



AALBORG UNIVERSITY
DENMARK

Building Dreams: The LEGO Legacy
A comparative study of Interactive Digital Narratives
in Brand Values Communication

Sebastián Evangelista
Student number 20220515
sevang22@student.aau.dk

Supervisor: Luis Emilio Bruni

Thesis submitted for the Degree of
Master of Science (M.Sc.) in Medialogy

Department of Architecture, Design and Media Technology
Aalborg University

Submitted 03.10.2024
Number of pages: 61

ABSTRACT

This thesis explores the use of Interactive Digital Narratives (IDNs) as tools to effectively communicate brand values, using the LEGO brand as a case study. As brands increasingly adopt storytelling as a strategy to enhance audiences' engagement by incorporating cultural and emotional elements within their messages, it becomes essential to understand how IDNs can be applied to enhance brand-themed narratives in a constantly evolving transmedia context. This study compares a linear narrative structure with a non-linear, exploratory structure to assess their impact on participants' recognition, emotional connection, and identification with the LEGO brand values. Twenty participants experienced both narrative types through a screen-based interaction, and their responses were analyzed. Findings reveal that the exploratory structure was generally more effective in conveying brand values, enhancing engagement and eliciting interest. However, the linear structure also demonstrated its strengths, particularly in providing clarity and ease of following the story. The study concludes that combining both linear and exploratory narrative approaches may yield the most effective outcomes for communicating brand values and culture in dynamic, transmedia environments.

Keywords: Interactive Digital Narratives – Transmedia Branding – Brand Storytelling — Brand Experience – Interactive Marketing – Consumer-Brand Relationship

Disclaimer

This thesis is an independent academic work whose idea arose from an internship at the LEGO® Group. However, this work is not sponsored, associated or endorsed by the LEGO® Group. All information regarding the LEGO® brand used in this work is sourced from publicly available resources and materials, and any interpretations, analyses, or opinions are solely those of the author. LEGO® is a trademark of the LEGO Group. For ensuring better readability, the registered trademark symbol (®) has been omitted throughout this work.

Table of Contents

1.	Introduction.....	1
1.1	Problem Statement.....	2
1.2	Background.....	3
2.	Theoretical Framework.....	4
2.1	Marketing and branding in a transmedia context.....	5
2.1.1	From traditional to interactive marketing.....	5
2.1.2	Brands as perceptual entities and their role in differentiation.....	6
2.1.3	Brands that tell stories.....	6
2.1.4	Communicating brands in a transmedia context.....	7
2.1.5	Marketing as an experience.....	8
2.1.6	Gamification as a branding strategy.....	9
2.1.7	Narratives in the consumer relationship experience.....	10
2.2	An approach to narratives and Interactive Digital Narratives.....	11
2.2.1	Conceptualizing narratives.....	11
2.2.2	Narrative transportation and identification.....	12
2.3	An approach to Interactive Digital Narratives.....	13
2.3.1	A classification of narratives.....	14
2.3.1.1	Types of interactivity.....	14
2.3.1.2	Narrative interactive structures.....	14
2.3.1.3	Levels of interactivity.....	15
3.	Methodology.....	16
3.1	The experience.....	16
3.1.1	The narrative.....	16
3.1.2	The Linear Condition (LC).....	17
3.1.3	The Non-linear Condition (NC).....	17
3.1.4	Visual design and aesthetics.....	19
3.1.5	Implementation.....	21
3.2	Participants.....	22
3.3	Procedure.....	22
3.3.1	Data collection.....	22
3.3.2	Data analysis.....	23
4.	Findings.....	24
4.1	Ease of following and eagerness to continue the story.....	24

4.2	Emotional connection.....	26
4.3	Sense of identification with the character	26
4.4	Recognition of the brand values.....	27
4.5	The story conveying the values.....	28
4.6	Participants' knowledge of the brand values after the experience	29
4.7	Sense of identification with the values.....	29
4.8	Predilection for a specific narrative structure in communicating the values	30
4.9	Perception of the effectiveness of each structure in communicating brand values.....	32
5.	Discussion	33
5.1	Theoretical implications.....	33
5.2	Practical implications.....	35
5.3	Limitations and future research.....	36
5.4	Future development.....	37
6.	Conclusion	37
7.	References.....	39
8.	Appendixes	44
8.1	Appendix A – The story.....	44
8.2	Appendix B – Responses of LC-first participants.....	46
8.3	Appendix C – Responses of NC-first participants	51
8.4	Appendix D – GitHub repository	56

1. INTRODUCTION

Telling stories is an activity deeply embedded in human nature. Through narratives, individuals make sense of their experiences, explain events, and obtain perspectives, enabling them to better understand their surrounding world and their own identities as individuals and members of society [1], [2]. This timeless practice of telling stories has been integral to communicating ideas across various fields and domains, serving different purposes. In this matter, the field of marketing, and particularly branding, has not been an exception [3]. The use of narratives has thus been recognized as an invaluable strategy for creating compelling brand content, extending beyond the characteristics of products and services to enrich brand intangibles and effectively highlight core brands' values [4].

In today's ever-evolving, dynamic environments, the mere provision of products and services is no longer sufficient. The quality of a product or the efficiency of a service alone cannot reach consumers and build meaningful connections with them. Nowadays' consumers expect brands to provide experiences that appeal to their emotions and personal values. In this concern, organizations have been increasingly turning to storytelling as a valuable strategy to communicate diverse aspects of their brands and elevate their connections with consumers. By employing narratives, brands can uncover and share the stories embedded within their organizations, revealing their culture and establishing it as the foundation of the brand. Every story presented by a brand reflects its culture and its values, which resonate with consumers' emotions and values, creating relevant relationships between organizations and consumers [4], [5]. Even so, the current model of cultural convergence, characterized by the layering, diversification, and interconnectivity of media, continues to shape the decisive activities of media producers, advertisers, technologists, and consumers, emphasizing its multifaceted nature and far-reaching implications [6].

The advent of new technologies and the resulting emergence of novel communication spaces based on multimedia, interactivity, and digital networks have fundamentally transformed contemporary marketing theory and practice, as well as their relationships with consumers and society. In the present landscape, brands have transcended the simple utilization of iconic or linguistic enunciations, with the interactive experience becoming a crucial

component of the brand-building process. Technology-enabled interactions therefore provide organizations with unprecedented opportunities to engage with individuals in innovative ways, across products, services, brands, companies, and even among consumers themselves [7], [8].

1.1 Problem Statement

The use of narratives in marketing has been well-established practice for a significant period of time and continues to remain relevant today [4]. Since stories have demonstrated to be highly effective in conveying information across a wide range of topics, narrative-based brand communication has garnered considerable attention as a means to engage audiences and shape consumer attitudes and behaviors towards brands. While informational advertising continues to play a relevant role in providing product or service knowledge through logical arguments, consumer decision-making is frequently influenced by non-rational factors. In this context, storytelling has been widely recognized as a remarkable efficient format for advertising, facilitating the delivery of messages while promoting audience participation and emotional involvement [1], [9]. Research has demonstrated that narratives have the ability to influence the perception of a brand or a certain product, in contrast with solely informational messages [3], [10].

Extensive scholarly research has explored the effects of narratives across different aspects within the field of marketing, including consumer-brand connections facilitated by storytelling [2], the role of narratives in forging consumer-brand relationship experiences [4], individuals' engagement with brand stories based on the storyteller's identity [9], and comparative effects of story-based versus informational brand narratives [10]. However, the application of Interactive Digital Narratives (IDNs) in generating brand awareness remains underexplored. Whereas the effects of IDNs have been studied in diverse fields, such as health [11], environmental awareness [12], journalism [13], and cultural heritage [14], their role in the marketing domain, particularly within the context of brand communication, has not been comprehensively examined. As a result, empirical studies to understand the effects of IDNs within the field of branding are still scarce. This thesis seeks to address this gap by investigating how IDNs can be used to effectively communicate brand values. Accordingly, the primary Research Question (RQ) posed is:

RQ: Can IDNs become a successful tool to enhance the knowledge and the perception of a brand's values?

This thesis demonstrates that IDNs can serve as a valuable tool for brands to effectively communicate their values and culture to consumers by creating engaging and playful experiences. Given the various IDN formats and the diverse opportunities they offer, this study compares a linear narrative structure with an exploratory narrative structure within the same brand-themed narrative to assess their effectiveness in conveying the brand values. The findings suggest that exploratory narrative formats may be particularly successful in communicating a brand's history and values, although linear formats also exhibit certain strengths. This indicates that a combination of both approaches could enhance the overall effectiveness of brand communication. These insights present relevant implications for organizations whose branding strategies need to be implemented within dynamic, transmedia environments.

1.2 Background

The motivation for this research arose from a Project-Oriented Study in an External Organization (POSEO) conducted at the LEGO Group (TLG) in 2023, as part of the MSc. Medialogy program at Aalborg University. Over the course of twenty-four weeks, daily involvement with the Research Team, allocated within the Global Communications Strategy department at Our LEGO Agency (OLA), TLG's in-house creative agency, provided numerous opportunities to closely observe a diverse range of brand communication strategies and stakeholders' engagement practices through different channels. This experience was also crucial in providing first-hand insights into the ongoing opportunities and challenges that organizations face as they navigate the continuous socio-cultural shifts driven by emerging technologies and the ever-evolving landscape of interactive media.

A brand with 90 years of history, LEGO has been considered the world's most valuable toy brand for ten consecutive years [15], and the most reputable company in 2024 [16]. Since its foundation in 1932, TLG has grown to become one of the world's largest toy manufacturers, expanding its brand far beyond physical products to provide a broad range of audiovisual and digital experiences. Despite its portfolio has expanded over the years, the company's core remains in its most iconic product: the LEGO brick. The bricks' interlocking principle allows for exploring unlimited building possibilities, eliciting imagination and creativity through play for children and adults [17], [18]. LEGO stands out as a clear example of how a brand can successfully generate and inhabit the complexities across transmedia platforms. Throughout movies, videogames, board games, TV shows, theme parks, books and magazines, the brand

has been a pioneer in navigating the territories of Transmedia Storytelling and Transmedia Branding to produce cross-generational engaging experiences [19], [20], [21]. Furthermore, LEGO has positioned itself at the forefront of digital innovation, leveraging technology and data to enhance experiences around the brand. This includes the launching of the LEGO Play app (formerly LEGO Life app), the first social media network specifically designed for kids [22].

The LEGO brand is anchored in a comprehensive brand framework that leads all the organization's activities and initiatives. This framework embodies the values, belief, vision, mission, idea, spirit, and promises the brand stands for, as well as it serves as a blueprint for LEGO's identity and direction. The six values that lie within the framework are *imagination*, *creativity*, *fun*, *learning*, *caring*, and *quality*. *Imagination* is fostered by free play, converting dreams into reality through curiosity and playfulness. *Creativity* refers to generating new and valuable ideas, combining logic with imagination. *Fun* involves active engagement, shared adventures, and the joy of creation, providing happiness through challenging and exciting activities. *Learning* is driven by experimentation and collaboration, allowing everybody to build, unbuild, and rebuild, gaining new skills and insights. *Caring* means making a positive impact on people, from children and colleagues to partners and the world. *Quality* is about continuous improvement, providing the best play materials and experiences, reflecting a commitment to excellence. Additionally, the brand presents *Children are our role models* as its belief, as its mission to *Inspire and develop the builders of tomorrow*, as its spirit *Only the best is good enough*, and the idea of *System-in-Play*. The four brand's promises consist of *play*, by striving to offer experiences that represent the spirit of the brand name; *people*, promoting an environment to succeed and grow together; *planet*, aiming to build a sustainable future for society and the planet; and *partner*, aimed to generate collaboration among the diverse stakeholders through mutual value creation [23].

2. THEORETICAL FRAMEWORK

This section outlines the fundamental concepts and theories that form the basis of this thesis, providing a foundation for understanding key aspects of marketing and branding practices, as well as their evolution within transmedia contexts. Furthermore, it introduces

essential theories related to traditional narratives and Interactive Digital Narratives (IDNs), which have been integral to the design and development of the interactive experience explored in the study.

2.1 Marketing and branding in a transmedia context

2.1.1 From traditional to interactive marketing

Marketing is a significantly complex process whose goal goes far beyond the action of selling products and services. According to the American Marketing Association, marketing comprehends a broad range of activities, institutions, and processes, dedicated to creating, communicating, delivering, and exchanging offerings that provide value for customers, clients, partners, and society at large [24]. Kotler and Keller [25] further elaborate on this notion, stating that marketing deals with the identification and meeting of social needs. The authors therefore differentiate between a social definition of marketing – understanding it as a collective process where individuals and groups meet their needs and desires by creating, offering, and exchanging valuable products and services with others – versus a managerial definition concerning the solely practice of selling. Consequently, understanding marketing as a developing within society implies that it will be inevitably influenced by continuing social and technological changes.

