	33
	3.2.2 O site oferece um desconto ou acesso que não é real e é modificado inesperadamente.	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	
	3.2.3 O site fornece informações de custos ou preços aos poucos ao longo do processo de compra.	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10	
	3.2.4 O site fornece informações de custos tardiamente.	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	3.2.5 O site impõe custos adicionais de última hora.	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	3.2.6 O site mostra um preço de desconto nos produtos à venda, que é comparado com um preço original mais alto que é enganoso ou falso.	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18	
3.3 Informações Ocultas do Usuário: Situações em que o acesso a informações relacionadas ao controle da conta ou privacidade dos usuários é ocultado ou dificultado.	3.3.1 As opções que o site oferece para escolher as condições estão ocultas ou em cinza.	11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	7
	3.3.2 Os detalhes do serviço estão disfarçados ou são difíceis de encontrar.	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	3.3.3 O site oculta ou fornece tardiamente informações relevantes para o usuário, dificultando seu acesso.	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	
3.4 (Des)contextualizando Pistas: Situações em que o conteúdo apresentado aos usuários é enviesado em direção a outra definição ou requer um maior nível de conhecimento para ser compreendido adequadamente. Isso é feito com o propósito de dissuadir certas ações ou manter as configurações padrão.	3.4.1 O site fornece informações contraditórias ou que geram insegurança nas ações dos usuários, ao mesmo tempo em que oculta suas possíveis consequências.	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	34
	3.4.2 O site torna as informações difíceis de entender usando palavras ou estruturas de frases desconhecidas ou incompreensíveis.	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	
	3.4.3 O site apresenta informações de segurança relevantes para o usuário em outro idioma, de modo que é provável que ele não esteja ciente de como os dados são tratados.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	3.4.4 O site usa termos ambíguos e vagos ao fornecer informações sobre privacidade e tratamento de dados aos usuários.	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16	
	3.4.5 O site apresenta informações que não podem ser entendidas sem um conhecimento específico prévio.	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	
		48	40	17	0			

Appendix F - Deceptive Patterns Evaluation Spreadsheet: Interface Interferences Patterns

4. Interferências da Interface

Descrição

Interferências na interface consistem na manipulação da interface para privilegiar ações específicas em detrimento de outras, confundindo assim quem a utiliza ou limitando a possibilidade de descobrir ações importantes.

Quantidade de telas a avaliar: 4

Nível Meso	Nível Micro	Pontuação	P1	P2	P3	P4		
4.1 Manipulando a Arquitetura Visual da Escolha: Situações em que a arquitetura visual é manipulada para favorecer um conteúdo ou ação sobre outra.	4.1.1 Uma opção que é negativa para os usuários tem uma hierarquia visual maior ou se sobrepõe inesperadamente a outras interações ou alternativas.	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	42
	4.1.2 O site apresenta elementos gráficos que distraem ou manipulam o usuário ao tomar decisões relevantes.	12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24	
	4.1.3 O site oferece a opção de combinar dois ou mais produtos ou serviços em um único pacote com um preço especial. Esses pacotes recebem destaque para incentivar um maior consumo em comparação com a aquisição individual dos mesmos produtos ou serviços.	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18	
4.2 Padrões Ruins: Situações em que há opções pré-selecionadas ou configurações padrão que são frequentemente ignoradas pelas pessoas.	4.2.1 O site apresenta alternativas onde há opções pré-selecionadas.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
	4.2.2 Opções desfavoráveis para os usuários já estão pré-selecionadas por padrão.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
4.3 Manipulação Emocional ou Sensorial: Situações que buscam exercer manipulação emocional e/ou sensorial sobre os usuários para distraí-los ou persuadi-los a realizar uma ação específica.	4.3.1 O site usa personagens visualmente atraentes, fofos ou bonitos para aumentar a probabilidade de os usuários confiarem neles.	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
	4.3.2 O site apresenta diferenças gráficas para apresentar conteúdos que são considerados positivos e outros negativos, a fim de condicionar a escolha dos usuários.	9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9	
		27	18	6	0			

Appendix G - Deceptive Patterns Evaluation Spreadsheet: Forced Action Patterns

5. Ação Forçada

Descrição

Ação Forçada consiste em exigir que os usuários realizem uma ação específica para acessar (ou continuar acessando) uma funcionalidade. Essa ação pode ser apresentada como um requisito obrigatório para completar um processo ou pode ser disfarçada como uma opção que supostamente trará grandes benefícios aos usuários.

