

ANGLIA RUSKIN UNIVERSITY

FACULTY OF ARTS, HUMANITIES, EDUCATION
AND SOCIAL SCIENCES

**ILLUSTRATING NON-FICTION:
A PRACTICE-BASED EXPLORATION OF VISUAL AND MATERIAL
STRATEGIES IN NON-FICTION CHILDREN'S BOOKS**

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A thesis in partial fulfilment of the requirements of
Anglia Ruskin University for the degree of Doctor of Philosophy

Submitted: July 2025

Acknowledgements

I could not have undertaken this investigation without the guidance of Professor Martin Salisbury and Dr Katherina Manolessou, whose expertise, insight, and unwavering support made this research possible.

I am grateful for the unconditional encouragement my family has given me through the years, in particular my mother, who inspired my passion for children's books, and to whose memory I dedicate this thesis. I would also like to thank my sister, Irene, for her advice and patience throughout this process. Lastly, my thanks go to Sofia Neto and Flavia Z. Drago, who were a constant source of motivation during this research journey.

The project that gave rise to these results received the support of a fellowship from "la Caixa" Foundation (ID 100010434). The fellowship code is LCF/BQ/EU19/11710010. This research was also supported by the Deputación da Coruña and their Bolsas para o Perfeccionamiento de Estudos Artísticos (ID 2021000025009 and 2022000019158).

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ABSTRACT

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This practice-based investigation explores visual and material strategies used by illustrators to present and structure the information, organise the book's content, and influence the perceived reliability of the depictions in non-fiction picturebooks. The study was motivated by a shift in the genre that resulted in the proliferation of visually-conceptualised books, and in an increased presence of the illustrator in their ideation and development.

The methodological bricolage employed in the study enabled a combination of methods, at the core of which was creative practice. A review of primary literature led to the identification of visual strategies used in the genre, which were analysed in view of the degree of reliability they are perceived to convey by using the social semiotic concept of visual modality. Finding potential in introducing features from informational spaces into the book, four projects were developed through creative practice, exploring connections between non-fiction picturebooks and cabinets of curiosities, museums, and collections. Reflective processes were holistically applied through the research to reveal insights during making, and to extract conclusions from the findings.

Through this study, I found that modality can be expressed through pictorial, design and material means in non-fiction picturebooks. While certain strategies risk conveying authoritarian implications, they can be reframed, resignified or contested through conceptual, visual and material approaches. This investigation thus highlighted the illustrator's role in shaping the content of non-fiction picturebooks through their subjective voice, creative choices, and modality conveyed by the strategies employed.

The investigation concluded that, given the convergence of the creative and the informational in non-fiction picturebooks, illustrators have the possibility of using visual and material means to communicate information, influence the perceived reliability of the depictions, reinforce the narrative, enhance the content, and generate alternative reading experiences. The picturebook can thereby offer great expressive potential for the illustrator to construct informational experiences by making use of the multimodal nature of this form.

Key words: children's book illustration, modality, non-fiction, practice-based research

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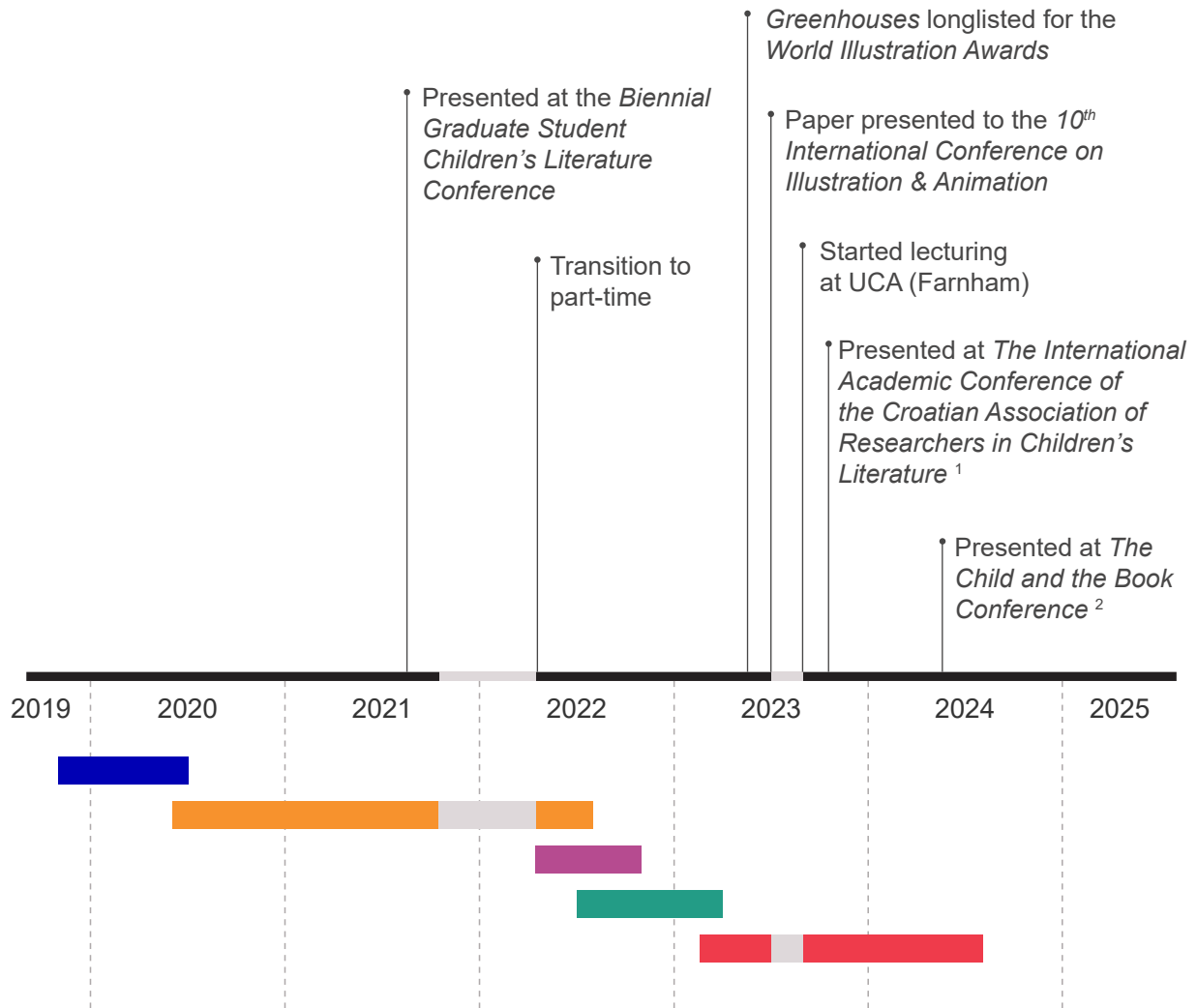
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Chronology of events