Followed by the rapid and profound changes that occur within society, the discipline of marketing is trying to redefine its own boundaries to respond in a consistent and effective manner to new scenarios [26]. With the rise of digital media and the decline of traditional, passive broadcast advertising, marketing has shifted from one-way persuasive communication in pursue of bidirectional interaction to enhance consumer-brand relationships. In this context, Interactive Marketing (IM), develops in a market that has become a space of conversations and interactions among connected actors through digital and mobile activities in platform ecosystems. Unlike traditional marketing, IM is characterized by bi-directional value creation and mutual influence achieved through active customer connection, engagement, participation, and interaction, and comprehends a series of aspects. Initially, it consists of a two-way communication with mutual impacts within social and business ecosystems. Secondly, it focuses on customer responsiveness and often proactive behaviors in value creation and exchange. Thirdly, its interactivity involves customer participation and engagement in controlling and modifying the environment in real-time [27]. Interactivity has thus become an

essential part of contemporary marketing practice, echoing the rapid development and innovation in new technologies, platform revolution, and participating culture. Effectiveness of IM is directly related to the rising use of social media, artificial intelligence, and ubiquitous devices, as it lets to carry out a more personalized approach to customers by facilitating convenience, tailored content, and unique experiences – such as games, user-generated-content commercials, and even advertisements – where the consumers become protagonists [25], [27], [28], [29], [30].

2.1.2 Brands as perceptual entities and their role in differentiation

In today's rapidly evolving environments, the dynamic context drives ever-changing interactions between consumers and organizations, presenting significant challenges and opportunities regarding brand management and the process of branding. A brand, defined as any name, term, sign, symbol, design, or combination thereof, is aimed to distinguish the products or services of a particular provider from those offered by its competitors [25]. As one of the most relevant intangible assets an organization possesses, the main purpose of a brand holds on identification. This identification process relies on differentiation, resulting in a product or service whose dimensions distinguish it from others intended to meet the same needs. These distinctions can be tangible, functional, or rational – pertaining to the performance – as well as symbolic or affective – regarding what the brand represents or abstractly means. Thus, the physical and intangible properties of a product or service and the brand interrelate to become a psychological entity, a system of signs for the characteristic ideas, affections, and perceptions that individuals associate with a specific branded offering. Brands therefore consist of perceptual entities grounded in reality, but that reflect the perceptions and set the expectations of consumers [25], [31]. Nonetheless, the increasing presence of multiple channels and the widespread access to media services makes branding an increasingly complex process, as consumers are prompted to act and think faster than ever. This situation compels organizations to dive into various challenges in simplifying consumers' decision-making, as they are constantly exposed to fast, affordable, and extensive means of sharing meanings, values, and opinions with their social circles and beyond [31], [32].

2.1.3 Brands that tell stories

Expanding upon the notion of brands creating engaging individuals-oriented experiences, telling stories has been revealed to be an invaluable tool to generate appealing

brand communications and consequently create strong emotional bonds and empathy between brands and consumers. The use of stories enhances the emotional impact of brand communications, as individuals are more inclined to remember information presented in narrative forms rather than through quantitative data. Furthermore, stories result more attractive and are frequently better recalled and evoked than fact-based messages [1], [9]. Accordingly, brands have the possibility of shortening the distance with consumers by sharing captivating stories able to generate genuine connections with consumers. These narratives have the power to become memorable thoughts and experiences, thereby strengthening and increasing positive associations with brands [3]. The use of literary narrative techniques in communicating brands is considered a foundational component of successful branding, as stories endow products and services with symbolic value, by the addition of emotional aspects [10].

In today's saturated media landscape, storytelling is also widely accounted as a potent tool to generate branded content that drives to better Consumer-Brand Identification (CBI). This content extends beyond product and services features, to encompass brands' intangibles, such as their values, mission, and vision. Moreover, marketing strategies based on CBI are much appreciated as they provide substantial competitive advantage among other brands because the consumer identification with the brand cannot be easily replicated in the short term, providing business with an enduring brand protection [33].

2.1.4 Communicating brands in a transmedia context

In order to establish an effective and differentiated brand positioning, every aspect that constitutes a brand need to be clearly communicated. In this context, Integrated Marketing Communications (IMC) play a foundational role by embodying the voice of an organization and brand identity, acting as means by which engage in dialogue and build connections with consumers. IMC therefore encompass the methods employed to inform, persuade, and remind consumers' memories, concerning the products, services, and brands an organization offers. Through IMC activities, organizations ensure that all communication strategies remain cohesive across various channels, while always focused on the consumers. This approach guarantees that consumers receive a consistent message from the organization, regardless their point of contact with it. As a result, brands can be associated to other people, places, events, experiences, and feelings, contributing to shape brand image in consumer's minds, fostering positive opinions around the brand, and reinforcing consumer loyalty [25], [34]. Due to the emergence of novel technologies and the rise of interactive media, IMC is another marketing

practice that has been compelled to push the boundaries of traditional elements and embrace innovative strategies to navigate in challenging, increasingly competitive media environments [35].

The idea of conveying a unified message across diverse media does not imply merely adapting the message from one platform to another. Consequently, building various strategies for communicating brands across multiple platforms has become essential. In this regard, the notion of Transmedia Storytelling (TS) offers an ideal approach to create increasingly immersive and engaging experiences for customers. A concept forged by Henry Jenkins [6], TS involves the process of expanding a particular narrative world across various languages and media, with the purpose of creating a uniform and coordinated entertainment experience, with each medium leveraging its own unique strengths. TS is thus not about replicating the same story across every medium, but rather allowing different media and languages to contribute uniquely to the transmedia narrative world [8]. Additionally, and drawing from the concept of Transmedia Storytelling (TS), Burghardt Tenderich [36] introduced the idea of Transmedia Branding (TB). TB entails a communication process that organizes brand information into a cohesive narrative, which is then distributed through unique contributions across multiple media channels, with the aim of creating interactive, engaging brand experiences.

2.1.5 Marketing as an experience

While the notion of brands connecting with consumers through the craft of appealing experiences is not new, the ever-changing and dynamic landscape of media consumption has made this process increasingly complex. Experiential Marketing revolves around the premise that value is found not only in the functional and practical benefits of products and services but also resides in the hedonistic and experiential elements that surround the product or service, and the consumption experience itself. This idea underscores the importance of affective, cognitive, contextual, and symbolic aspects of the consumption [37].

In the context of research around Experiential Marketing, the concept of Brand Experience (BX) emerges as particularly relevant. BX is understood as the personal and internal consumer reactions, such as sensations, feelings, thoughts, and behavioral responses, triggered by stimuli generated by a brand, which are integral to the brand's design and identity, packaging, communications, and environments. BX therefore consists of the result of all types of consumer interactions with a brand across diverse touchpoints, including specific sensations, emotions, cognitions, and behavioral responses evoked by brand stimuli [38].

2.1.6 Gamification as a branding strategy

In the ongoing effort to engage audiences and create memorable experiences, brands continue to explore diverse and innovative approaches to elicit deeper connections and enrich the overall brand experience. In the current transmedia landscape, audiences interact with brands in more long-term and impactful ways, often seeking playful and immersive interactions. Integrating gaming-oriented activities into the communication of products and services allows brands to communicate their identity and culture while presenting complex messages in a more accessible and engaging way. This approach not only helps reframe lesser-known topics but also strengthens the brand's connection with its audience through playful interactions [39]. Under these circumstances, the notion of gamification has been rapidly gaining traction as an emerging practice in various fields, particularly within branding [40]. Broadly defined as the utilization of game elements in non-gaming environments, gamification comprehends game mechanics or functional game components, which in turn create game dynamics able to stimulate players' desires [41]. Even though the notion of gamification can manifest as card or board games, contemporary gamified systems are predominantly put in practice through digital means [42].

Gamification tools and techniques are currently employed as effective strategies across diverse fields to foster engagement, given their potential to shape and influence individuals' attitudes and behaviors. Within branding, the gamification of narrative experience can vary from facilitating simple interactions with a story to creating advergames or free-form creative experiences, such as open worlds. These spaces encourage audience engagement without limiting creativity and self-expression, while allow brands to illustrate, describe, or directly experience its actions [39]. As a result, various organizations are integrating this approach into their consumer-oriented branding activities to enhance the digital experience of both existing and prospective customers. Furthermore, gamification is viewed as the practice of adding value to daily, rutinary activities or enriching a service with features that facilitate game-like experiences, thereby supporting users' general value creation [40], [43], [44]. Gamification has been positively related to several key aspects of brand perception, such as enhanced brand attitude, increased brand awareness, greater brand engagement, and deeper brand involvement. By incorporating game-like elements, brands can effectively strengthen these dimensions of consumer-brand relationships [45].

2.1.7 Narratives in the consumer relationship experience

Payne et al. [46] reinforce the idea that the value offered by a brand lies more on the experience than on its actual products or services. Consumption can therefore be understood from both contextual and symbolic perspectives, in addition to a rational execution. This approach allows customers to be viewed as individuals who feel, think and execute. The authors then outline a customer relationship experience based on three key elements: cognition, emotion, and behavior. Cognition is considered from an information-processing approach, while emotion remarks attitudes and preferences, and behavior refers to the actions that derive from and result in experiences.

Building upon Payne et al. and drawing on social identity theory, Crespo et al. [4] investigated the effects of storytelling as a marketing strategy via a conceptual model based on the consumer relationship experience. Firstly, the study explores how storytelling impacts on the cognitive dimension of the consumer–brand relationship, which is characterized by Consumer–Brand Identification (CBI). CBI – understood as the consumer’s sense of unity with a brand – is considered a mental representation and acts primarily as a reflection and enhancement of consumer’s self-identity and perceived brand identification, leading consumers to recognize themselves with brands. Here, storytelling (ST) serves as a pertinent tool because stories encourage identification by offering meaning and enabling consumers to frame their own experiences into the brand narrative. As a result, ST is regarded as an enhancer of CBI, capable of stimulating cognitive responses to decode and interpret the story, thereby promoting consumer’s narrative processing [4], [33].

In second place, Crespo et al. [4] examined the influence of ST on the emotional dimension of the consumer–brand relationship, in view of affective involvement. Affective involvement, comprising individuals’ feelings and emotions, conveys the degree of personal relevance assigned to a message, considering the alignment between the message’s emotional appearance and the individual's self-image. This way, an affective response is elicited when a message is able to reach an individual and support their values. In this sense, ST has the capability of generating consumers’ brand affective involvement, as it can appeal to consumers’ personal values and feelings by providing a narrative configuration able to provoke positive emotions that can be linked with the brand.

Thirdly, the authors studied how ST influences the behavioral dimension, in terms of driving purchase decisions. The process of choosing and the consequent purchase as a final outcome has been widely studied in the field of marketing. On this basis, ST arises as a

powerful tool that influences not only brand associations, but also consumers' motivation to pay for products or services, as narratives present the force of leading to brand trust and perceived exclusivity. Following this, brands can assist consumers in projecting their desired social identity and reinforcing the concept of themselves.

2.2 An approach to narratives and Interactive Digital Narratives

2.2.1 Conceptualizing narratives

Although the notion of narrative is well-established in common understanding, defining the concept of narrative has presented numerous challenges over time. Conventional definitions structuring narratives consist of two key components: chronology and causality. Chronology involves the occurrence of events along a temporal dimension, configured as episodes which encompass a beginning, a middle, and an end. Causality organizes the story elements within a structured framework that defines their relationships and allows causal inferencing. These elements set a context, by setting up a physical, social, and temporal environment, and the narrative is further enriched through imagery, that guide individuals' imagination and enhances their involvement in the story [2], [47] Additionally, Marie-Laure Ryan [48] ultimately defines narrative texts as a diffused combination with varying degrees of what qualifies as a narrative, but centered on prototypical cases collectively acknowledged as stories. This idea can be represented as a series of concentric circles, where each inner circle represents increasingly specific conditions that define a narrative. With blurred limits, each circle builds on the previous one, so when moving from the outer ones to the core, the conditions for being a narrative become more precise. These conditions of narrativity are organized into three semantic dimensions – spatial, temporal, and mental – and one formal and pragmatic dimension.

The spatial dimension requires a narrative depicting a world inhabited by specific individuals, thereby excluding abstract entities and categories of objects. The temporal dimension involves this world being situated in time and undergoing significant transformations caused by unique physical events, excluding static descriptions and repetitive or natural occurrences. The mental dimension necessitates that participants in the events are intelligent agents with mental lives who emotionally respond to various states of the world, and that some events are intentional actions by these agents; this dimension excludes scenarios involving only natural forces or non-rational characters and mere representations of internal

mental events. Additionally, the sequence of events must form a coherent causal sequence leading to closure, with at least some events presented as factual within the story world. Finally, the narrative must convey something meaningful to the audience. The conditions comprehended within the four dimensions provide a convenient model for defining narrativity, establishing a general agreement on their significance and relevance. While they may be differently prioritized, a certain consensus on their significance and importance exists. Therefore, this proposed definition both aids in determining the degree of narrativity of a text depending on how many conditions are met and provides a basis for a semantic typology of narrative texts based on the prominence of the four dimensions.

Narratives have been demonstrated as powerful means of communication between brands and consumers, with telling stories being essential in building successful brands [49]. As narrative structures enable the creation of meaning by providing temporal and relational organization and a basis for causal inference, scholars have observed that potential consumers often decide on purchases based on the imagined sequence of experiences related to buying and using a product, rather than solely on the evaluation of product's features [50].