Quantidade de telas a avaliar: 4

Nível Meso	Nível Micro	Pontuação	P1	P2	P3	P4		
5.1 Continuidade Forçada: Situações em que, após o término de um período de teste, a continuidade do serviço é forçada, renovando-o automaticamente sem aviso prévio.	5.1.1 O site gera cobranças após o período de teste sem consultar o usuário.	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	10
	5.1.2 O site renova uma assinatura sem consultar o usuário.	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10	
5.2 Registro, Comunicação ou Divulgação Forçada: Situações em que os usuários são forçados ou enganados a se registrar ou compartilhar mais informações - pessoais ou de seu círculo próximo - do que o necessário para o funcionamento do produto ou serviço.	5.2.1 O site obriga a criação de uma conta para poder acessar o serviço ou produto.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12	76
	5.2.2 O site obriga a baixar ou instalar algo para acessar o serviço ou produto.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	
	5.2.3 O site obriga a clicar em algum botão para confirmar a identidade por meio do Google ou outro sistema.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12	
	5.2.4 O site solicita acesso às redes sociais dos usuários.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12	
	5.2.3 O site obriga a compartilhar mais informações pessoais do que o realmente necessário para acessar os serviços/produtos oferecidos. // O site persuade o usuário a compartilhar mais informações pessoais do que o necessário para acessar um produto ou serviço.	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	
	5.2.4 O site oculta ou disfarça a entrega de informações privadas por parte do usuário.	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	28	
5.3 Gamificação: Situações em que - imitando recursos de videogames - a funcionalidade do serviço é limitada, e só pode ser acessada após a repetição de ações ou por meio de transações monetárias.	5.3.1 O site obriga a realizar tarefas desgastantes para obter algo que, de outra forma, poderia ser obtido com dinheiro.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
	5.3.2 O site obriga a ver publicidade para acessar benefícios que poderiam ser obtidos com dinheiro.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	5.3.3 O site permite baixar um produto gratuitamente, mas posteriormente exige uma compra para continuar usando o mesmo.	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
5.4 Captura de Atenção: Situações em que se busca distrair ou confundir os usuários para que permaneçam mais tempo do que o necessário navegando pelo site.	5.4.1 O site reproduz automaticamente outro vídeo assim que um vídeo termina de forma inesperada ou prejudicial.	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
		12	7	25	42			

Appendix H - Deceptive Patterns Evaluation Spreadsheet: Social Engineering Patterns

6. Engenharia Social

Descrição

Engenharia Social consiste em se aproveitar da natureza humana e suas relações sociais para manipular os usuários a realizar uma ação ou comprometer a segurança de seus dados.

