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Original Scientific Paper

The Impact of the Brutalist Approach to Web Design on User Experience in Terms of Usability and Satisfaction

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Abstract: This study analyses the impact of the brutalist approach to web design on the user experience, focusing on usability and user satisfaction. The theoretical part of the study gives an overview of this design approach in the context of the history of web design as well as modern digital trends and practises in UX/UI design. The experimental part of the thesis involves testing different brutalist websites to evaluate their impact on users of different age groups. The results show that despite its rough appearance, brutalism can have a positive impact on the usability and satisfaction of younger users, while older generations tend to favour more traditional solutions.

Keywords: brutalism; web design; user experience; usability; user satisfaction.

1. Introduction

Web design plays a key role in the digital world. Norman emphasises that good design must balance aesthetics with clear affordances and feedback to support effective interaction. Disrupting familiar patterns may therefore influence users' perceived control and performance [1]. It adapts to rapid technological change and the new needs of users, striving for a balance between functionality, aesthetics and user experience. Brutalism in web design is inspired by the architectural style of the same name, which emphasises simplicity, functionality and minimalism. Designer Malte Müller emphasises the similarities between web design and architecture, arguing that websites are more than just tools – they are spaces for interaction, cultural artefacts and part of users' daily lives. Like buildings, websites are built, changed, aged and need to be maintained [2]. Brutalist web design focuses on clarity and functionality by removing unnecessary elements. Although controversial, it can be effective when speed and simplicity are prioritised. This article explores the style, appearance and impact of brutalism on user experience, particularly in relation to respondent age, usage and user satisfaction.

Brutalism in interaction design refers to a contemporary approach to user interface design that has become increasingly popular over the last ten years. It is characterised by simplicity and the use of raw, eye-catching visual elements that give websites a unique, often provocative look [3].

The name comes from 20th century architecture, where brutalism was based on raw materials and functionality. The UI design uses bold typography, geometric shapes, contrasting colours and rough graphics [4]. Although they share a similar emotion, architectural brutalism prioritises function over aesthetics, while design brutalism rejects established patterns for the sake of expressiveness [5].

The brutalist style is reminiscent of the aesthetics of the 1990s but is now characterised by creative boldness rather than technical limitations [6]. Aesthetics take centre stage but must not compromise the user-friendliness of the website [3]. The term "web brutalism" was first used by Pascal Deville in 2016 when he created an archive of brutalist websites [7]. He describes brutalism as a reaction of the younger generation to today's lightness and frivolity of web design [8].

Brutalism focuses on basic web technologies such as HTML and CSS and avoids the

complexity of JavaScript, with the aim of creating a simple and transparent user experience [9]. The term "brutalism" comes from the French term "bétonne brut" (raw concrete) and was coined by British architects in the 1950s [10]. The concrete was not finished after casting, symbolising the rawness of the material.

In architecture, brutalism developed from the need for quick and functional solutions after the Second World War. The style rejected ornamentation, emphasised equality and togetherness and quickly gained a negative reputation for its harshness. Now, however, it is making a comeback in web design, offering alternative, expressive solutions [6].

Brutalism can be found on the websites of art institutions, start-ups, independent media, tech blogs and portfolios. It is used to emphasise innovation, efficiency and creative expression.

Table 1. Overview of the differences between the brutalist approaches L'Internet Brut and L'Internet Fou and flat design.