2.2.2 Narrative transportation and identification

Building on the fundamental role of stories in strengthening emotional engagement and captivating consumers through the creation of memorable brand experiences, the theory of narrative transportation offers valuable understandings about how individuals get immersed in narratives and the ways this immersion shapes their attitudes and behaviors. According to Green [51], the essence of narrative transportation theory relies on the individuals' experiencing a sense of being 'lost in a story'. They might become unaware of the world around them or disregard the passing of time in favor of accepting the narrative world presented to them, both on the physical and psychological levels. While immersed in the story, the individuals may not be reflecting on real-world facts that challenge the assertions made in the narrative [52]. Narrative transportation is thus conceptualized as a distinctive mental process, characterized a combination of attention, imagery, and affections, where individuals become immersed in a narrative world. Those who experience this transportation have therefore more probabilities of embracing attitudes, beliefs, and behaviors conveyed in the story.

Transportation into a narrative world is possible through various means, including emotional engagement, mental imagery, reduced counterarguing, and character connection. Emotional engagement refers to the feelings that stories can evoke, making narratives

particularly impactful when they elicit strong emotions. Mental imagery also holds a significant role in the transportation process, as it involves the vivid visual representation of the story, whether through textual descriptions or visual presentations, which helps link the beliefs implied in the story with the audience's mental images. Additionally, transporting stories can reduce the motivation to counterargue by fostering a more open and accepting mindset for individuals, thereby decreasing resistance to the narrative's message [51]. Moreover, individuals may adopt the attitudes and beliefs presented in a story by establishing connections with its characters. When the audience people see themselves in the protagonists or relate to their experiences, they are more likely to embrace the narrative's perspectives. Closely related to this mechanism of connection with the characters, the concept of identification also serves for the purposes of this study. Cohen [53] considers identification as a process where individuals receive and interpret the narrative text from an internal perspective, as if they were personally experiencing the events. This mechanism is valuable as it can introduce alternative points of view and encourage others to identify with them, therefore allowing new understandings and potentially leading to attitude changes.

2.3 An approach to Interactive Digital Narratives

Building on the notion of cultural convergence by Jenkins [6], along with the unceasing transformations in the digital media landscape and the rapid evolution of technologies, Interactive Digital Narratives (IDNs) form the core foundation of this study. From the outset, the idea of IDNs served as the basis for this research, shaping its direction and objectives. IDNs emerge as forms of expressions in the conjunction of diverse artistic disciplines, research domains and emerging technologies [54]. Roth and Koenitz [54] define IDNs as software-based systems capable of generating diverse outputs every time a user interacts with them. A central aspect of understanding IDNs is they are intended to be essentially a form of narrative expression within a digital interactive medium from their foundation, in contrast to the enrichment of non-interactive formats or efforts to convert traditional narrative structures, such as films, drama, or books, into interactive systems. Moreover, IDNs blur the limits between an active creator and a passive audience, driving the constitution of a novel three-folded relationship among creator, dynamic narrative artifact and audience-turned-participant.

2.3.1 A classification of narratives

Given the inherent interactivity of IDNs and for the purposes of this study, it becomes imperative to explore the classifications of interactivity, the types of interactive structures, and the different levels of interactivity. These taxonomies were integral to the design, conception, and development of this study's narrative experience.

2.3.1.1 Types of interactivity

Ryan [55] regards interactivity as a mechanism intrinsic to the design of narrative texts and categorizes interactive devices in relation to the ways they offer users to engage with the narratives. In this regard, interactivity can be divided into internal and external. Internal interactivity concerns the user becoming a member of the narrative world, where their actions influence the events within the story. In contrast, external interactivity positions the user outside the narrative world, enabling control over the story from a godlike point of view. Ryan further distinguishes between exploratory and ontological interactivity. Exploratory interactivity permits the user to navigate the story, but without any power of making changes, so the user's involvement does not present any consequence in the story. Ontological interactivity, conversely, provides the user the power of altering the state of the narrative through their actions, and the story world evolves based on the interaction. These two dichotomies can be cross-classified into four types of interactivity: external-exploratory, external-ontological, internal-ontological, and internal-exploratory.

2.3.1.2 Narrative interactive structures

Ryan [55] also asserts that the narrative capacity of an interactive text is fundamentally based on its underlying structure. Consequently, diverse interactive architectures facilitate the creation of various narrative, or even anti-narrative, forms. Among these structures, the vector structure and the complete graph represent two extremes. The vector structure, characterized by a linear progression, is highly compatible with narrative as it preserves the linear flow of both temporal sequence and causal connections. On the opposite end is the complete graph, where every node is interconnected, offering the user a total freedom of navigation; this unrestricted flexibility, however, often compromises narrative coherence.

Between the linear vector structure and the complete graph, other architectures convey diverse narrative possibilities, balancing user freedom and narrative coherence through different ways. A brief overview of these architectures is presented, as they were initially

considered for the process involved in designing the experience for this study. The network structure provides limited freedom of movement, balancing between total freedom and a single course to follow. The tree structure prohibits returning to previous branches, allowing only one way to reach a given terminal node. The database structure allows users to select options from a menu that remains always accessible, providing easy navigation without needing to backtrack. The maze presents one or more exits that users must discover, offering multiple ways to reach the goal. The flowchart features horizontal evolution corresponding to the chronological sequence, with vertical branches representing user choices. The hidden story includes two narrative levels: a linear, temporally directed story at the bottom, and an atemporal network of choices for the user on the top. The braided plot uses interactive means to switch perspectives within a multi-layered but determinate narrative. Lastly, the action-space structure provides a general plot outline, allowing users to take any path, with the system controlling the user's destiny once a site is reached.

2.3.1.3 Levels of interactivity

Another useful categorization for interactivity focuses on the level of the text influenced by the user's interventions. According to Ryan [55], narrative texts are composed of layers, with the outer layers consisting of the discourse and the inner layers comprising the story, and the latter consequently much harder to conquer. Through examining these different layers, Ryan offers a classification system for the levels of interactivity. In the first level, peripheral interactivity, the content of the story is presented through an interactive interface that enhances the text legibility but does not impact the story itself or the sequence of the discourse. At the second level, interactivity influences the narrative discourse and the presentation by changing the order in which the story is told, without altering the content. The third level involves interactivity that introduces variations in a partially predefined story, where the user assumes the role of a character in the story world. Here, the user has certain freedom of action, but the system maintains control over the whole narrative direction. At the fourth level, stories are dynamically created from the data provided by both the system and user interactions, resulting in a unique story each time the program is used. Finally, the fifth level introduces meta-interactivity, where the interactor modifies the system for other users. This can involve generating new levels, creating objects and various assets, and generally enhancing the range of actions possible within the story world.

3. METHODOLOGY

This section outlines the methodological approach employed to explore the impact of Interactive Digital Narratives (IDNs) on communicating brand values. The comparative study is described, including the crafting of the narrative, the design of the two experimental conditions, the overall visual design, the technical implementation, the participants details, and the procedure executed for data collection and analysis.

3.1 The experience

To explore the impact of Interactive Digital Narratives (IDNs) on communicating brand values, a comparative experiment was designed, focusing on a linear narrative versus an exploratory narrative. The experiment, titled *Building Dreams: The LEGO Legacy*, aimed to investigate the effects of both narrative structures influence participants' recognition of brand values through a screen-based user interaction. A consistent core story, which details the origins of the LEGO brand from the hand of its creator, was presented in two distinct interactive conditions: a Linear Condition (LC) and a Non-linear Condition (NC). This approach ensured that the only variable being manipulated was the narrative structure itself, allowing for an isolated assessment of the impact of linear versus exploratory narratives on the transmission of the LEGO brand values.

3.1.1 The narrative

A custom narrative was crafted to convey the story of the foundation of LEGO by Ole Kirk Kristiansen, while simultaneously reflecting the core values, the mission, and the vision of the LEGO brand, as stated in *Background*. Starting from the history of the brand [56] and the values presented in the brand framework [23], the story has been structured into eight paragraphs, consisting of an introduction, six distinct passages, and an epilogue. Every passage has been crafted to communicate each one of the LEGO's brand values independently, ensuring as much as possible that each passage results comprehensible in isolation and does not rely on the context provided by the other passages. This modular design of the narrative allowed then each passage to stand alone, capturing a specific value of the brand. Through this manner, the narrative chronicles the foundational history of the LEGO brand while also illustrates the

principles that have guided the company since its origins. The complete storyline is presented in *Appendix A – The story*.

3.1.2 The Linear Condition (LC)

This condition presents the story elements sequentially, and the user progresses through the narrative in a fixed order without any possibility of changing its course. The participant starts with a title screen, followed by an instructions screen, and then proceeds through each narrative segment by pressing the left-click mouse button to move to the next passage. The narrative sequence is predefined, and the user has no control over the order of the story elements. This structure, based on a vectorial interactive architecture with an external-exploratory schema and a level-one peripheral interactivity according to Ryan [55], ensures that each user receives the story in the same linear format: Introduction, Passage 1 (*Imagination*), Passage 2 (*Creativity*), Passage 3 (*Fun*), Passage 4 (*Learning*), Passage 5 (*Caring*), Passage 6 (*Quality*), and Epilogue, as shown in *Figure 1*.

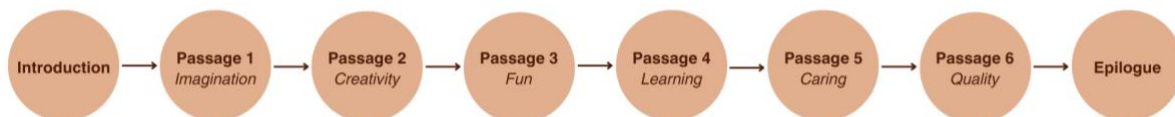


Figure 1. Narrative architecture for the Linear Condition.

3.1.3 The Non-linear Condition (NC)

In this condition, the elements of the story are presented in a non-fixed order, and the user has freedom to explore them through controlling an avatar. The participant starts with a title screen, followed by an instructions screen explaining how to move the character and go forward in the story, and then the introduction. Afterwards, the user can control the character within a virtual environment that simulates a carpentry workshop, with six wood-work related elements spread throughout the screen – a saw, a hammer, a pair of chisels, a pair of wood

planks, a nail, and a group of bolts. The user controls the avatar using the keyboard arrow keys and interacts with the elements by touching them. When collided, each element triggers the display of one of the six passages. After reading a passage, the user left clicks to continue exploring the environment and the rest of the elements. Notably, a door leading to the display of the epilogue is always present and accessible on the top of the exploratory screen, enabling the user to finish the narrative at any time, regardless of whether all the passages have been read. The structure design is based on a conjunction of the complete graph and the network interactive architectures, with an internal-exploratory schema, where the level two interactivity affects the sequence in which the story is conveyed, without altering the content, according to Ryan’s taxonomy [55]. Each element on the screen, when collided, displays a certain passage related to one of the brand’s values, as represented in *Figure 2*. A comparison of the elements considered in the design of each condition is presented in *Table 1*.

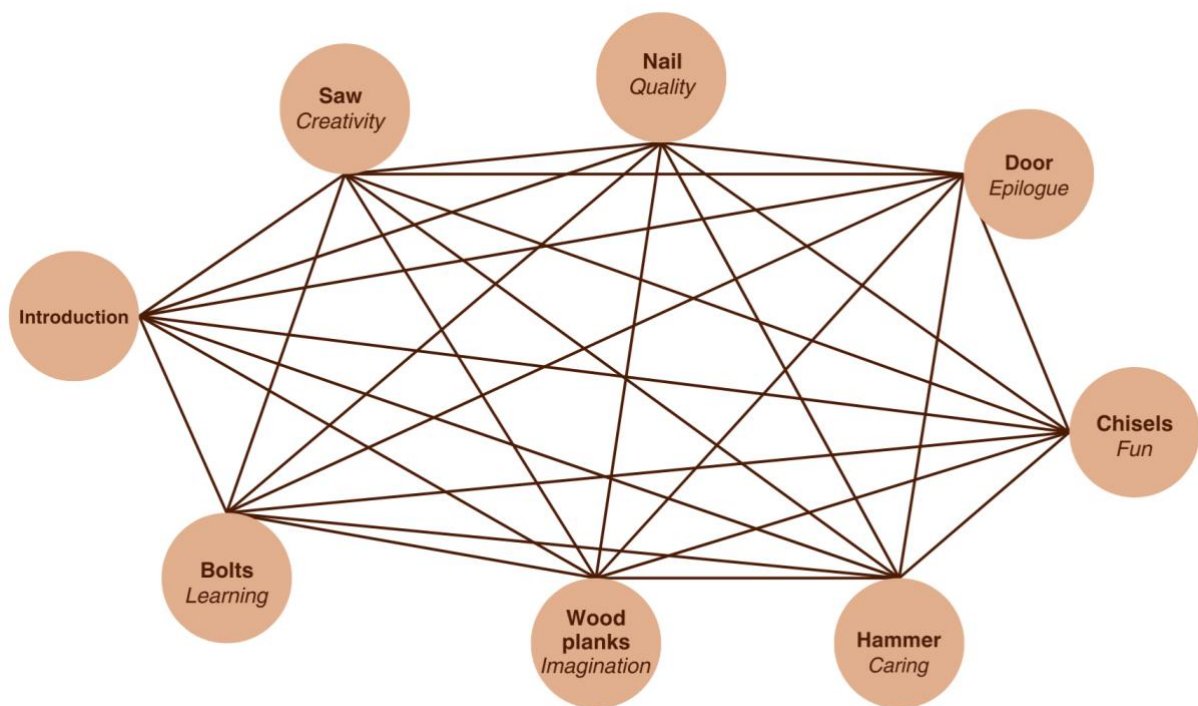


Figure 2. Narrative architecture for the Non-linear Condition.