- Initial explorations
- Project 1: *Hats*
- Project 2: *Dorothea*
- Project 3: *Greenhouses*
- Project 4: *Communication*
- Intermission of studies

¹ Presentation co-written with Dr Katherina Manolessou

² Presentation co-written with Dr Sofia Neto

1 Introduction

1.1 Research context and gap in knowledge

This thesis is the result of a practice-based investigation into visual and material strategies to convey, organise and present information in non-fiction picturebooks, conducted through illustration practice and book making. The research was motivated by the emergence of a new generation of visually conceptualised non-fiction books for children, which evidenced a shift in the understanding of the genre under contemporary social, cultural, and epistemological values. The significance that illustration acquired in the development of these books has resulted in the production of works which are able to transcend the conventions that traditionally defined them (Merveldt, 2018). With images garnering a central role in non-fiction picturebooks, illustrators can assume a more active position in the ideation and realisation of these books and, consequently, in the shaping of the genre. Besides expanding the genre's expressive and communicative potential, this emerging approach to non-fiction has also opened additional avenues for its research.

Despite visuals being essential to contemporary non-fiction children's books, illustration has remained largely unexplored in academic literature, where the focus has often been on defining the features of the genre, the nature of its content, and the ways in which this is expressed (as noted by Mallet, 2004; Sanders, 2017; Merveldt, 2018; Grilli, 2020a; Goga, Iversen and Teigland, 2021b). Only recent scholarship has begun to address the significance, function, and potential of illustration, with few studies investigating the specific visual strategies employed in non-fiction picturebooks (e.g. Lartitegui, 2018; Goga, Iversen and Teigland, 2021b) and, to my knowledge, only one (Tzomaka, 2017) doing so from the practitioner's perspective. Recognising this gap in knowledge, this study aims to contribute to the practice-based research of non-fiction picturebooks by offering insights into the use, role, and significance of the creative strategies available to the illustrator in the making of such books. My research was primarily conducted through illustration practice, although not coterminous with it: this method was accompanied by the application of reflective processes, as well as by an analysis and examination of children's literature to contextualise, inform, and advance the projects that were developed in parallel. The introduction of perspectives from book arts, social semiotics, and museum studies further enriched and shaped the insights generated from the processes and outcomes of practice, establishing interdisciplinary resonances with kindred fields of knowledge.

This investigation derived from my own research, knowledge and practice, and as such is affected by influences, biases, and my personal, subjective experience as an illustrator. While this study cannot and does not intend to be applicable to non-fiction books in their totality, more so considering the variety of visual, material, and conceptual approaches the genre can embrace, it aims to contribute to the understanding of non-fiction picturebooks from a perspective often under-represented in the academic discourse.

1.2 Defining the research

Considering the illustrator's recently increased influence in the conceptualisation and depiction of information, using practice as an investigative method appears to be suited for the exploration of the creative strategies practitioners can adopt in the making of non-fiction picturebooks. Doing so can demystify the illustrator's approach to making, and enable an understanding of the tacit processes involved in illustration practice. Having practice become the main tool of an investigation has, however, its own set of particularities. Although doctoral inquiries traditionally commence with a defined research question, Salisbury and Styles observe that this practice may be in conflict with the exploratory and open-ended nature of the illustrator's process (2020, p.48), which does not necessarily abide by a predetermined structure, and often evolves in a more organic manner. Robin Nelson (2013) echoes this remark when he suggests that it may be preferable to speak of a *research inquiry* rather than a *research question*. He considers the latter implies explicit answers, while an investigation conducted through practice 'typically affords substantial insights rather than coming to such definite conclusions as to constitute 'answers'' (2013, p.30). Understanding the flexibility of the process, Nelson (2013) adds that the direction of the investigation may fluctuate once it is underway, further highlighting the open nature of research in the arts in contrast to other disciplines.