	L'Internet Brut	**L'Internet Fou**	***Flat* design**
Typography	simple, web-safe fonts, often monospace, blue underlined links	a combination of different font styles and sizes, often illegible, intentionally chaotic	minimal, readable, geometric sans-serif fonts, sometimes combined with sans-serifs
Colours	minimalist approach, black, white or grey background with contrasting text	strong, discordant colours, often intentionally mismatched and unnatural	simple, saturated colours, harmonious and carefully selected
Grid	simple grid, centre or left alignment, basic composition	disrupted or completely absent, elements scattered without apparent order	simple, often centre or left alignment, basic composition
Images	minimal use, often simple or without images	excessive use, often with visual noise, intentionally out of sync with the rest of the design	minimal use, often simple or without images
Cursor	standard cursor, no adjustments	customized and changed cursor, often impractical or exaggerated	standard cursor, no adjustments
Visible compositional grid	a clearly visible, simple grid that structures the content, the grid is often emphasised by strong outlines	intentionally disturbed or completely absent, chaotic structure	invisible, but structured, the units are separated by surfaces with different tones or by free space
Navigation	simple, with basic menus, often limited to text links	disorienting navigation, with unclear or hidden menus	intuitive, simple, often includes drop-down menus
Interactive elements	basic, standardized buttons and links	extremely stylised or unintuitive, can disrupt the user experience	recognizable and functional
Animations	minimal or absent, if present, very simple	chaotic, irregular animations often interfere with functionality	standard cursor, no adjustments
Decorative elements	absent, focus on functionality and readability	excessive, incongruous decorative elements that distract from the content	reduced to a minimum

While User Experience (UX) encompasses a broad spectrum of user emotions and interactions, the applied methods in this study (System Usability Scale, first-click testing, and task success measurement) primarily address usability. According to ISO 9241-11, usability is defined as the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use [11]. This definition provides the operational foundation for the usability-related measurements applied in this study. Therefore, this study is explicitly positioned as an investigation into how brutalist web design impacts the specific usability and user satisfaction dimensions of the broader user experience.

1.1. Two directions of web brutalism

Frederick O'Brien from Smashing Magazine believes that the term brutalism in web design is used too broadly and often refers to unconventional solutions that are not necessarily brutalist [5]. A 2019 study confirms the diversity of the term – although brutalism rejects traditional rules and favours rawness and the absence of decoration, it incorporates elements of other styles and comes in two variants: simple and complex, often opposing each other [12].

O'Brien distinguishes between two currents of Internet brutalism: L'Internet Brut, which emphasises the function, simplicity and technical limitations of the early Internet [5], and L'Internet Fou, which deliberately breaks UX/UI rules and where design dominates functionality [5]. An overview of the differences between the brutalist approaches of L'Internet Brut and L'Internet Fou and flat design can be found in Table 1.

From a theoretical standpoint, brutalism often challenges fundamental UX and interaction design principles. Traditional interaction design heavily relies on established heuristics—such as consistency, standard navigation patterns, and minimal cognitive load—to ensure seamless usability. Nielsen's usability heuristics, such as consistency, visibility of system status, and recognition rather than recall, represent widely accepted principles for ensuring intuitive interaction [13]. Brutalist design, particularly in its more expressive forms, may intentionally challenge these conventions. Brutalism deliberately subverts these patterns to evoke an emotional response.

2. Experimental Part

The research aims to investigate the impact of the brutalist approach on the user experience when interacting with the website. The goal of the research is to determine how emphasising creativity in the design of a website affects the user experience, i.e. usability and user satisfaction. The usability testing of brutalist web solutions was conducted based on two different categories of websites: E-commerce and information websites, using the L'Internet Brut and L'Internet Fou design approaches for each category. This categorisation is based on James Garrett's dual classification of web solutions.

To structure our experimental approach, we relied on Jesse James Garrett's dual classification of the web. Garrett theorizes that the web operates simultaneously as a software interface (task-oriented, represented in this study by e-commerce sites) and as a hypertext system (information-oriented, represented by informative websites).

According to Jonathan Lazar's typology in the book "Web Usability: A User-centred Design Approach", e-commerce websites are those whose primary goal is the sale of products or services. The e-commerce category is presented here as the most widespread representative of interactive web solutions. On the other hand, information sites provide information about organisations, groups, hobbies or activities. Each category is tested in both mobile and desktop versions. The selected websites were found in the Brutalist Websites collection, which receives over 100 requests per day. The selection criteria were the amount of content available, the wealth of information and the high level of interactivity.