Table 1. Comparison of the elements considered for the design of each condition.

Element	Linear Condition (LC)	Non-linear Condition (NC)
Narrative structure	Vector structure	Combination of the complete graph and the network structures
Interactivity type	External-Exploratory	Internal-Exploratory
Level of interactivity	1 - Peripheral interactivity	2 - Interactivity affects the sequence
User control	Fixed progression, no user choice	Freedom to explore, choice in sequence
Interaction with story	Linear, sequential advancement	Exploration-driven, freedom to explore elements
Ending availability	Fixed end after the epilogue	Door to finish accessible anytime during exploration

3.1.4 Visual design and aesthetics

The visual design draws inspiration from two cornerstones: the idea of being inside Ole’s carpentry workshop, and the use of pixel art. The interface seeks to immerse the user into a pixel art depiction of the workshop, capturing a nostalgic charm reminiscent of classic videogames. Pixel art, with its potential to evoke feelings of nostalgia and produce visually appealing content, has proven to be an effective form of expression [57]. The pixelated style aims to simplify complex scenes into fundamental visual elements, enhancing focus and reducing visual load, thereby avoiding users to get distracted and concentrate on the narrative. The carpentry environment and woodwork are also represented in a variety of wood-toned brown shades. Aligned with the overall aesthetic, all text is displayed in a pixel art font, as shown in *Figure 3*. The narrative text is presented with a typewriter effect, adding a dynamic visual appeal by gradually unfolding the text right after each screen shows-up. Additionally,

the avatar in the Non-linear Condition, serving a representation of Ole Kirk Kristiansen, searches to immerse the user in the world through navigating the character within the environment. The initial scene of the Non-linear Condition (NC), including the carpentry environment, the avatar, the collectable elements and the exit door, is presented in *Figure 4*.

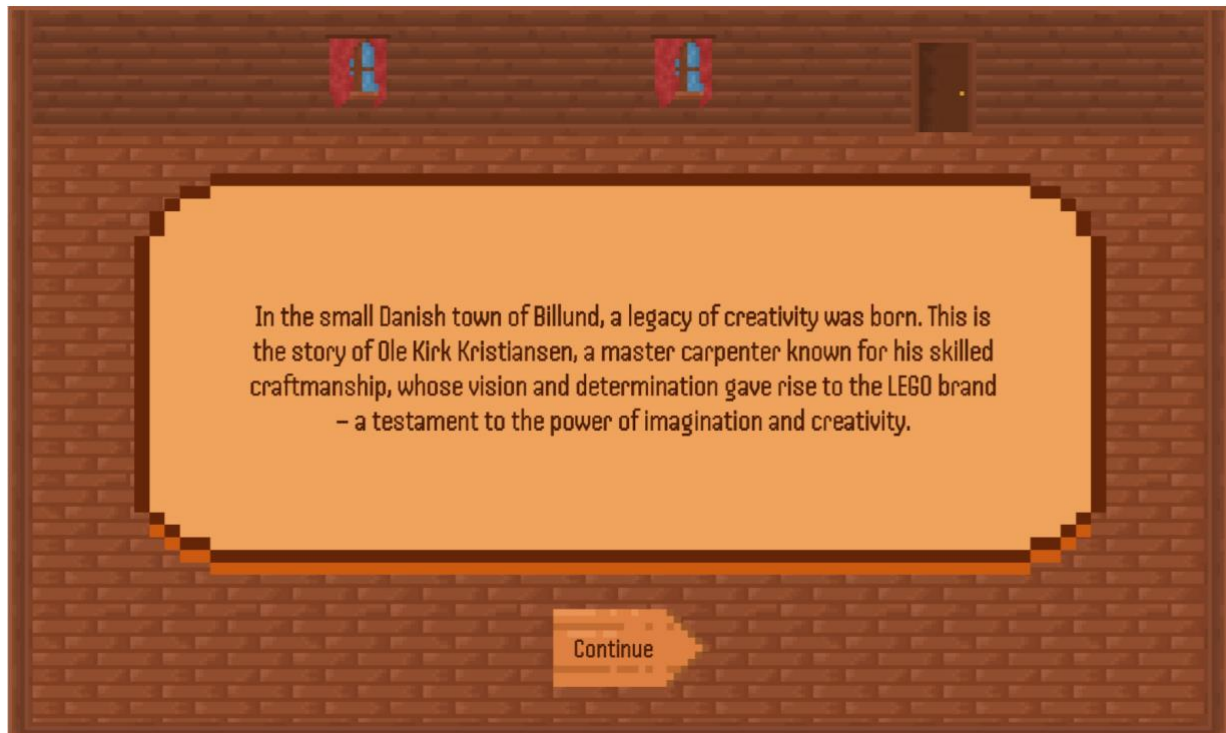


Figure 3. Introduction text, presented in a pixel art style font.

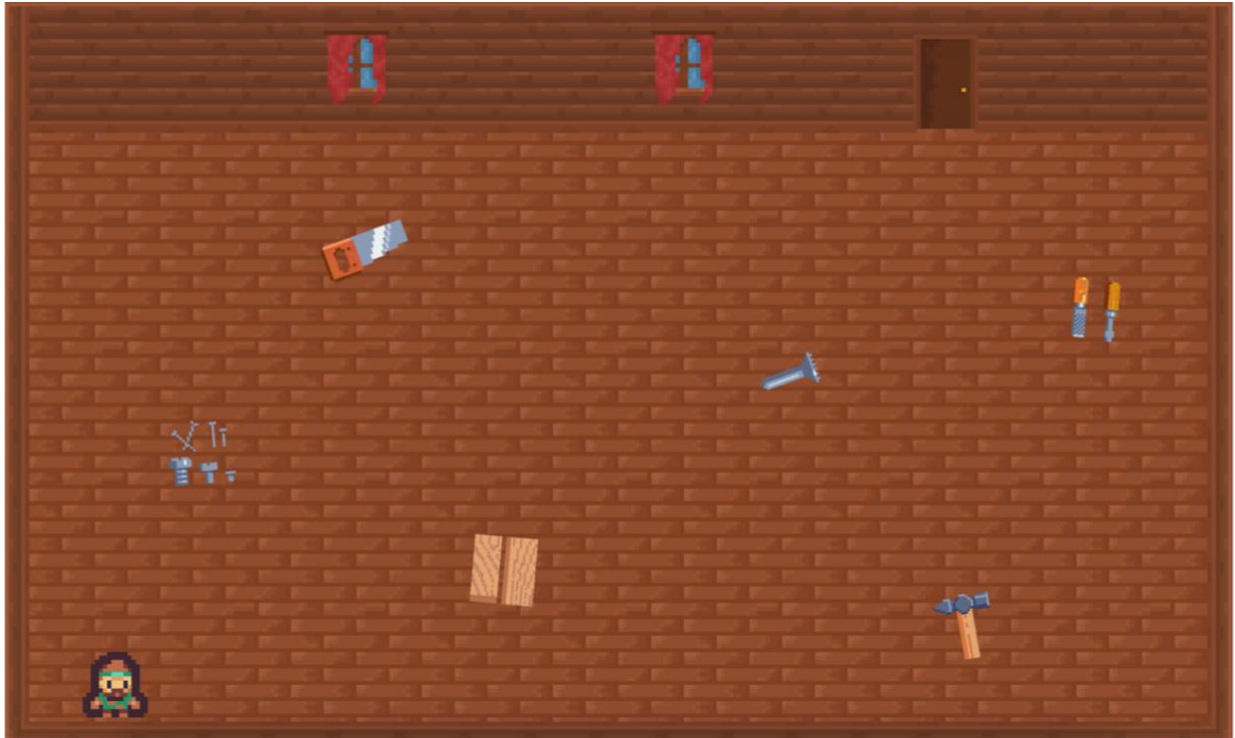


Figure 4. Initial scene of the Non-linear Condition.

3.1.5 Implementation

The project was designed and developed using Godot game engine (version 4.1.2) for MacOS, utilizing the engine's built-in coding language, GDScript, which provided a robust and flexible foundation for implementing the project's interactive elements. The interface incorporates a variety of assets, including sprites, tiles, fonts, UI elements, and scripts, which contribute to both visual representation and user interaction.

Each of the six interactive elements, along with the character, consists of a specific 2D sprite and its corresponding 2D collision shape to facilitate interaction. A bidimensional collision shape is also set on the tiles with the door pattern to manage the interaction when the character exits the room. The sprites pipeline for the project involved sourcing royalty-free graphics available on the indie gaming platform itch.io, which were then edited for color and size using Adobe Photoshop and Piskel App online sprite editor. The final images were exported in .png format and subsequently imported into Godot game engine.

The environment design relied on various tile textures, with grass applied to the title and instructions screens and wood textures used for the workshop interiors, including the doors and windows. For consistency, the Handjet SemiBold 600 pixel font was used throughout the project, complementing the overall visual style.

The User Interface (UI) elements, including the text boxes for narrative content, instructions, and navigation buttons (*Start, Continue, Finish*), were sourced and edited through the online graphic design platform Canva, aligning with the project aesthetic and functional needs.

3.2 Participants

The study included a total of 20 participants, ranging in age from 21 to 37 years old ($M = 28.45$, $SD = 5.26$). The sample comprehended 50% males, 45% females, and 5% identifying as other. All participants had heard about the LEGO brand before, although their familiarity with the LEGO history and the brand values varied: 35% of the participants were slightly familiar, 30% were not familiar at all, 25% were moderately familiar, and 10% considered themselves very familiar with the brand values. None of the participants felt extremely familiar with the LEGO brand values and its history. This indicates that the majority of participants had limited familiarity with LEGO's history and brand values, ensuring a diverse range of prior knowledge among the study's sample.

3.3 Procedure

The study employed a within-subjects experimental design, where all participants were exposed to both conditions: the linear narrative (LC) and the non-linear narrative (NC). To mitigate potential learning effects and reduce bias, the sequence in which the conditions were presented was alternated. Specifically, half of the participants were assigned the LC first followed by the NC, while the other half encountered these conditions in reverse order. The alternating assignment ensured that any order effects were evenly distributed across the sample. Participants were recruited through convenience sampling by approaching volunteers and asking them to take part in the experiment, without any specific criteria or conditions being applied.

3.3.1 Data collection

After being introduced to the study and accepting the terms of a consent form, the participants were guided through a demographic screening. The questions covered age, gender (male; female; non-binary; other; prefer not to say), prior awareness of the LEGO brand (I

heard about the LEGO brand before; I didn't not hear about the LEGO brand before; not sure), and familiarity with the LEGO brand history and values (not familiar at all; slightly familiar; moderately familiar; very familiar; extremely familiar). Following this, participants took part in the first condition, either LC or NC, and responded to a series of questions after experiencing this condition. These questions were answered using five-point Likert scales, comprehending *Strongly disagree, Disagree, Neither agree nor disagree, Agree, and Strongly agree*. The questions addressed: ease of following the story, eagerness to continue the story, emotional connection to the LEGO brand, identification with the character's attitudes and actions, effectiveness of the story in conveying the LEGO brand values, knowledge of the LEGO brand values, and sense of identification with those values. Additionally, the participants answered an open-ended question asking them to write down the LEGO brand values they perceived from the story. The respondents then proceeded to involve in the second narrative condition and answered the same series of questions. Finally, the participants were asked to compare both conditions, indicating which they believed was more effective in communicating the LEGO brand values, and responding to additional five-point Likert scale questions about the effectiveness of each condition. Finally, the participants could share any additional comments, thoughts, or observations regarding their participation in the study. None of the questions throughout the entire questionnaire were mandatory.

3.3.2 Data analysis

The 5-point Likert scale responses were numerically coded to facilitate statistical analysis (*1: Strongly disagree 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly agree*). Mean scores and standard deviations were calculated to interpret the data, using statistical formulas applied to the entire dataset in a MS Excel spreadsheet.

Open-ended responses about the brand values underwent thematic analysis, with further assistance of the online resource WordNet. WordNet serves as a comprehensive English lexical database that organizes nouns, verbs, adjectives, and adverbs into categorical sets of synonyms, each representing a distinct concept. These sets are interconnected through conceptual-semantic and lexical relationships, facilitating semantic disambiguation and the labeling of word relationships. For thematic analysis, the initial steps first step involved reading and familiarizing with the responses, followed by preprocessing to standardize the text data. This comprehended cleaning the text, removing irrelevant information, and formatting the responses consistently. Recurring concepts were then identified by comparing responses with the brand

values and its definitions and approach to them. Afterwards, Wordnet was employed to identify semantically related words and themes, which helped in identifying and categorizing the concepts more accurately.