In consonance with Salisbury and Styles (2020) and Nelson (2013), this investigation first focused on defining an area of inquiry. The germinal idea behind the research revolved around a broad examination of the nature of pictorial representations in non-fiction children's books, and considered the exploration of conditioning factors in the rendering and visual approach to the illustrations. However, finding convergences between picturebooks and other informational media, publications, and spaces during

the initial stages of making affected the direction of the research, and led to a redefinition of the inquiry in more specific terms. Three questions, necessary for better describing the aims of my investigation and the area of inquiry, emerged in consequence:

- What are the specific creative strategies used in non-fiction picturebooks in the presentation and delivery of information?
- How can conventions and practices found in informational publications and spaces be adapted into non-fiction picturebooks?
- How does the use of such conventions affect the content presented and its modality? And, in view of this, how can visual modality be understood in the context of non-fiction picturebooks?

1.3 The thesis

1.3.1 Creative practice

Aiming to respond to the questions above, I adopted an authorial approach to illustration practice as the main method of research. Following a period of speculative making, I developed four exploratory projects independently of an industry setting (figure 1). As creative practice was produced in a research context, I was able to focus the study on the possibilities of picturebook making, rather than on audience suitability or publishing requirements. While the picturebook was acknowledged as a commercial and communicative product, implied readers were only considered when it was relevant to the practice produced, with the development of the resulting projects being generally unconstrained by production costs or age of readers.

The processes and outcomes of practice are discussed in chapters 4, 5 and 6, and comprise:

- **Hats.** A picturebook, presented as a dummy book, which provided the context for an initial exploration of the research questions.
- **Dorothea.** A project created to explore the characteristics of exhibition spaces.
- **Greenhouses.** A screenprinted and laser-cut carousel book that examined the potential of the book as a conceptual space.
- **Communication.** A project composed of seven books, contained and presented in a box.

The development of the outcomes is shown through records of practice in the form of sketches, physical prototypes, prints, and photographs. These are presented in Appendices B, C, D and E,¹ and serve as a means of 'evidencing the research inquiry' (Nelson, 2013, p.86), thus revealing the reasoning and processes involved in their making.



Figure 1. The four outcomes produced during the research.

1.3.2 The exegesis

The outcomes of practice are accompanied by a written component, or exegesis. Its function goes beyond the translation of the visual work into words, to become complementary to it. The exegesis serves both as a revision of the practice produced, and as a reflective discourse, consequently 'validating the process of studio enquiry and elaborating the value of its outcomes' (Barrett, 2004, p.2). In this thesis, the exegesis is divided into seven chapters, of which this introduction is the first, with the subsequent sections addressing the content as follows:

Chapter 2 outlines the research context, offering an overview of visual strategies employed in non-fiction picturebooks through the examination of primary literature. This involved the identification and interpretation of prevailing

1 The figures in the appendices are referenced in this thesis with a letter that indicates the appendix in which they appear, followed by a number.

conventions analysing, through a social semiotic lens, their meaning and purpose, and how their use may be associated with a perceived sense of reliability. A full list of the books examined is provided in Appendix A. A paper based on an earlier version of this chapter was included in the book of proceedings for the *10th edition of the Conference on Illustration and Animation (CONFIA)* (Lostalé-Seijo, 2023).

Chapter 3 positions the thesis in relation to practice-based research paradigms, identifying and discussing the methods and processes employed to investigate the research questions. It additionally outlines professional, cultural and academic factors influencing the investigation, as well as the criteria used to ensure the rigour of the study in the wider academic context.

Chapter 4 presents an overview of the initial experiments that contributed to defining the research questions, collected in Appendix B. Following this, the chapter offers a critical account of the development of *Hats*, a picturebook in which I explored visual, organisational, peritextual, and material considerations in the communication of information, as seen in Appendix C.

Chapter 5 examines the incorporation of morphological features of exhibition spaces into the book's format, and the implications this has, in *Dorothea* and *Greenhouses*. The visual development of both projects is found in Appendix D.

Chapter 6 builds upon the shortcomings of previous explorations of practice through the development of *Communication*, a project in which the deconstruction of the book and an attempt to challenge the limitations of the bound page led to the examination of the idea of collection (Appendix E).

Chapter 7 offers a reflection on the investigation undertaken, and the creative strategies employed through practice, which are collected in Appendix F. This chapter presents key findings and identifies areas for further research, thereby serving as the conclusion of the study.

1.4 Definition of key terms

In the interest of clarity, it is pertinent to define the key terms used in this study, specifying their meaning within the investigation:

Picturebook. The term *picturebook*, equivalent to *picture book* or *picture-book*, is adopted in this study following its prevalent use in academia, where the compound form is often preferred for the emphasis it places on the integral relationship between pictures and text (Kümmerling-Meibauer, 2018a). This term is employed in publishing and scholar circles, as well as in the context of this investigation, to refer to children's books in which sequential imagery is combined with an explicit or implied text to construct and convey meaning (Shulevitz, 1985; Salisbury and Styles, 2020).