The respondents were divided into two groups - young people aged between 18 and 30 and older respondents aged between 31 and 45. An unmoderated remote survey was conducted. The demographic data of the respondents was collected prior to the survey. For each website within a category, respondents were given the same tasks for the desktop and mobile versions. The tasks set were in line with the objectives of the site in each category. The survey consists of 4 steps: collection of respondent

demographics, a first click test, performance measurement and an SUS questionnaire. During their first interaction with the user solution, the respondents first carry out a first click test. They then complete a series of tasks and rate the solution based on the items in the questionnaire. Finally, their overall experience is evaluated using the SUS questionnaire. Testing conditions allowed participants to complete the tasks in their natural environment using their own desktop computers or mobile devices, ensuring high ecological validity. They were instructed to complete the tasks without external assistance.

Table 2. Overview of the selected websites by category and assigned tasks for the first click test.

		L'INTERNET BRUT	L'INTERNET FOU
E-commerce website	Link	www.inktrapbooks.com	www.studio-job.com
	Short description	Webshop for the purchase of books.	Webshop for designer items
	Desktop	*Scenario 1: You are looking for a present for your girlfriend's birthday and have decided to buy her the book 'točka Nemo'. Task 1: Check the items that are currently in your shopping basket.*	*Scenario 2: You are looking for a new designer item of clothing, more specifically a new grey T-shirt. Task 2: Check the items that are currently in your shopping basket.*
	Mobile		
Informative website	Link	www.2024.innsbruckinternational.com	www.clusterduck.space
	Short description	Contemporary art exhibition website.	Website of an interdisciplinary multimedia collective.
	Desktop	*Scenario 3: You are a tourist in another city and have decided to visit a current exhibition. Task 3: Find the content available on May 6, 2024.*	*Scenario 4: You search the Internet for teams of artists who create interactive multimedia solutions. Task 4: Find detailed information about the collective.*
	Mobile		

A first click test is used to assess how intuitive a user interface is by tracking where a user clicks first when performing a particular task. The results provide information about the clarity and organisation of the user interface and highlight any necessary changes. The first click is crucial, as a wrong choice will significantly reduce the success of the task. The first click test measures efficiency and the possibility of errors, while the SUS questionnaire assesses user satisfaction.

Task success is the percentage of users who successfully complete a particular task. It can be measured binary (success/failure) or by success levels. Although the reasons for failure are not obvious, this method is easy to collect and provides important information about the usability of the solution. If users cannot complete the task, other aspects of the interface become less important.

Table 3. SUS scale

1.	I think that I would like to use this system frequently.	1-5
2.	I found the system unnecessarily complex.	1-5
3.	I thought the system was easy to use.	1-5
4.	I think that I would need the support of a technical person to be able to use this system.	1-5
5.	I found the various functions in this system were well integrated.	1-5
6.	I thought there was too much inconsistency in this system.	1-5
7.	I would imagine that most people would learn to use this system very quickly.	1-5
8.	I found the system very cumbersome to use.	1-5
9.	I felt very confident using the system.	1-5
10.	I needed to learn a lot of things before I could get going with this system.	1-5

The SUS (System Usability Scale) is a usability assessment method consisting of 10 statements (Table 3) that are rated on a Likert scale. The results are converted into a score from 0 to 100 - a higher score means better usability. The SUS quickly identifies problems such as the complexity of the system or the need for support but does not provide detailed feedback for specific improvements. Its simplicity and speed make it a very popular tool. The ratings are interpreted in five levels:

- < 51: extremely poor,
- 51–68: poor,
- 68: acceptable,
- 68–83: good,
- > 80.3: excellent.