4. FINDINGS

This section presents the key findings of the study, based on the data collected throughout the experiment and the analysis of the participants' responses. The results present insights on the effects of both the linear and the exploratory narrative structures, examining participants' ease of following the story, eagerness to continue, emotional engagement, sense of connection with the character, recognition of the brand's values, and identification with those values. Participants' preferences between the Linear Condition (LC) and the Non-linear Condition (NC) are also explored, providing a comprehensive understanding of the relative effectiveness of each narrative approach.

4.1 Ease of following and eagerness to continue the story

In general, the participants' experiences with both narrative structures regarding how easy following the story was suggests a consensus towards agreement, while the exploratory narrative structure was favored in grabbing users' attention and continue the story. The LC-first respondents, comprising participants who first experienced the linear narrative, generally agreed that the story flow was easy to follow, with a mean score of 4.1 (SD = 0.57) for the LC. However, when these participants shifted to the NC, their perceptions varied more widely, with an usual response of *Neither disagree nor disagree* (M = 3.4, SD = 1.25). Conversely, the NC-first participants – who initially experienced the non-linear narrative – showed a more uniform level of agreement regarding the ease of following the story across both conditions. Experiencing the NC first led to a general agreement towards how easy was following the flow of the story (M = 4.1, SD = 0.57), while upon switching to the LC, presented a slight improvement in following the story (M = 4.2, SD = 0.63). This trend suggests that starting with a non-linear narrative might better prepare participants to adapt to various narrative structures, potentially facilitating an easier transition to linear storytelling.

Regarding eagerness to continue the story, the participants who experienced the LC first reported a general agreement on eagerness to follow the story ($M = 3.9$, $SD = 0.99$). When these same participants transitioned to the NC, a higher enthusiasm to continue experiencing the story was found ($M = 4.4$, $SD = 0.84$). This preference for the NC was also explicitly mentioned across diverse respondents' comments, such as: *“Regarding the linear story, it felt like a lot of text, and gave you a sense of wanting to finish it faster to get to the end. I ended up skimming the texts instead of fully reading all the text. I got more distracted and not as focused. For the exploratory, on the other hand, it was nice to have those pauses between texts. (...) Even though the text was a bit unordered it was nicer and more calm to follow the texts”*. Furthermore, another participant emphasized: *“I would say the second narrative [NC] was more effective to grab my attention and give me the motivation to follow the story and read the text parts”*. Conversely, participants who initially experienced NC, reported a higher eagerness on continuing the story, with responses falling between *Agree* and *Strongly Agree* ($M = 4.2$, $SD = 0.42$). However, upon being exposed to LC, their enthusiasm diminished which was reflected in less agreement ($M = 3.6$, $SD = 0.70$). This decline in enthusiasm was also reflected in another participants' comment: *“The linear narrative reminded me much of the brief introductory part at the beginning of videogames. With this feeling in mind, I felt less engaged in what was going on as I was passively learning about the brand with little attachment to it. The first narrative style [NC] instead had me moving around, exploring a little environment at my own pace, which felt better suited for a brand that makes empowering people through creativity one of its core values”*. This reduction in eagerness could be attributed to certain predictability and structured nature of the linear format, which might have seemed less engaging following the exploratory and more dynamic non-linear experience. These findings suggest that the initial narrative format not only sets expectations, but also significantly influences subsequent engagement levels.

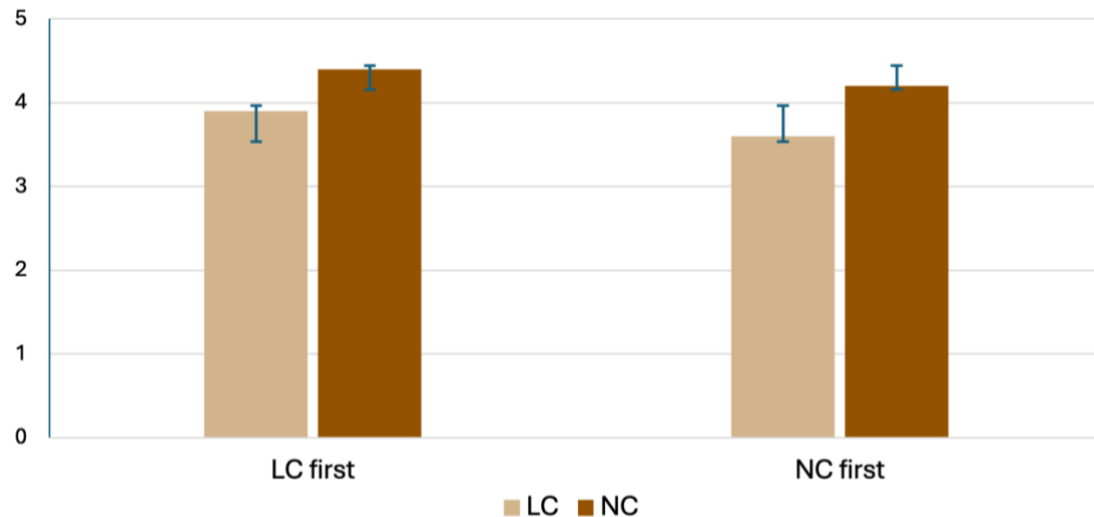


Figure 5. Comparative results regarding Eagerness to continue the story, for each order of presentation.

4.2 Emotional connection

Emotional engagement with the narrative was also measured throughout both narrative formats. Here, the LC-first participants reported to feel a slightly higher emotional connection when they shifted to the NC, where the mean score increased from 3.4 (SD = 1.17) to 3.8 (SD = 1.03). Moreover, the participants who were first exposed to NC did not report a stronger emotional connection with the brand and its values as they transitioned to the LC. The mean score of 3.5 remained constant between the two conditions, with the values between *Neither agree nor disagree*, and *Agree*. In summary, experiencing the story in a linear format first, followed by a non-linear approach, slightly increased participants' emotional connection to the LEGO brand and its values. However, experiencing the story in a non-linear format first did not alter the level of emotional connection when later experiencing the story linearly.

4.3 Sense of identification with the character

Having a sense of connection with the characters has also been regarded as a fundamental mechanism to aid narrative transportation. In this context, experiencing a linear narrative following an exploratory dynamic may even improve this identification of the audience through the avatar. This statement is better understood after analyzing the feedback given by the participants who first went through the NC, followed by the LC. These

respondents reported to feel more connected to the character's attitudes and actions throughout NC ($M = 3.5$, $SD = 0.97$), as opposed to LC with a mean score of 2.8 ($SD = 0.79$), between *Disagree* and *Neither agree nor disagree*. Additionally, it could be possible that prior knowledge of the story might have negatively impacted their sense of identification with the character. For the participants who first went through LC, their sense of identification remained stable throughout both conditions, between *Neither agree nor disagree* and *Agree* ($M = 3.6$, $SD = 0.97$).

4.4 Recognition of the brand values

Presenting the story of the brand through different narrative structures proved to be an effective approach for showcasing and communicating the brand's values and beliefs. The LC provided a clear and sequential presentation, which is beneficial for understanding and memorizing these values. In contrast, the NC provided a playful experience where participants were able to actively explore and discover the brand values. Both conditions demonstrated to be well-rounded experiences that facilitated the recognition and recall of the brand values, as well as its mission and vision. The following is an in-depth examination of the two conditions.

Among participants who experienced the LC first, *Creativity* and *Imagination* both emerged as the most frequently mentioned values across both conditions, each appearing 8 times, significantly surpassing all others. However, *Creativity* was the most directly perceived value in the direct responses written by participants: 7 times for *Creativity* versus 2 times for *Imagination* after LC-first experience, and 6 times for *Creativity* against 3 times for *Imagination* after shifting to the NC. Additionally, *Caring* and *Quality* appeared as relevant values after the first condition, with 3 mentions each within the coded values category. *Fun* was also mentioned, though to a lesser extent (twice) and *Learning* was recognized just once. After the shift to the second condition (NC), *Fun* and *Quality* slightly increased to 4 mentions each, while *Caring* and *Learning* remained the same (3 and 1 mention, respectively).

Regarding the participants who first experienced the NC followed by the LC, a similar pattern emerged, with *Creativity* and *Imagination* again being the most frequently mentioned values in both conditions. Each value appeared 7 times after first experiencing the NC, and 8 times after experiencing the LC in a second instance. Again, *Creativity* was the most directly perceived value in the participants' direct responses: 4 times after the first condition and 6 times after the second condition. *Imagination* was less directly mentioned: once after the first condition and twice after the second condition. Following these, *Caring* surfaced as a notable

value, being coded 4 times in both conditions, suggesting that NC could initially heighten the perception of this value. The frequency of *Fun* and *Quality* remained stable in both conditions (3 times each), while *Learning* was mentioned once after the first condition but did not appear after shifting to LC.

Overall, the findings suggest that both *Creativity* and *Imagination* consistently stand out as core values strongly associated with the LEGO brand, regardless of the narrative structure. The shift from one condition to another influenced the frequency of other values, such as *Caring*, *Fun*, and *Quality*. The NC seemed to slightly improve the perception of *Caring* when experienced first, while the LC may better reinforce *Fun* and *Quality* when experienced second. Both conditions convey these core values effectively, with some variations in how secondary values are perceived depending on the order in which the conditions are experienced. The value of *Learning* was barely mentioned across both conditions and groups, demonstrating that none of the narrative structures strongly conveyed this value to the participants. This understanding, supported by the frequency of mentions, could inform future decisions on structuring narratives to emphasize specific brand values.

4.5 The story conveying the values

A playful, exploratory narrative structure can serve as a powerful tool for a brand to effectively convey its foundational values to the audience. In this context, the Non-linear Condition (NC) has proven to be more effective in transmitting these values compared to the Linear Condition (LC). Among the participants who first experienced the LC followed by the NC, there was a general agreement that both conditions successfully conveyed the brand values. However, the NC received a slightly higher average rating of 3.9 (SD = 0.57) compared to the LC average of 3.7 (SD = 0.67), indicating a slight preference for the non-linear narrative approach in delivering the brand values.

Participants who were first exposed to the NC followed by the LC again found the exploratory narrative structure more effective, with an average rating of 4.11 (SD = 0.60), firmly placing this approach within the *Agree* category. When these same participants went through the LC, they also agreed on its effectiveness in transmitting the brand values, although with a slightly lower average score (M = 3.9, SD = 0.57) than the NC.

In summary, the exploratory narrative approach was rated more highly for its effectiveness in conveying the LEGO's brand values, compared to the linear narrative structure. Although both methods received ratings corresponding to *Agree* on the Likert scale,

the NC emerged as more effective and impactful, particularly when presented first. The higher success of the NC in effectively communicating brand values can also be attributed to its ability to participants to go through the narrative exploratory at their own pace, with pauses that may allow a better assimilation of the information presented. This is supported by a participant who first experienced the LC and stated that “[the] exploratory interface was better in keeping user attention, although it may not necessarily tell the story in the ‘correct’ order. I felt that I can understand the information much better when there was interaction or a pause, allowing me to digest more information”. Similarly, a NC-first participant remarked that “the explorative face snips the information in nicer bits, so i want to read each bit. [In] the linear one I skip a lot of the text”.

4.6 Participants’ knowledge of the brand values after the experience

In addition to assessing the effectiveness of the narrative structures in conveying the LEGO's brand values, another relevant metric for this study was the extent to which participants felt they had gained a deeper understanding of these values after experiencing the narratives. The aim was to determine whether the narrative structures not only communicated the brand values effectively, but also enhanced participants’ knowledge and understanding of those values. Participants who experienced the LC first, followed by the NC, generally agreed that they felt knowing more about the values of the LEGO brand after going through the linear structure ($M = 4.2$, $SD = 0.92$). However, after shifting to the exploratory narrative structure, participants reported a higher agreement on the NC to enhance the understanding of the brand values, with an average score of 4.6 ($SD = 0.52$); this rating falls into the Agree category, but slightly closer to *Strongly Agree*. Regarding participants who were first exposed to the NC and then to the LC, they also reported to agree with the fact that both narratives helped to gain a better knowledge about the brand values. However, in this case the NC resulted in an average score of 4.2 ($SD = 0.67$), while the LC yielded a slightly higher average of 4.4 ($SD = 0.52$).

4.7 Sense of identification with the values

While the narrative structures demonstrated to be generally effective in communicating the brand values and enhancing their understanding, they did not present a significant influence on participants’ personal identification with these values. This is evident from a predominant

tendency towards neutrality, as most of participants answered *Neither agree nor disagree* when asked about their sense of identification with the values. However, some insights can be drawn from this generally neutral trend.

Engaging with an exploratory narrative structure may help foster a stronger sense of identification with brand values, encouraging participants to view these values as reflective of their own beliefs and attitudes. This statement is sustained by the fact that NC-first respondents showed the strongest and most consistent agreement in feeling identified with the brand's values presented throughout the exploratory narrative, with the average answers falling into *Neither agree nor disagree*, very close to *Agree* ($M = 3.89$, $SD = 0.33$). In turn, when these respondents went through the LC, their agreement slightly decreased to an average score of 3.6 ($SD = 0.84$). Conversely, participants who first experienced the LC demonstrated a lower level of agreement regarding the feeling of identification with the values, with an average score of 3.6 ($SD = 0.70$). This agreement further declined when these participants shifted to the NC, with an average score of 3.5 ($SD = 0.85$).