Non-fiction. While *non-fiction* is the most commonly found denomination in publishing, having also been largely adopted in academia (e.g. Sanders, 2017; Lartitegui, 2018; Grilli, 2020a), its use has been critiqued for its dichotomous nature (Merveldt, 2018), imprecision (Kümmerling-Meibauer and Meibauer, 2021), and logical impossibility in view of the author's subjectivity (Nodelman, 1987). Given that 'trying to define the genre by what it is not remains largely unproductive' (Merveldt, 2018, p.232), Merveldt has suggested the label *informational*, similarly to Mallet's (2004) use of *information texts*, to refer to these books and avoid the fiction/non-fiction binary. Kümmerling-Meibauer and Meibauer, however, find both options to be inadequate, considering *non-fiction* to be too broad, and *informational* exclusionary, thus suggesting the adoption of *descriptive picturebooks* instead (2021). Adding to this, labels such as *expository* have been suggested to distinguish with more precision the type of approach found in these books (Kiefer and Wilson, 2010). Not wishing to add to an already complex debate on nomenclature, and with this research focusing on creative strategies rather than on the terminological nuances surrounding these books, the term *non-fiction* is used in this study to refer to children's books in which, as defined by Merveldt, an informational intention is complemented by a desire to delight and engage the reader (2018, p.232).

Visual. In this research, I understand *visual* to extend beyond the pictorial and illustrative, to also encompass features of book design (e.g. page or spread layout, typeface).

Material. In this study, the terms *material* and *materiality* refer to the objecthood of the book, and its status as a physical artefact. Following the use Dinç and Alaca make of *materiality* (2021), this term is employed to denote the tangible properties of picturebooks as reading objects, referring to both their material qualities, as well as the spatial relationships and physical engagement they can generate.

Mode. In the context of social semiotics, a *mode* refers to each of the various meaning-making resources that are employed in communicative processes (e.g. visual, verbal, written) (Kress and van Leeuwen, 2001). Given the coexistence of multiple semiotic modes in picturebooks, the term *multimodal* is applied to these works to indicate the combination of, at least, visual and written modes in their realisation (Sipe, 1998; Nikolajeva, 2010; Salisbury and Styles, 2020). In accordance with this, the term *multimodal text* is used to describe the content of a picturebook, referring to both images and text.

Modality. More extensively described in chapter 2, the concept of *modality* is not to be confused with that of *mode*. In social semiotics, *modality* refers to the extent to which a sign asserts itself as a representation of what is real or true. Originally used in verbal texts to refer to the credibility of verbal statements, this concept has been applied to the analysis of images to determine the degree to which they are intended to be perceived as credible within a specific social context, and under a particular social agreement of what is regarded as true (Kress and van Leeuwen, 2006, p.155). In this thesis, the concept of modality is applied to the analysis of picturebooks and illustration practice, adapting its interpretation to the particularities of the picturebook medium. Its consideration enables an exploration of how the visual and material attributes of the book can influence the perceived credibility of depictions, and affect how the information is presented to an implied reader.

2 Visual strategies in children's non-fiction²

2.1 The emergence of new values

Picturebooks have become a fertile ground for authors and illustrators to explore the narration of the fictional and the factual. The diverse approaches to this form currently found in the children's publishing market attest for the multiple possibilities the picturebook can engender, and evidence its potential as a literary and artistic product. Indeed, Barbara Bader's early attempt to reach a comprehensive definition of what we understand by *picturebook*, now paradigmatic in children's book research, already introduced this idea:

A picture book is text, illustrations, total design; an item of manufacture and a commercial product; a social, cultural, historical document: and foremost an experience for a child.

As an art form it hinges on the interdependence of pictures and words, on the simultaneous display of two facing pages, and on the drama of the turning page.

On its own terms its possibilities are limitless (1976, p.1).

The notion of the picturebook as a form of unlimited potential presented by Bader may be partially derived from one of its main defining features, namely the interdependence between pictures and words (amply described by scholars such as Bader, 1976; Shulevitz, 1985; Sipe, 1998; Nikolajeva and Scott, 2006). While it could be argued that the structuralist-influenced understanding of the interdependence between the verbal and visual semiotic systems could be limiting, it is also apparent that this intersemiotic complementarity has enabled a degree of narrative and representational freedom that sets the picturebook apart from other informational literary forms. Non-fiction children's books have benefited from the expressive possibilities of the picturebook, making use of what Sipe defines as the synergistic relationship between image and text (1998), while adopting an approach not solely motivated by a desire to inform, but also by an intention to amuse and delight the reader (Merveldt, 2018). By embodying these dual purposes, the picturebook has thus become 'the format of choice to describe, explain, report, instruct and inspire' (Merveldt, 2018, p.232).