2.1. Websites used for the analysis

2.1.1. L'Internet Brut Access - e-Commerce

Brutalism can be recognised in Figure 1 by the atypical grid, the grotesque typography and monochrome design. The hierarchy of information is interrupted – book titles and author names are placed on an equal footing. The content is reduced. On the desktop, the navigation is at the top, with the menu hidden behind the hamburger symbol and a sliding shopping basket on the right-hand side. In the mobile version, only the category navigation and the same movable shopping cart are available.

2.1.2. L'Internet Brut access - informative website

Brutalism in Figure 2. is manifested by a visible grid, strong monospaced typography and a reduced colour palette. The layout is reminiscent of old web tables. The navigation is purely typographic, with repeating frames that are identical on desktop and mobile devices.

2.1.3. L'Internet Fou Access - E-commerce

The brutalism in Figure 3. manifests itself in a clearly defined grid, dark borders and a colourful palette. Photos and textures dominate, and a sans serif font with a slightly grotesque flavour is used. Navigation is at the top, but the homepage is cluttered and unreadable. The articles are mixed with animations, and the cursor on the desktop is enlarged and animated.

2.1.4. L'Internet Fou access - informative website

The brutalist approach in Figure 4. emphasises interaction through cursor movement and spatial exploration, both on desktop and mobile devices. It uses grotesque typography, high contrast and dominant visual images. Some UI components have pixelated icons reminiscent of early digital aesthetics.

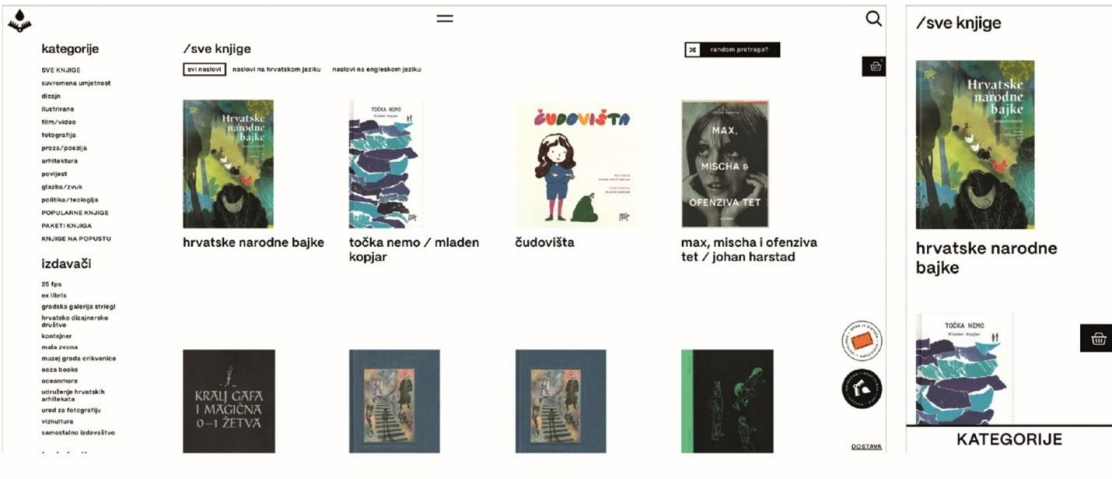

Figure 1. Desktop and mobile version of the e-commerce site used for gross analysis of access (source: www.inktrapbooks.com, 26.08.2024)

Figure 2. Desktop and mobile versions of an information website used to analyse the brute approach (source: www.2024.innsbruckinternational.com, 26.08.2024.)