Quantidade de telas a avaliar: 4

Nível Meso	Nível Micro	Pontuação	P1	P2	P3	P4		
6.1 Prova Social: Situações em que a influência do comportamento de outros é usada para acelerar a tomada de decisões e as compras por parte dos usuários.	6.1.1 O site apresenta informações sobre outros usuários que poderiam tirar sua oportunidade de compra.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
	6.1.2 O site indica aos usuários que há quantidades limitadas de um produto.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	6.1.3 O site inclui depoimentos em uma página de produto cuja origem não é clara.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
	6.1.4 O site usa personagens conhecidos, influentes e nos quais os usuários confiam para pressioná-los a tomar uma determinada decisão.	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	
6.2 Urgência: Situações em que um prazo é imposto a uma venda ou negócio, acelerando assim a tomada de decisões e as compras dos usuários, tornando os descontos e ofertas mais desejáveis do que seriam de outra forma.	6.2.1 O site indica aos usuários que uma oferta ou venda expirará em breve, sem especificar um prazo.	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	16
	6.2.2 O site apresenta contagens regressivas de tempo para uma oferta.	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16	
6.3 Envergonhar: Situações em que emoções desconfortáveis, como culpa ou vergonha, são provocadas para influenciar a tomada de decisões dos usuários.	6.3.1 O site usa rótulos de botão com um tom depreciativo ou degradante, o que gera sentimentos negativos nos usuários que optam por não participar do serviço ou função oferecida.	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0
		8	8	0	0			

Appendix I - Deceptive Patterns Evaluation Spreadsheet: General Results

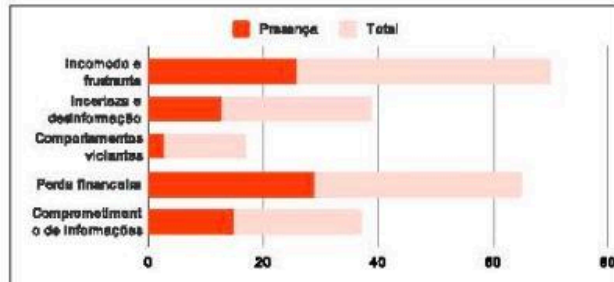
Resultados

Resultados gerais

2	
Nota (Exigência de 70%)	
Pontuação obtida	197
Pontuação total	394

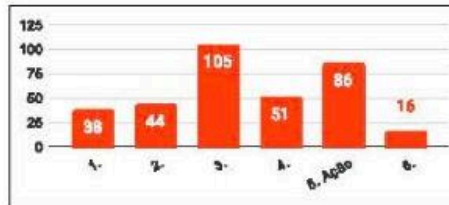
Nota	Descrição
10	O site está livre de padrões enganosos.
9-7	O site apresenta alguns padrões enganosos.
6-4	O site apresenta uma quantidade elevada de padrões enganosos.
3-1	O site apresenta uma quantidade alarmante de padrões enganosos.

Fatores de risco		
Fator	Presença	Total
Incomodo e frustrante	26	44
Incerteza e desinformação	13	26
Comportamentos viciantes	3	14
Perda financeira	29	36
Comprometimento de informações pessoais	15	22

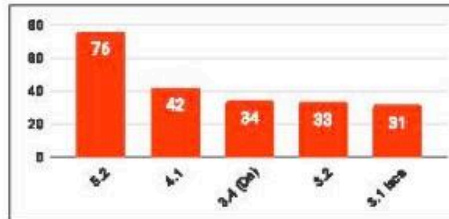


Resultados por padrões

Nível macro	Pts
1. Insistência	38
2. Obstrução	44
3. Dissimular	105
4. Interferências na interface	51
5. Ação forçada	86
6. Engenharia social	16



Nível meso críticos	
Nível meso	Pts
5.2 Registro, Comunicação ou Divulgação Forçada	76
4.1 Manipulando a Arquitetura Visual da Escolha	42
3.4 (De)contextualizando Pistas	34
3.2 Ocultando Informações do Produto	33
3.1 Isca e Troca	31



Resultados por página

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	
Insistência	22	16	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Obstrução	18	5	0	21	0	0	0	0	0	0	0	0	0	0	0	44
Dissimular	48	40	17	0	0	0	0	0	0	0	0	0	0	0	0	105
Interferências na interface	27	18	6	0	0	0	0	0	0	0	0	0	0	0	0	51
Ação forçada	12	7	25	42	0	0	0	0	0	0	0	0	0	0	0	86
Engenharia social	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	16
	135	94	48	63	0	0	0	0	0	0	0	0	0	0	0	

Páginas críticas	
P1	135
P2	94
P4	63
P3	48
P5	0