The possibilities offered by the picturebook as an informational medium need to be considered in conjunction with the social, cultural, and historical context to which it

2 A preliminary version of this chapter was included in the book of proceedings for the 10th edition of the *International Conference on Illustration and Animation (CONFIA)* (Lostalé-Seijo, 2023).

belongs. The renewed focus on the visual, defining of what has been identified in academic circles as the *iconic* or *pictorial turn*,³ has permeated visual culture as a whole, consequently affecting the conceptualisation and making of non-fiction books for children (Goga, 2020). The visual guides published by the British company Dorling Kindersley, such as *Eyewitness* (1988–2025), are early examples of the impact that a dominant role of imagery has had in shaping the production of children’s non-fiction. These books evidence how building the content around the visual, rather than the textual, can influence the construction, understanding, and communication of knowledge. Particularly representative of this shift is the following fragment of an interview with Dorling Kindersley’s co-founder Peter Kindersley, where he contextualised the aims of the books the company produced in view of the broader context to which they belonged:

I think that there is a shift taking place in the world which in a sense has not been recognized. Information is better communicated through pictures initially. ... At Dorling Kindersley we believe that a thousand words are worth a thousand pictures. We’re not trying to supplant the word; we’re just trying to redress the balance, given everything else that is happening in the world (Goldenberg, 1992, p.297).⁴

While initially met with reluctance (Goldenberg, 1992), allowing the image to become central to the design and production of non-fiction picturebooks would soon come to be widespread in publishing. Doing so would have implications in the making processes, leading to a redefinition of the roles of those involved in the development of non-fiction picturebooks, with greater responsibilities being placed on the figures in charge of the book’s visuals (Garralón, 2013, p.158), including designers, photographers, and illustrators. In time, the dominance of the visuals in publishing would result in the emergence of a new set of production values, and a rejuvenation of the physical characteristics of the picturebook. These changes, some of which could be intuited in previous decades, materialised with greater clarity and as a unified trend during the 2010s. During this time, a shift in the production of non-fiction picturebooks was more

3 The term *pictorial turn* was coined by W. J. T. Mitchell (1994) to highlight the growing emphasis on the visual aspects of culture, both in the public sphere and in the academic discourse, and particularly in the Anglo-American context. At the same time, but independently from Mitchell, the German philosopher Gottfried Boehm (2006) also introduced the concept of *Ikönische Wendung* (iconic turn), further evidencing the existence of a change in the Western cultural and epistemic realities. In the study of picturebooks, the pictorial turn is identified since the early 1990s (Merveldt, 2018), and can be particularly appreciated in the shift towards the visuals that publishers like Gallimard or Dorling Kindersley pioneeringly adopted, and which would later become the norm in the industry.

4 This interview predates Mitchell’s publication of *Picture theory* (1994), demonstrating that the pictorial turn was manifesting in the British children’s publishing industry since, possibly, the late 1980s.

clearly recognised in the UK and the rest of Europe (Lartitegui, 2018; Merveldt, 2018; Goga, 2020; Gotti, 2020), with some pinpointing *Maps* (Mizieliński and Mizieliński, 2013) as a breakthrough in the genre and a representative expression of a developing picturebook trend (Gotti, 2020; Salisbury, 2020). *Maps* synthesised characteristics which would become defining of the new generation of non-fiction picturebooks. Its large format, the diluted and expanded notion of audience it presented and, most notably, its visual conceptualisation, coincide with the characteristics of what would come to be known as *new non-fiction* (term used by scholars such as Aronson, 2011; Grilli, 2020b).

The questioning of a predominantly logocentric world-view cannot, however, be solely attributed to a reclamation of the visual prompted by the pictorial turn. Rather, it is also a reflection of the postmodern currents that preceded it, and the doubt they cast on the capacity of language to convey universal truths. While complex in nature, postmodern ideals rejected the tenets of the modern era and their associated assumptions of objectiveness, instead preferring, amongst other notions, an indeterminacy of knowledge, the decanonisation of the prevailing narratives of Western culture, and a fragmented view of reality (Lewis, 2001b; Allan, 2018). Although authors may not consciously seek to address these values in their work, children's books are cultural artefacts and, as such, distil the prevailing values of the context under which they come to be (Lewis, 2001b; Bader, 2011; Allan, 2018; Lartitegui, 2018). Consequently, the conceptual and artistic identity of non-fiction picturebooks has found itself affected, to a greater or lesser degree, by the impact these ideals have had in the way information is consumed, and the mindset through which we engage with it.

The disputing of social and cultural constructs that shape the transmission of knowledge, and the re-examination of how information is communicated to a younger audience have resulted in a tendency to challenge objectivity and impartiality in the presentation of information. This has facilitated the incorporation of personal and individualistic approaches in books which are, by their definition, informational, placing non-fiction picturebooks in the position to bridge the factual and the creative (Grilli, 2021). As a result, the adoption of creative strategies in the presentation of information often needs to navigate the friction that can exist between these, in appearance, opposing perspectives.

2.2 Modality in non-fiction picturebooks

While the versatility of the picturebook has enabled heterogeneity in the book maker's approach to non-fiction, certain narrative voices, visual conventions, and design strategies may be identified to be representative of the genre, although not necessarily exclusive to it. The traditionally instructional nature of non-fiction has likely contributed to the incorporation of resources and motifs drawn from educational, scientific, or technological contexts, as well as from other forms of informational literature and media. While the references to these forms and contexts can be traced back to early picturebooks,⁵ they have remained relevant in contemporary non-fiction titles, in spite of the changing times. The use of visual and conceptual connections to scientific and artistic traditions of the past has, in fact, become as prominent as to constitute an identifiable trend that has been referred to as 'modern nostalgia' by Big Picture Press publisher Helen Wicks (Cowdrey, 2017, quoted in Merveldt, 2020, p.121).