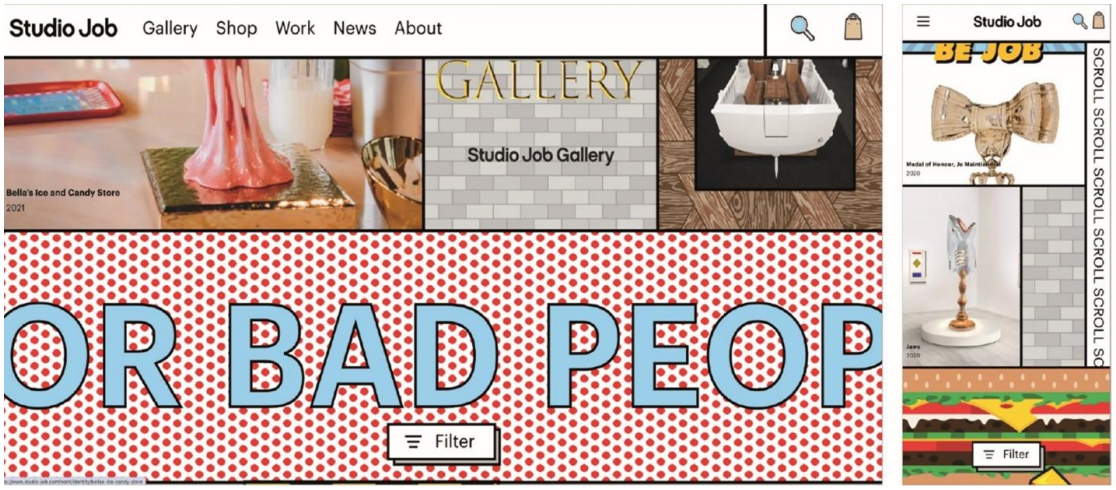

Figure 3. Desktop and mobile versions of the e-commerce website used to analyse the fou approach (source: www.studio-job.com, 26.08.2024.)

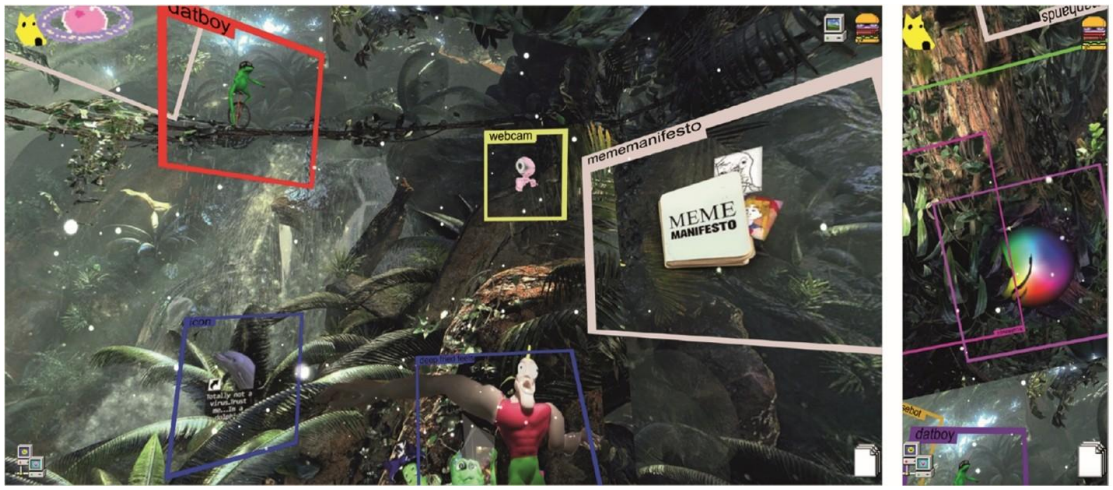

Figure 4. Desktop and mobile versions of an information website used to analyse the fou approach (source: www.clusterduck.space, 26.08.2024.)

2.2. Participants and Testing Conditions

To enhance the reproducibility of this study, participant demographics and recruitment criteria were defined. The research included 34 participants (N=34), primarily recruited from the academic community and professional circles associated with digital technologies, divided into two age groups:

- **Group A (Younger users):** 18–30 years.
- **Group B (Older users):** 31–45 years.

Although the overall age range was 18–45, the highest concentration of participants (the core of the sample) is in the 25 to 35 range, with a median age of 29, which encompasses late Millennials and early Generation Z.