In summary, the NC appears to have a slight advantage in helping participants feel identified with LEGO's brand values, especially when experienced first. The order in which the storytelling approaches were presented may have influenced the participants' responses, with the NC-first approach leading to stronger and more consistent identification with the values. While both groups showed similar trends in identification, the NC-first group exhibited a stronger overall sense of identification with the LEGO brand values, suggesting that the exploratory narrative approach may be more effective when it comes to identifying with brand values.

4.8 Predilection for a specific narrative structure in communicating the values

A non-linear, exploratory narrative may become a successful approach to attract the attention of individuals when it comes to transmit and communicate the values of a brand. This statement can be drawn from the analysis of the whole set of responses, regardless of the order of presentation. Among all the participants of the study, 70% believed the exploratory structure was more effective, while 20% considered both equally effective, and the remaining 10% favored the linear narrative.

However, in a more in-depth analysis it appears evident that the order in which the narratives were experienced influenced the participants' perceptions. For participants who experienced the Non-linear Condition (NC) first, an overwhelming majority (90%) found the

NC approach to be more effective in communicating LEGO's brand values, and only one respondent preferred the linear structure. This strong predilection for the NC suggests that when participants are first introduced to a narrative that allows for exploration and discovery, they are more likely to engage with and perceive the brand values more effectively. This may also relate to the playful nature with which the LEGO brand is usually associated, as one of the participants pointed out: *"I felt exploring the space myself added to understand the encouragement to be independently creative, there is not one good way proper order, such as in LEGO"*. On the same vein, another respondent declared that *"the non-linear narrative was more aligned with what LEGO has to say, learn through playing!"*.

When considering the participants who first experienced the Linear Condition (LC) first, their responses were more varied. While 50% of participants still found the exploratory condition more effective, a significant portion (40%) believed that both conditions were equally effective in conveying LEGO's brand values. Only one participant preferred the LC approach. This suggests that when the linear narrative is presented first, participants are more likely to see value in both approaches, possibly because the structured nature of the linear storyline could set a foundation on which the exploratory approach could build upon. Nonetheless, many NC-first participants showed surprise and astonishment when shifting to LC. One of the respondents exclaimed, *"What is this!?"* as soon as the initial exploratory screen appeared, while another participant, upon reaching the starting NC screen, celebrated aloud, expressing eagerness to take part in it while chuckling.

Overall, the findings reveal a clear preference for the non-linear, exploratory approach in communicating LEGO's brand values. Nevertheless, the effectiveness of the non-linear narrative is enhanced when it follows a linear structure, as participants who experienced the LC first were more likely to recognize the strengths of both approaches. This situation highlights the importance of narrative structure and order in shaping participants' engagement with and understanding of brand values.

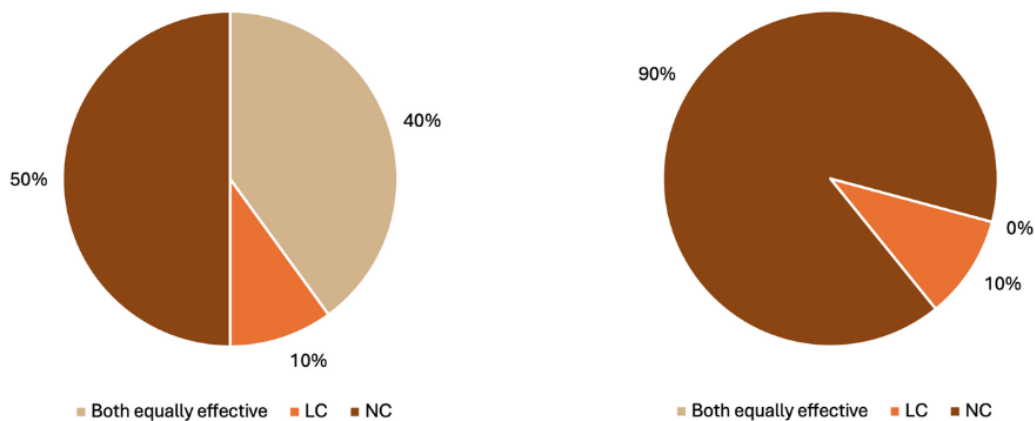


Figure 6. Results of the preference of each narrative structure in terms of effectively communicating the brand values.

4.9 Perception of the effectiveness of each structure in communicating brand values

After experiencing both narrative conditions, participants were directly asked about the efficacy of each structure in communicating the brand values as well as their understanding. The results consistently showed that the exploratory narrative structure within the NC was preferred for transmitting the brand values through the narrative. However, the difference in preference compared to the LC as was not substantial.

The participants who first experienced the LC, generally agreed that following the linear story paragraph by paragraph effectively communicated the brand values, with an average score of 3.9 (SD = 1.13). Furthermore, the same participants agreed that the linear approach enhanced their understanding of the brands value, with an average score of 4 (SD = 0.94). When these participants shifted to the NC, their agreement towards the efficacy in communicating the brand values and improving their understanding through exploring the environment firmly fell into the *Agree* category, with average scores of 4 (SD = 0.67 and SD = 0.94, respectively).

Among the participants whose first approach to the study was the NC, there was a firm general agreement about the exploratory narrative to be more efficient in both communicating the brand values (M = 4, SD = 0.94) and improving their understanding (M = 4, SD = 0.67). When these participants moved to the LC, it was considered somewhat less effective about transmitting and enhancing the understanding of the brand values, with the averages scores decreasing to 3.6 (SD = 0.52) and 3.7 (SD = 0.67), respectively.

5. DISCUSSION

In the context of contemporary marketing practice, individuals expect brands to deliver experiences that resonate with their emotions and personal values. In this regard, the use of narratives has arisen and continues to evolve as a valuable strategy for communicating a brand's culture, including its values. Nonetheless, the increasingly complex landscape of media consumption poses various challenges and opportunities for brands in terms of generating engaging and meaningful relationships with audiences. From this perspective, this study explores the implementation of Interactive Digital Narratives (IDNs) as a tool to enhance the knowledge and the perception of the values of a brand. Presenting the brand's story through two distinctive narrative structures has demonstrated to be a successful approach for conveying the values integral to its culture. While the linear format offered clarity through a sequential presentation, the exploratory structure proposed a playful way of discovering those values. Both conditions ultimately resulted in comprehensive experiences that facilitated the communication of the brand's values, its mission and vision.

5.1 Theoretical implications

The findings of this study generally reveal that an exploratory, self-directed narrative approach appears to be more effective in engaging individuals and communicating a brand's values compared to a linear, predetermined narrative structure. This is supported by the fact that, overall, 70% of the participants expressed a clear preference for the Non-linear Condition (NC) when it came to communicate the LEGO brand values. This preference, particularly pronounced among the participants who first experienced the NC, suggests that the exploratory format demonstrates to be more engaging and effective in communicating brand values. Nonetheless, the Linear Condition (LC) was still appreciated, particularly when it was presented first, indicating that both narratives structures present their own strengths and can complement each other when developing a brand storytelling strategy aimed at communicating the inherent values of a brand. These outcomes are aligned with existing literature that explores the relevance of narratives in brand communication. Prior research has emphasized the role of narratives in creating meaningful and engaging consumer-brand connections [2], [4], [9], [10], and linking the thoughts and experiences generated to positive associations to brands [1], [3]. This study therefore contributes to the current body of brand storytelling knowledge by

demonstrating how IDNs can further enhance this experience, offering a more dynamic medium for consumers to connect with a brand's culture.

A deeper analysis states that an exploratory narrative architecture becomes a powerful driver of the eagerness to continue the story, as participants demonstrated a higher enthusiasm for continuing with the narrative when it was presented in a non-linear format. Several participants' comments reinforce this trend, with many of them expressing that the pauses and interactive elements inherent to the NC allowed them to keep the attention and involve with the content at their own pace. This observation becomes relevant as it indicates that self-exploring narratives might foster a deeper connection with the story, a fundamental fact when it comes to generate strong connections between brands and individuals, as scholars have previously demonstrated [5]. Conversely, the non-linear narrative format did not present a notable success regarding the ease of following the story. Participants who initially experienced the LC generally agreed that the story was easy to follow. However, when they transitioned to the NC, their responses shifted towards neutrality, suggesting that the exploratory structure may have introduced a complexity that some individuals found challenging. Consequently, the transition from a structured linear narrative to a more flexible, discovery-based format could require an adjustment period, which can impact the ease of story comprehension. Contrarywise, starting with a non-linear narrative structure could better prepare participants with higher cognitive flexibility, making it easier to navigate and adapt to diverse narrative formats.

In accordance with the three-dimensional consumer-brand relationship framework proposed by Crespo et al. [4], this model may serve as a valuable foundation for developing IDNs aimed to communicate brand-related content, such as the brand values and its underlying culture. It becomes particularly relevant to the emotional and cognitive dimensions of the framework. Regarding the emotional aspect, where the authors emphasize that a narrative configuration can elicit affective involvement with a brand by appealing to personal values and feelings, brand-themed narratives that encourage user exploration may serve as an effective strategy to strengthen emotional bonds and provoke a higher sense of identification with the audience. This is evidenced in the study by the participants who first experienced the LC and reported a higher emotional connection to the LEGO brand and its values after transitioning to the NC, whereas participants who started with the NC did not report a change in emotional engagement when later experiencing the LC. Regarding the connection with the character's attitudes and values, the introduction of a user-controlled avatar appears to be particularly effective in establishing a stronger connection with the character. This is supported by the

feedback of participants that first experienced the NC, who reported to feel more connected to the character's attitudes throughout the NC, in opposition to the LC.

Concerning the cognitive aspect, in which storytelling emerges as an effective strategy for enhancing Consumer-Brand Identification (CBI) by encouraging consumers to align their personal experiences with the brand's narrative, brand-themed narratives that encourage user exploration may serve as an effective strategy to reinforce the rational connection with the brand. In the study, both the LC and the NC resulted in better knowledge of the brand values, when experienced as a second instance. This can explain that the order of narrative presentation may have influenced the participants' response, as familiarity with the brand values increased by the time that participants reached the second condition.

Stated the above, the consumer-relationship framework proposed by Crespo et al. [4] together with Green's [51] theorization on emotional engagement and connection with the characters within the narrative transportation process, might successfully lead to craft brand-themed IDNs able to engage with audiences at the same time they reflect the culture and values of a brand.

An unexpected outcome was the neutral position that many respondents took when asked about self-identification with the LEGO brand values. However, the exploratory narrative structure appears to foster a stronger sense of identification with brand values, as participants who first experienced the NC reported the highest and most consistent agreement in feelings identified with the brand's values, compared to those who experienced the LC secondly. This general tendency towards neutrality could indicate several influencing factors, such as pre-existing perceptions of the brand, as all the respondents expressed to know the brand before going through experiences, or the possibility that the narratives did not resonate deeply enough to affect personal identification. These findings may seem less concluding but offer relevant insights into the complexities of crafting brand identity and the challenges of developing strong personal connections through narratives by themselves. A preliminary study of the narrative content might have provided additional insights into the narratives' potential effect, allowing for adjustments to optimize the effectiveness of the communication of the brand values prior to executing the main experiment.

5.2 Practical implications

From a practical concern, marketing practitioners can leverage this research to integrate IDNs for enriching the connections between brands and audiences through narrative-driven

experiences. By using IDNs, brands have the opportunity of crafting engaging stories that not only communicate key messages, such as values, mission, and vision, but also articulate diverse aspects of the consumer-brand relationship in a cohesive manner. IDNs have the ability of enhancing brand storytelling by turning passive audiences into active participants, through the incorporation of game mechanics and consequently engaging audiences in playful ways. The exploratory dimension of certain IDNs can therefore provide participants with personalized experiences, eliciting stronger emotional connections with the brand.

By encouraging user interaction and allowing users to make decisions within the story, IDNs can promote higher emotional connection and greater sense of identification with the brand. Furthermore, IDNs emerge as a versatile means of communication strategies across numerous media platforms, offering unified experiences across different consumer touchpoints. Additionally, building on the notion of brands as differentiators, IDNs can serve as unique opportunities for brands to stand out in constantly changing and competitive landscapes, presenting themselves as creative and innovative.

5.3 Limitations and future research

Several limitations should be acknowledged in interpreting the findings of this study. The sample size is relatively small, limiting the generalizability of the results, especially regarding a large-scale brand such as LEGO. Additionally, participants were recruited through convenience sampling, which barely represents the consumer population. A careful audience selection and targeting would be essential, to ensure that the insights gained align with the organization's specific objectives and meaningfully contribute to its strategic goals.

The reliance on self-reported data also introduces potential for response bias, particularly in assessing emotional engagement and personal identification with the brand values. Future research could involve expanding the sample size, employing more diverse participant groups, and incorporating objective measures of engagement, such as physiological responses to further validate the findings. Furthermore, studying the impact of different IDNs across diverse demographic groups may provide better understandings about how brands can tailor their storytelling approaches to different audiences. Upcoming investigation would also explore the long-term effects of IDNs on consumer behavior, particularly in terms of brand loyalty and consequent purchase intentions.