Referencing visual or textual strategies typical of informational media in picturebooks may be at the service of facilitating a clear communication of the information, based on the effectiveness these devices hold in their original contexts. However, these may, intentionally or not, reinforce the perceived reliability of the information presented due to the associations they evoke, and connotations they carry. The incorporation of devices that contribute to enhancing the perceived reliability of the content could generate tension when faced with the current understanding on non-fiction, more partial to subjective interpretations and critical engagement than to a passive acceptance of alleged truths. In view of this, it becomes pertinent to analyse the usage, adaptation, and reinterpretation of such strategies under contemporary epistemological and cultural views. The use of these devices in the genre is symptomatic of the current understanding of the picturebook as an informational form, and the relationship with knowledge children are expected to establish. Consequently, an examination of such strategies in non-fiction picturebooks can yield insight into how social, cultural, and historical values are integrated into the book, and how the interplay between creative expression and informational intent is negotiated in today's informational literature for children.

5 John Amos Comenius' 1658 instructional work *Orbis sensualium pictus* (2017), often referred to as the first children's picturebook (Salisbury and Styles, 2020) has been also defined as the first encyclopaedia, ABC book, and textbook for children (Karlskov Skyggebjerg, 2020). The visual approach and design of this book is reminiscent of encyclopedic works of the time.

As multimodal works, picturebooks make use of, at least, text, images, and the combination of both to transmit information and convey reliability, with each mode having specific affordances. Textual resources, for instance, generally mirror devices found in adult non-fiction. Conveying authority in the accounts through the use of specific formulae and conventions, such as an omniscient narrator, univocal narrative approaches, or connotations of certainty in the language employed, can suggest truthfulness in the writing. Despite the historical prevalence of these devices, and their presence in contemporary literary works, they are frequently contested under present-day views. Indeed, Sanders (2017) sustains these strategies can inhibit critical engagement, and perpetuate an approach to learning more akin to the banking model⁶ Freire described in his *Pedagogy of the oppressed* (2014), than to current educational values. On their part, multimodal elements, such as the book's backmatter, have been examined for their potential to endorse the credibility of the author, or the accuracy of the content (Merveldt, 2018; Daly, 2021). The backmatter can provide the reader with additional contextual information, resources to further their understanding of the subject, or a glimpse into the research process behind the book. Doing so can enhance the reader's engagement with the content, while modelling their informational literacy (Cappiello and Hadjioannou, 2022).

While the capacity to communicate reliability has been largely studied in semantics and linguistics, it has received less widespread attention in relation to the visual. Because of this, the examination of resources which convey reliability through imagery has had to draw elements from the linguistic tradition, having to find correspondences between the written and visual modes. Among these borrowed notions is Halliday's understanding of the concept of modality, used in linguistics to refer to the 'truth value or credibility of (linguistically realized) statements about the world' (Kress and van Leeuwen, 2006, p.155). This concept was notably introduced into the context of visual communication by semioticians Gunther Kress and Theo van Leeuwen in their work *Reading images: the grammar of visual design* (2006). Similarly to how a text can feature a series of words, phrases and constructions which can help determine the credibility of that which it narrates, Kress and van Leeuwen posit that visual representations may contain certain elements, or modality markers, that convey how truthful an image is meant to be perceived as in a particular social context, and under a particular tacit social agreement of what

6 The concept of banking model was introduced by educator Paulo Freire (2014) to describe the education model in which learners uncritically accept the information provided to them by their teachers.

is considered true (2006). Features such as the choice of colour, the rendering of detail, the use of depth, or the presence of shading, can be used to convey different degrees of credibility, connoting different values depending on the specific understanding of reality, or coding orientation, under which they are created or placed (Kress and van Leeuwen, 2006; Løvland, 2016).

Kress and van Leeuwen's theories have been broadly applied to various aspects of picturebook research (e.g. Lewis, 2001a; Unsworth, 2001; Nikolajeva and Scott, 2006; Painter, Martin and Unsworth, 2013; Løvland, 2016; Kümmerling-Meibauer, 2018b), to which the study of modality is no exception. In the context of children's literature, the concept of modality must be understood in relation to the conventions, expectations, and characteristics of the picturebook as a creative form and communicative medium. Stephens (2000) observes that a certain degree of abstraction and stylisation is often expected from the depictions, from which it transpires that the criteria used to define the reality principles operating within the picturebook must be adjusted accordingly. This is considered by children's book scholar Anne-Stefi Teigland (2021) in her analysis of how the naturalistic, abstract, technological, and sensory coding orientations identified by Kress and van Leeuwen (2006) appear in non-fiction picturebooks. Teigland (2021) finds correspondences between picturebook imagery and these reality principles in the type of rendering employed, the representational choices, the visualisation methods, and the potential to elicit sensory responses in the reader, acknowledging the particularities of the medium in doing so. Providing a different approach to that of this recontextualisation, Anna Løvland's (2016) earlier study of Kress and van Leeuwen's theories (2006) connected the types of modality they define to corresponding, pragmatic, and hermeneutic traditions of truth. Løvland's analysis provides a nuanced perspective of the notion of modality, demonstrating that a single visual strategy can be used to convey multiple conceptions of truth, the understanding of which would be influenced by '[t]he choices of motives, views, perspectives and, not least, the multimodal context' (2016, p.186).