The largest number of participants within the sample fell into the 25 to 35 age range. The sample was gender-balanced and composed of highly educated individuals (holding a university degree or currently enrolled as senior-year students). The research was conducted as an unmoderated remote test. All participants are technologically literate and active internet users who utilize web platforms daily for both gathering information and e-commerce, seamlessly transitioning between desktop and mobile devices. Because they are highly familiar with standard UX patterns, this participant profile enabled a relevant evaluation of advanced and atypical UX concepts such as brutalism, given that the participants are well-acquainted with standard web design conventions. While most participants had not consciously encountered the term "brutalism" in web design prior to the study, they easily recognized its elements during the testing of the "Internet Fou" and "Internet Brut" styles.

2.2.1. L'Internet Brut approach

Scenario 1, task 1:

The average usability according to the SUS measurement for this website is 70.37, which is rated as a good solution according to the SUS scale. The SUS measurement showed equal results for the desktop (67.38) and mobile (67.92) versions of the website, with the solution showing better results for young respondents (73.08) than for older respondents (67.65) according to the SUS usability scale. The average result for the first click test was better for young respondents (91.67%) than for older respondents (84.62%). Respondents were more successful with the desktop version (100.00%) than with the mobile version (61.54%).

Scenario 3, task 3:

The average usability according to the SUS measurement for this website is 61.93, which is categorised as a poor solution according to the SUS scale. The SUS measurement showed equal results for the desktop and mobile versions of the website, with the solution being better for young respondents (81.52%) than for older respondents (74.04%) according to the SUS usability scale. The average result for the first click test was better for young respondents (75.00%) than for older respondents (38.46%). Respondents were more successful with the desktop version (61.54%) than with the mobile version (30.77%).

2.2.2. L'Internet Fou approach

Scenario 2, task 2:

The average usability according to the SUS measurement for this website is 77.77, which is categorised as a good solution according to the SUS scale. The overall results of the SUS measurement are slightly better for the desktop version (73.65) than for the mobile version of the website (73.33). The solution according to the SUS usability scale scored better for young respondents (81.52) than for older respondents (74.03). The average result for the first click test was better for young respondents (100%) than for older respondents (92.31%). Respondents were more successful in the mobile version (92.31%) than in the desktop version (61.54%).

Scenario 4, task 4:

The average usability according to the SUS measurement for this website is 52.54, which is categorised as a poor solution according to the SUS scale. The results of the SUS measurement show that the mobile version of the website (55.19) has an advantage over the desktop version (50.09) in terms of usability and satisfaction. In addition, the website proved to be more user-friendly for younger respondents (54.70) than for older respondents (50.58) in the SUS test. The first click test showed slightly better results for the desktop version of the website (20%) compared to the mobile version

(7.69%). However, younger respondents were more successful in the first click test than older respondents. Although the success rate is low, the success measurement showed that users performed the task better on a desktop computer (12%) than on a mobile phone (8%).

Table 4. Complete comparative overview of the research results.

E-commerce website		L'Internet Brut www.inktrapbooks.com			L'Internet Fou www.studio-job.com		
		18 - 30	31 - 45	In total	18 - 30	31 - 45	In total
Desktop	A first click test	91.67%	84.62%	88.00%	100.00%	92.31%	96.00%
	Task success	75.00%	61.54%	68.00%	91.67%	61.54%	76.00%
	SUS	74	67.38	70.69	73.08	74.23	73.65
Mobile	A first click test	100.00%	100.00%	100.00%	100.00%	84.62%	92.00%
	Task success	91.67%	100.00%	96.00%	91.67%	92.31%	92.00%
	SUS	72.167	67.92	70.05	72.83	73.84	73.33
Informative website		L'Internet Brut www.2024.innsbruck internation al.com			L'Internet Fou www.clusterduck.space		
		18 - 30	31 - 45	In total	18-30	31 - 45	In total
Desktop	A first click test	75.00%	38.46%	56.00%	41.67%	7.69%	24.00%
	Task success	66.67%	61.54%	64.00%	16.67%	7.69%	12.00%
	SUS	68.67	55.46	62.06	51.42	48.77	50.09
Mobile	A first click test	75.00%	23.08%	48.00%	8.33%	7.69%	8.00%
	Task success	75.00%	30.77%	52.00%	8.33%	7.69%	8.00%
	SUS	68.167	55.23	61.70	58	52.38	55.19