5.4 Future development

Participants' open feedback provided valuable insights about potential improvements for the experience, particularly regarding engagement and the overall connection among the narrative elements. One common suggestion involved the incorporation of auditory elements to add depth to the narrative and help to immerse participants in the narrative world, as the addition of music or sound effects would enhance the atmosphere and emotional engagement of the story.

The need of more explicit connections between the interactive elements and the narrative content in the exploratory condition was also emphasized. Consequently, future developments would include adding icons or other graphical elements alongside the text to enhance understanding and establish stronger connections among the user choices and the narrative outcomes. The addition of headers for each passage could also aid in understanding the connections between the interactive elements and their corresponding content, suggesting that clearer visual cues could guide users through the story more effectively.

Finally, proposals about integrating other interactive elements, such as small puzzles in the exploratory condition, were proposed to maintain user engagement. This approach aligns with the current state of interactive marketing and the increasing use of gamification applied to branding. By adding interactive layers, brand can sustain engagement and provide users with diverse challenges and rewards, enhancing the overall narrative experience and strengthening their connection. These suggestions provide a useful roadmap for future development, emphasizing the potential for a multisensory and interactive experience that could further engage participants and deepen their connection with the brand-themed narrative and consequently with the brand's culture.

6. CONCLUSION

This thesis explores the impact of Interactive Digital Narratives (IDNs) on effectively communicating the values inherent to a brand, particularly focusing on the LEGO brand, its history, and its foundational aspects. In this regard, a comparative analysis was conducted between linear and non-linear narrative structures, with the aim of assessing whether IDNs can

serve as efficient tools for conveying a brand's core values. Additionally, the study evaluated which narrative structure proved more successful in transmitting these values. The influence of incorporating interactive elements into the brand-themed narrative was also examined.

The study demonstrates that, even though storytelling has long been an effective resource for brands to connect with audiences, IDNs emerge as a central tool for brands to effectively communicate their values and every aspect of their culture. This ultimately contributes to forging the identity of a brand within the current changing transmedia landscape. In increasingly and competitive environments, where stimuli become more complex and individuals are thus encouraged to process information and respond faster than ever, crafting and implementing brand-themed IDNs serve as a valuable strategy for creating more impactful and longer-lasting connections with audiences. The incorporation of interactive, narrative-driven brand experiences that elicit individuals' active participation and exploration presents a significant potential for forging stronger emotional connections, enhancing brand perception, and consequently establishing deeper consumer-brand relationships.

7. REFERENCES

- [1] S. Dominique-Ferreira, S. Praça, and C. Prentice, “Brand Management: From Storytelling to Strategic Narratives,” 2023, pp. 275–296. doi: 10.1007/978-3-031-06809-6_18.
- [2] J. E. Escalas, “Narrative Processing: Building Consumer Connections to Brands,” *Journal of Consumer Psychology*, vol. 14, no. 1–2, pp. 168–180, Jan. 2004, doi: 10.1207/s15327663jcp1401&2_19.
- [3] M. Mucundorfeanu, “The Key Role of Storytelling in the Branding Process,” *Journal of Media Research*, vol. 11, no. 1 (30), pp. 42–54, Jan. 2018, doi: 10.24193/jmr.30.3.
- [4] C. F. Crespo, A. G. Ferreira, and R. M. Cardoso, “The influence of storytelling on the consumer–brand relationship experience,” *Journal of Marketing Analytics*, vol. 11, no. 1, pp. 41–56, Mar. 2023, doi: 10.1057/s41270-021-00149-0.
- [5] K. Fog, C. Budtz, P. Munch, and S. Blanchette, *Storytelling*. Berlin, Heidelberg: Springer Berlin Heidelberg, 2010. doi: 10.1007/978-3-540-88349-4.
- [6] H. Jenkins, “Transmedia 202: Further Reflections,” http://henryjenkins.org/2011/08/defining_transmedia_further_re.html.
- [7] D. L. Hoffman, C. P. Moreau, S. Stremersch, and M. Wedel, “The Rise of New Technologies in Marketing: A Framework and Outlook,” *J Mark*, vol. 86, no. 1, pp. 1–6, Jan. 2022, doi: 10.1177/00222429211061636.
- [8] C. A. Scolari, “Transmedia Storytelling: Implicit Consumers, Narrative Worlds, and Branding in Contemporary Media Production,” 2009. [Online]. Available: <http://ijoc.org>.
- [9] J. Kang, S. Hong, and G. T. Hubbard, “The role of storytelling in advertising: Consumer emotion, narrative engagement level, and word-of-mouth intention,” *Journal of Consumer Behaviour*, vol. 19, no. 1, pp. 47–56, Jan. 2020, doi: 10.1002/cb.1793.
- [10] A. Lundqvist, V. Liljander, J. Gummerus, and A. van Riel, “The impact of storytelling on the consumer brand experience: The case of a firm-originated story,” *Journal of Brand Management*, vol. 20, no. 4, pp. 283–297, Feb. 2013, doi: 10.1057/bm.2012.15.
- [11] J. Oh, H. S. Lim, and A. H.-C. Hwang, “How Interactive Storytelling Persuades: The Mediating Role of Website Contingency and Narrative Transportation,” *J Broadcast Electron Media*, vol. 64, no. 5, pp. 714–735, Dec. 2020, doi: 10.1080/08838151.2020.1848180.
- [12] A. Andrade, M. Dionisio, and V. Nisi, “SeaStory: An interactive narrative using collaborative features,” in *Interaction Design and Children*, New York, NY, USA: ACM, Jun. 2022, pp. 633–636. doi: 10.1145/3501712.3535276.

- [13] R. van der Nat, E. Müller, and P. Bakker, “Navigating Interactive Story Spaces. The Architecture of Interactive Narratives in Online Journalism,” *Digital Journalism*, vol. 11, no. 6, pp. 1104–1129, Jul. 2023, doi: 10.1080/21670811.2021.1960178.
- [14] N. Basaraba, “A communication model for non-fiction interactive digital narratives: A study of cultural heritage websites,” *Frontiers of Narrative Studies*, vol. 4, no. s1, pp. s48–s75, Nov. 2018, doi: 10.1515/fns-2018-0032.
- [15] “Barbie’s brand back? Brand value rises on the back of mega movie success,” <https://brandirectory.com/rankings/toys/>.
- [16] RepTrak, “2024 Global RepTrak® 100,” 2024.
- [17] The LEGO Group, “The LEGO Group History.” Available: <https://www.lego.com/en-us/aboutus/lego-group/the-lego-group-history>. Accessed: Mar. 26, 2024
- [18] C. du Plessis, “Prosumer engagement through story-making in transmedia branding,” *International Journal of Cultural Studies*, vol. 22, no. 1, pp. 175–192, Jan. 2019, doi: 10.1177/1367877917750445.
- [19] M. Bak, “LEGO Studies: Examining the Building Blocks of a Transmedial Phenomenon,” *Am J Play*, vol. 8, no. 1, pp. 134–136, 2015.
- [20] L. Geraghty, “In a ‘Justice’ League of Their Own: Transmedia Storytelling and Paratextual Reinvention in LEGO’s DC Super Heroes,” in *Cultural Studies of LEGO*, Cham: Springer International Publishing, 2019, pp. 23–46. doi: 10.1007/978-3-030-32664-7_2.
- [21] R. DeMott, “How Transmedia Made LEGO the Most Powerful Brand in the World,” <https://www.awn.com/animationworld/how-transmedia-made-lego-most-powerful-brand-world>.
- [22] The LEGO Group, “The LEGO Group delivers double-digit growth in H1 2024” LEGO.com. Aug. 28, 2024. Available: <https://www.lego.com/en-sg/aboutus/news/2024/august/The-LEGO-Group-delivers-double-digit-growth-in-H1-2024>. Accessed: Sep. 20, 2024.
- [23] The Lego Group, “The LEGO® Brand - LEGO Group - about us - LEGO.com US,” *Lego.com*, 2023. Available: <https://www.lego.com/en-us/aboutus/lego-group/the-lego-brand>. Accessed: Mar. 26, 2024
- [24] American Marketing Association, “About AMA: Definition of Marketing.” Accessed: Mar. 28, 2024.
- [25] P. Kotler and K. L. Keller, *Marketing Management, Global Edition*, 15th ed. Pearson, 2015.
- [26] F. Greco, “The Rule of Persuasion in the Marketing Process,” *Psychology and Behavioral Science International Journal*, vol. 9, no. 5, Sep. 2018, doi: 10.19080/PBSIJ.2018.09.555775.

- [27] C. L. Wang, Ed., *The Palgrave Handbook of Interactive Marketing*. Cham: Springer International Publishing, 2023. doi: 10.1007/978-3-031-14961-0.
- [28] L. Johnson, “Mars ups brand-building efforts through mobile game,” 2012.
- [29] J. Bercowitz, “See What You’ll Look Like Old With Merrill Edge’s ‘Face Retirement,’” *FastCompany*.
- [30] “Apple Jacks - Race to the Bowl Rally - All Seasons - YouTube.” Accessed: Apr. 26, 2024. [Online]. Available: <https://www.youtube.com/watch?v=sraW0dnlUuU>. Accessed: Mar. 30, 2024.
- [31] W. Bastos and S. J. Levy, “A history of the concept of branding: practice and theory,” *Journal of Historical Research in Marketing*, vol. 4, no. 3, pp. 347–368, Aug. 2012, doi: 10.1108/17557501211252934.
- [32] K. N. Lemon and P. C. Verhoef, “Understanding Customer Experience Throughout the Customer Journey,” *J Mark*, vol. 80, no. 6, pp. 69–96, Nov. 2016, doi: 10.1509/jm.15.0420.
- [33] E. Delgado-Ballester, “Effect of underdog (vs topdog) brand storytelling on brand identification: exploring multiple mediation mechanisms,” *Journal of Product & Brand Management*, vol. 30, no. 4, pp. 626–638, May 2021, doi: 10.1108/JPBM-11-2019-2639.
- [34] J. Cronin, “Teach students to communicate a brand story with transmedia storytelling,” *Journal of Research in Interactive Marketing*, vol. 10, no. 2, pp. 86–101, Jun. 2016, doi: 10.1108/JRIM-01-2015-0004.
- [35] P. J. Kitchen and I. Burgmann, “Integrated Marketing Communication,” in *Wiley International Encyclopedia of Marketing*, Wiley, 2010. doi: 10.1002/9781444316568.wiem04001.
- [36] B. Tenderich, “Transmedia Branding,” Jan. 2014, *Europäisches Institut für Medienoptimierung, Nierstein*.
- [37] B. Schmitt and L. Zarantonello, “Consumer Experience and Experiential Marketing: A Critical Review,” 2013, pp. 25–61. doi: 10.1108/S1548-6435(2013)0000010006.
- [38] J. J. Brakus, B. Schmitt, and L. Zarantonello, “Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?,” *J Mark*, vol. 73, no. 3, pp. 52–68, 2009.
- [39] M. Giovagnoli, “Transmedia Branding and Marketing,” in *The Routledge Companion to Transmedia Studies*, Routledge, 2018, pp. 251–259. doi: 10.4324/9781351054904-28.
- [40] Y. Yang, Y. Asaad, and Y. Dwivedi, “Examining the impact of gamification on intention of engagement and brand attitude in the marketing context,” *Comput Human Behav*, vol. 73, pp. 459–469, Aug. 2017, doi: 10.1016/j.chb.2017.03.066.
- [41] S. Deterding, D. Dixon, R. Khaled, and L. Nacke, “From game design elements to gamefulness,” in *Proceedings of the 15th International Academic MindTrek*

- Conference: Envisioning Future Media Environments*, New York, NY, USA: ACM, Sep. 2011, pp. 9–15. doi: 10.1145/2181037.2181040.
- [42] R. Patrício, A. C. Moreira, and F. Zurlo, “Gamification approaches to the early stage of innovation,” *Creativity and Innovation Management*, vol. 27, no. 4, pp. 499–511, Dec. 2018, doi: 10.1111/caim.12284.
- [43] J. Hamari, J. Koivisto, and H. Sarsa, “Does Gamification Work? -- A Literature Review of Empirical Studies on Gamification,” in *2014 47th Hawaii International Conference on System Sciences*, IEEE, Jan. 2014, pp. 3025–3034. doi: 10.1109/HICSS.2014.377.
- [44] K. Huotari and J. Hamari, “A definition for gamification: anchoring gamification in the service marketing literature,” *Electronic Markets*, vol. 27, no. 1, pp. 21–31, Feb. 2017, doi: 10.1007/s12525-015-0212-z.
- [45] N. Xi and J. Hamari, “Does gamification affect brand engagement and equity? A study in online brand communities,” *J Bus Res*, vol. 109, pp. 449–460, Mar. 2020, doi: 10.1016/j.jbusres.2019.11.058.
- [46] A. F. Payne, K. Storbacka, and P. Frow, “Managing the co-creation of value,” *J Acad Mark Sci*, vol. 36, no. 1, pp. 83–96, Mar. 2008, doi: 10.1007/s11747-007-0070-0.
- [47] J. M. Brechman and S. C. Purvis, “Narrative, transportation and advertising,” *Int J Advert*, vol. 34, no. 2, pp. 366–381, Mar. 2015, doi: 10.1080/02650487.2014.994803.
- [48] M.-L. Ryan, “Toward a definition of narrative,” in *The Cambridge Companion to Narrative*, D. Herman, Ed., Cambridge University Press, 2007, pp. 22–36. doi: 10.1017/CCOL0521856965.002.
- [49] A. J. Mills and J. John, “Brand stories: bringing narrative theory to brand management,” *Journal of Strategic Marketing*, pp. 1–19, Aug. 2021, doi: 10.1080/0965254X.2020.1853201.
- [50] R. Adaval and R. S. Wyer, “The Role of Narratives in Consumer Information Processing,” *Journal of Consumer Psychology*, vol. 7, no. 3, pp. 207–245, Jan. 1998, doi: 10.1207/s15327663jcp0703_01.
- [51] M. C. Green, “Transportation into Narrative Worlds,” in *Entertainment-Education Behind the Scenes*, Cham: Springer International Publishing, 2021, pp. 87–101. doi: 10.1007/978-3-030-63614-2_6.
- [52] M. C. Green and T. Brook, “In the Mind’s Eye. Transportation-Imagery Model of Narrative Persuasion,” in *Narrative Impact: Social and Cognitive Foundations*, 1st ed., M. C. Green, J. J. Strange, and T. C. Brock, Eds., Taylor & Francis Group, 2002, pp. 315–341.
- [53] J. Cohen, “Defining Identification: A Theoretical Look at the Identification of Audiences With Media Characters,” *Mass Commun Soc*, vol. 4, no. 3, pp. 245–264, Aug. 2001, doi: 10.1207/S15327825MCS0403_01.
- [54] C. Roth and H. Koenitz, “Evaluating the User Experience of Interactive Digital Narrative,” in *Proceedings of the 1st International Workshop on Multimedia Alternate*

Realities, New York, NY, USA: ACM, Oct. 2016, pp. 31–36. doi: 10.1145/2983298.2983302.