In my analysis of primary literature, of which a full list of titles can be found in Appendix A, I draw from Kress and van Leeuwen's work (2006), but also from Teigland (2021) and Løvland's (2016) interpretations of it, to identify visual expressions of modality in non-fiction picturebooks. The purpose of this review is not limited to an examination of the reality principles or interpretations of truth that lend informational depictions an appearance of reliability. Besides this, I also explore how contemporary titles have

reframed these conventions in a context epistemologically distinct from that in which they originally emerged. Returning to Bader's understanding of the picturebook as 'text, illustrations, total design' (1976, p.1), I consider the possibility to convey modality to be not only in the textual and pictorial, but also in the design choices. The design of a book, much like the illustrations that feature in it, may be capable of transposing the sense of legitimacy associated with certain semiotically charged visual elements into the picturebook. In view of this, the visual strategies discussed below as expressions of modality, while mainly pictorial, also comprise decisions on the book's distribution, page layout, and typeface.

2.3 Visual expressions of modality

2.3.1 Photographs and photorealistic representations

Images that establish a relationship of naturalistic correspondence with reality, such as photographs and photorealistic representations, have traditionally been used in children's non-fiction for their potential to replace, through the visual, the contact with an object (Lartitegui, 2018). Photographs owe their high naturalistic modality to the seemingly direct connection they establish with the world we can observe and experience in a way that is apparently devoid of the artist's subjective input. On this basis, photographic representations are perceived as reliable in so far as they constitute a record which transmits the 'literal reality' (Barthes, 1977, p.17), being an apparently faithful depiction of that which we perceive with the naked eye.

Based on the assumption that photographs communicate an unadulterated vision of the world, those behind the camera have sometimes been considered to have no influence on the realities depicted. In the words of Susan Sontag, the photographer was often thought to be 'a scribe, not a poet' (2008, p.88), which underscores their perceived role as recorders, and not as creatives. Sontag further elaborated on this discussion by adding that 'the supposition that cameras furnish an impersonal, objective image yielded to the fact that photographs are evidence not only of what's there but of what an individual sees, not just a record but an evaluation of the world' (2008, p.88). Although the subjectivity of the maker might be initially obscured by an illusion of transparent accuracy, photographs and, by extension, visual representations that strive for photorealism, are no less devoid of the underlying intentions and interpretations of the author than drawings or paintings (Sontag, 2008). As much as a mimetic image

can provide faithful representation of reality, the choices the artist makes cannot be ignored as a statement of ideology, seeing as photography ‘decrees notable whatever it photographs’ (Barthes, 1993, p.34). It would appear that, regardless of the suspicion photographs may incite due to the concealed biases of the creator, their high naturalistic modality confers on them an aura of accuracy and reliability hardly paralleled in an informational context, being often perceived as an imprint of reality despite an awareness of the unavoidable risks of photo-manipulation (Løvland, 2016).

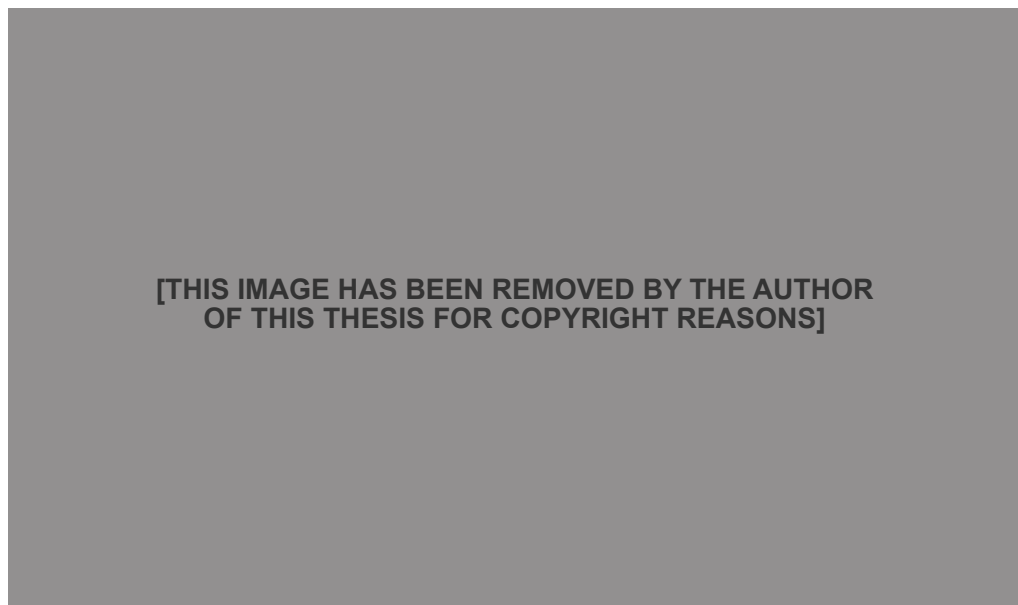


Figure 2. Spread from *La coccinelle* (Bourgoing and Peyrols, 2007), published by Gallimard Jeunesse.