3. Results and Discussion

The results of this study indicate a generational difference in the reception of brutalist web design. The data indicate that younger users (18-30) perform better and report higher satisfaction across almost all brutalist solutions, particularly in first-click tests where they scored highly (e.g., 100% success on the L'Internet Fou e-commerce mobile site). This aligns with the theory that younger users view brutalism as a creative, expressive reaction to standardized design. Previous research has demonstrated the aesthetic–usability effect, suggesting that visually appealing interfaces are often perceived as more usable, even when objective performance differences are limited. This effect may partially explain higher satisfaction scores among younger participants [14].

Conversely, older users (31-45) struggled significantly more with task success and reported lower usability scores. The L'Internet Fou approach on the informative website proved especially problematic, yielding extremely low first-click success rates (7.69% for older users on desktop) and poor SUS scores (48.77). This suggests that when standard UI conventions (such as visible grids and standard cursors) are completely disrupted, the cognitive load becomes too high for users who prioritize rapid functionality over aesthetic experimentation.

3.1. Limitations and Future Research

This study has several limitations that should be acknowledged.

First, the sample size was relatively small (N = 34), which limits the generalisability of the findings beyond the examined group. The results should therefore be interpreted as exploratory and indicative rather than statistically confirmatory.

Second, the analysis relied primarily on descriptive statistics. Inferential statistical testing was not conducted, as only aggregated data were retained from the original data collection. Future research should incorporate participant-level datasets and apply inferential statistical methods to validate observed differences.

Third, the study focused mainly on usability-related dimensions of user experience, operationalised through first-click testing, task success, and the System Usability Scale (SUS). Broader experiential dimensions, such as emotional response, hedonic quality, and long-term engagement, were not measured.

Fourth, the research was conducted as an unmoderated remote usability test. Although this approach ensured ecological validity, testing conditions were not fully controlled and may have influenced performance outcomes.

Finally, the participant sample consisted mainly of technologically literate and highly educated individuals, which may have influenced familiarity with digital interfaces and unconventional design patterns.

Future research should include larger and more diverse samples, controlled testing environments, and additional UX measurement instruments such as hedonic or affective evaluation tools. Further studies could also explore cross-cultural differences and examine how brutalist design performs in different industry contexts.

4. Conclusions

The research indicates that younger users (18–30 years old) tend to respond more positively to creative and experimental brutalist solutions, while older users (31–45 years old) appear to prefer more traditional and functionally structured approaches. Although detailed respondent profiles were not extensively analysed, the results suggest that interface design may benefit from considering target user characteristics, with more expressive elements potentially resonating with younger audiences and clearer structural organisation supporting older users.

As an alternative to highly standardised design practices, brutalism offers opportunities for creativity and differentiation, particularly in artistic and cultural contexts. Based on these exploratory findings, several cautious implications for UX/UI designers can be proposed. Brutalist approaches may be more appropriate when the primary target audience consists of younger users, especially in creative, cultural, or fashion-oriented industries where differentiation is valued. In commercial contexts, designers might consider favouring the L'Internet Brut style, as maintaining a visible grid and standard interactive elements appears to support acceptable usability levels (SUS ~70) while preserving a raw aesthetic. In contrast, the more chaotic navigation and absent grids characteristic of the L'Internet Fou approach were associated with lower task success rates in this study, particularly in mobile and information-oriented scenarios. Therefore, its application in information-heavy environments should be approached with caution.

Future research could further clarify the applicability of brutalist principles across different website types and user groups.

Conflict of Interest: The authors declare no conflict of interest.

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