- [55] M.-L. Ryan, *Narrative as virtual reality 2: revisiting immersion and interactivity in literature and electronic media*. Baltimore: Johns Hopkins University Press, 2015.
- [56] LEGO, “The LEGO Story - How it all started,” Aug. 24, 2012. Available: https://youtu.be/qr_dTySMI7s. Accessed: Apr. 3, 2024.
- [57] W. Song, J. Xu, S. Zhao, H. Liu, and H. Shu, “Development and implementation of pixel art game based on human-computer interaction,” in *Third International Conference on Intelligent Computing and Human-Computer Interaction (ICHCI 2022)*, K. Subramanian, Ed., SPIE, Jan. 2023, p. 49. doi: 10.1117/12.2655898.

8. APPENDIXES

8.1 Appendix A – The story

Introduction.

In the small Danish town of Billund, a legacy of creativity was born. This is the story of Ole Kirk Kristiansen, a master carpenter known for his skilled craftsmanship, whose vision and determination gave rise to the LEGO brand – a testament to the power of imagination and creativity.

Passage 1.

Ole's workshop was a realm of endless possibilities, where children's laughs combined with the scent of freshly cut wood. Here, imagination reigned supreme, inspiring the creation of playful toys that sparked joy and wonder. From simple yo-yos to intricate cars, each creation was a testament to the boundless imagination of its maker.

Passage 2.

Ole had a kind of superpower: he was able to transform wood into works of art, each stamped with the mark of his ingenuity and craftsmanship. With every stroke of the saw and every tap of the hammer, he brought his creations into life, with a sense of wonder and magic. Creativity, for Ole, was not merely a skill – it was a way of life, a guiding force that shaped his every endeavor.

Passage 3.

As Ole's workshop buzzed with activity, the air was filled with the joyful sounds of children playing. Here, fun was not just an ephemeral moment – it was a way of being, a celebration of life's simple pleasures. Whether crafting wooden toys or embarking on imaginary adventures, Ole and his sons discovered joy in every moment shared together.

Passage 4.

In Ole's workshop, every day opened up new opportunities for discovery and growth. Learning went beyond the pages of a book and blended with the experiences of daily life. Hands-on experimentation and collaborative effort let Ole and his sons carved their skills, unleashing their minds and enriching the understanding of the world around them.

Passage 5.

As Ole's legacy grew, so did his dedication to making a positive difference in the lives of others. He believed that caring was more than just a duty – but a deep conviction, rooted in warmth and empathy. Whether lending a helping hand to a neighbor in need or going the extra mile for a customer, Ole approached every interaction with kindness and generosity.

Passage 6.

In Ole's workshop, striving for excellence was a way of life. Quality was not just a measure of craftsmanship, but a reflection of his dedication to perfection. From choosing the best materials to meticulously crafting each toy, Ole never compromised in his pursuit of excellence. After all, children always deserve the best. And only the best is good enough.

Epilogue.

The legacy of Ole Kirk Christiansen has lived on, inspired generations to dream, create, and explore, envisioning a global force for learning-through-play. Today, LEGO continues to uphold its core values of imagination, creativity, fun, learning, caring, and quality. Guided by the spirit of "Only the best is good enough", LEGO remains dedicated to the mission of inspiring the builders of tomorrow.

8.2 Appendix B – Responses of LC-first participants

A presentation of the results can be accessed [here](#).

A spreadsheet with the raw data can be accessed [here](#) (Sheet 1).

A summary of the results is presented below.

1. Thank you for participating in this study.

Purpose of the Study.

The purpose of this experiment is to evaluate the effects of a series of screen-based narratives. After interacting with the narratives, you will be asked to answer a set of questionnaires regarding your experience.

Data Processing and Confidentiality.

By participating, you consent to the processing of the data collected from your answers. Your data will be stored securely and will be solely used for the purposes outlined above. Your responses will remain anonymous, and you will only be identified by a participant ID number in any reports arising from this research.

Right to Withdraw.

Participation in this study is voluntary, and you can stop the experiment at any time without providing a reason. You also have the right to change your consent at any time. If you wish to withdraw your consent or have any concerns, please write to sevang22@student.aau.dk

Confidentiality.

The data collected will be handled confidentially. All responses will remain anonymous, and your identity will not be revealed in any part of the study's documentation.

I consent to the above written 10



2. Participant ID

10
Responses

Latest Responses
"19"
"17"
"14"

1 respondents (10%) answered 1 for this question.

17 13 9 7 1 5 11 14
19

3. Age

10
Responses

Latest Responses

'37"
'24"
'23"

2 respondents (20%) answered 28 for this question.



4. Gender

Woman	6
Man	4
Non-binary	0
Other	0
Prefer not to say	0



5. Did you heard about the LEGO brand before?

Yes	10
No	0
Not sure	0



6.

Not familiar at all Slightly familiar Moderately familiar Very familiar Extremely familiar

How familiar are you with LEGO's history and brand values?



7. **While experiencing the story...**



8. **After experiencing the story...**

I can write down the LEGO brand values that arise from the story:

9 Responses

Latest Responses
 "craftsmanship, creativity"
 "LEGO brand has been grown by his kind mind for kids. The biggest values of LEGO is t..
 "love, share and care about"



9.



10. *While experiencing the story...*



11. *After experiencing the story...*

I can write down the LEGO brand values that arise from the story:

9 Responses

Latest Responses

"creativity, perfection, imagination, learning through play, craftsmanship"
"its value is always thinking the playing experience for children."
"share and love, and also care"



12.



13. Overall, which condition do you believe was more effective in communicating LEGO brand values?

- Condition 1. Linear: 1
- Condition 2. Exploratory: 5
- Both equally effective: 4
- None of them: 0



14.



15. Are there any comments regarding your experience you would like to add?

6 Responses

Latest Responses

"exploratory interface was better in keeping user attention, although it may not nece..."
"In Condition 2, I think you can add title of the explanation for each topic. It helps peo..."
"good work!"

3 respondents (50%) answered **story** for this question.



8.3 Appendix C – Responses of NC-first participants

A presentation of the results can be accessed [here](#).

A spreadsheet with the raw data can be accessed [here](#) (Sheet 2).

A summary of the results is presented below.

1. Thank you for participating in this study.

Purpose of the Study.

The purpose of this experiment is to evaluate the effects of a series of screen-based narratives. After interacting with the narratives, you will be asked to answer a set of questionnaires regarding your experience.

Data Processing and Confidentiality.

By participating, you consent to the processing of the data collected from your answers. Your data will be stored securely and will be solely used for the purposes outlined above. Your responses will remain anonymous, and you will only be identified by a participant ID number in any reports arising from this research.

Right to Withdraw.

Participation in this study is voluntary, and you can stop the experiment at any time without providing a reason. You also have the right to change your consent at any time. If you wish to withdraw your consent or have any concerns, please write to sevang22@student.aau.dk

Confidentiality.

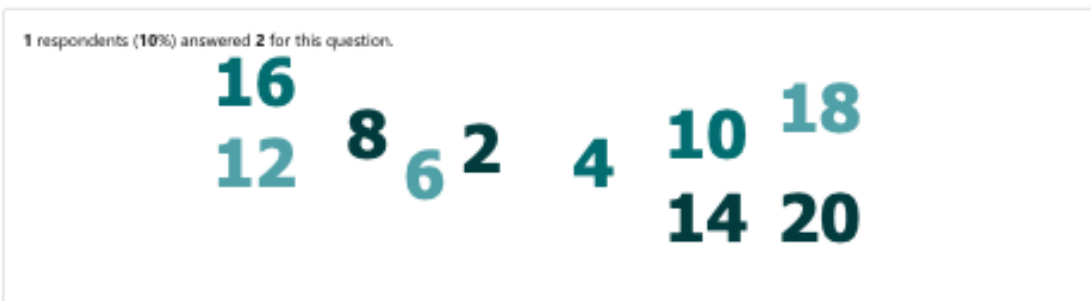
The data collected will be handled confidentially. All responses will remain anonymous, and your identity will not be revealed in any part of the study's documentation.



2. Participant ID

10
Responses

Latest Responses
"20"
"18"
"16"



3. Age

10
Responses

Latest Responses

"27"
"28"
"23"



4. Gender

Woman	3
Man	6
Non-binary	0
Other	1
Prefer not to say	0



5. Did you heard about the LEGO brand before?

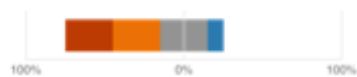
Yes	10
No	0
Not sure	0



6.

Not familiar at all Slightly familiar Moderately familiar Very familiar Extremely familiar

How familiar are you with LEGO's history and brand values?



7. **While experiencing the story...**



8. **After experiencing the story...**

I can write down the LEGO brand values that arise from the story:

9
Responses

Latest Responses
 "spread joy; good craftsmanship and community spirit."
 "Quality over quantity Perseverance Family bonding"
 "Warmth, Creativity"

4 respondents (44%) answered **creativity** for this question.

de
best

agregar que

creativity

customer

quality

Lego

9.



10. *While experiencing the story...*



11. *After experiencing the story...*

I can write down the LEGO brand values that arise from the story:

10
Responses

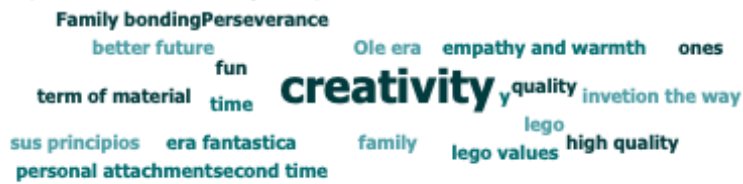
Latest Responses

"same as before."

"Family bonding Perseverance quality over quantity"

"Warmth, creativity, help other, empathy (because I read it a second time x))"

6 respondents (60%) answered **creativity** for this question.



12.

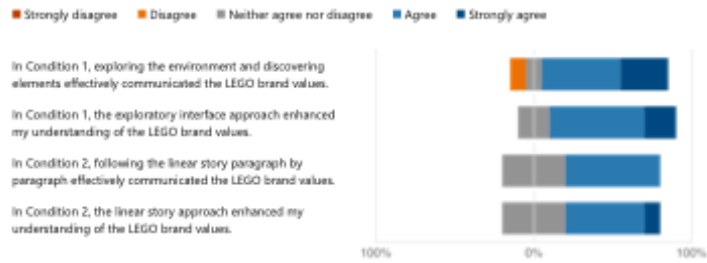


13. Overall, which condition do you believe was more effective in communicating LEGO brand values?

- Condition 1. Exploratory: 9
- Condition 2. Linear: 1
- Both equally effective: 0
- None of them: 0



14.



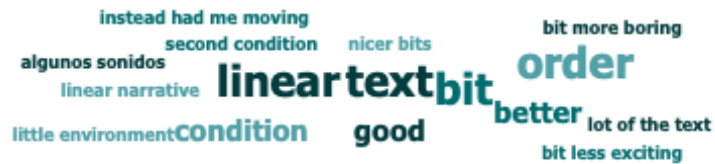
15. Are there any comments regarding your experience you would like to add?

8 Responses

Latest Responses

- "the explorative face snips the information in nicer bits, so I want to read each bit the l..*
- "I think the exploratory one is more suitable for young audience whereas the linear on...*
- "Typing continue before the text is fully written should make the text appear completel..*

3 respondents (38%) answered text for this question.



8.4 Appendix D – GitHub repository

The GitHub repository can be accessed [here](#).