While the presence of photographs in children’s books is as old as photography itself (Wattenberg, 2018), its popularity peaked at the end of the 1980s, with photographs and photorealistic representations becoming a staple of children’s non-fiction picturebooks (Garraón, 2014). Publishing houses such as Dorling Kindersley and Gallimard popularised the use of naturalistic imagery following a visual approach which frequently involved presenting the subjects decontextualised, often in a white background, and removed from any additional surrounding information that could indicate the subjectivity of a maker (figure 2). Kress and van Leeuwen (2006) see in such representational choices an intention to convey objectivity, impersonality, and detachment, from what it can be surmised that these images are meant to be perceived as impartial accounts of reality. Key examples can be found in series like *Eyewitness* (1988–2025), published by Dorling Kindersley. In these, there is a combination of historical and contemporary

photographs which are often presented as cut-outs, in a clean design that intends to capture the reader's attention and encourage a closer engagement with the image (Goldenberg, 1992; Garralón, 2013). Representations displaying viewpoints which could more clearly hint at the voice of a maker, such as artistic photographs or photomontages, are, however, not present in these titles. Despite the extensiveness of the collection, topics which require greater subjectivity or a nuanced approach, such as politics, sociology, contemporary history, or philosophy, are not addressed (Garralón, 2013, p.165). By avoiding indicators of subjectivity, it can be inferred that, in these cases, photographs rely on an idea of truth as correspondence (Løvland, 2016), and avoid any alterations which could compromise this idea.

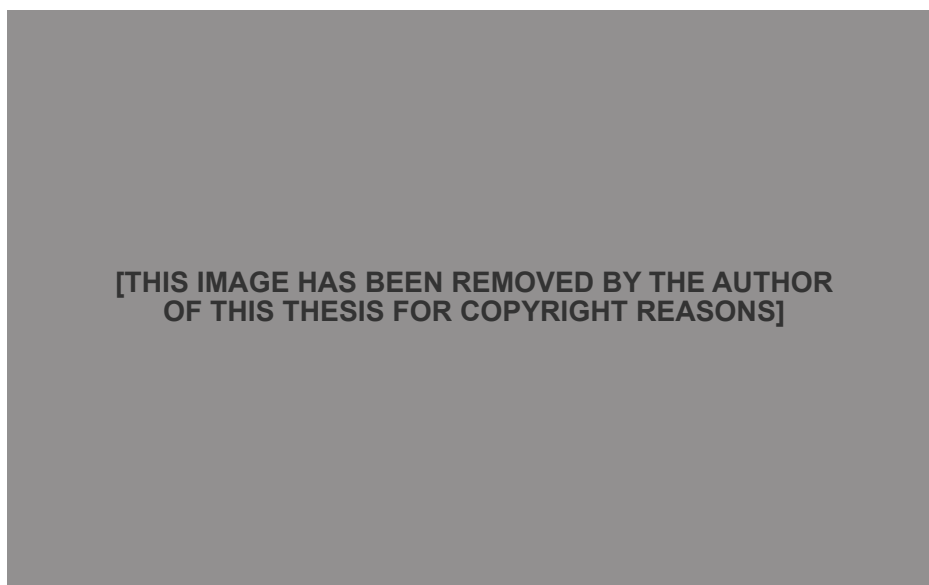


Figure 3. Spread from *Curious comparisons* (Doneiger et al., 2008).

Although less ubiquitous now than they had been in past decades, photographs are still the medium of choice for certain contemporary works, with books like *Curious comparisons: a life-size look at the world around you* (Doneiger et al., 2008) constituting a more recent example of their use. This title includes life-size photographs to illustrate the relative size of a series of elements, introducing facts and information about the objects and creatures depicted. The playful and humorous approach to design and photography is conveyed through unexpected juxtapositions, varied visual layouts, and the use of an informal script typeface. This stands out as an example of how the voice of the creator can manifest through the use of a medium which *a priori* could seem limiting due to its assumed neutrality, with the playfulness of the design and conceptual approach to the representation of the content counterbalancing the authority derived

from the use of photography as a means to establish a connection with reality (figure 3). On its part, a wordless book like *Oxiseau* (Birds of a feather) (Pittau and Gervais, 2010), part of a series including titles such as *Axinamu* (Out of sight) (Pittau and Gervais, 2008) and *Nacéo* (The open ocean) (Pittau and Gervais, 2012), presents a lift-the-flap approach that enables the reader to discover information, make connections, and engage with the book as an object (figure 4). As in previous cases, the photorealistic rendering of the images contributes to the perceived objectivity of the depictions. However, the interactivity required from the reader, and the possibility to create new animals by flipping, mixing, and combining the slit pages in a mix-and-match section, invites a re-examination of the role photorealistic imagery can play in children's books. This highlights the possibilities that disrupting accurate depictions of reality through the fanciful and fantastic can have in challenging the authority photographs are assumed to bestow on that which they depict.

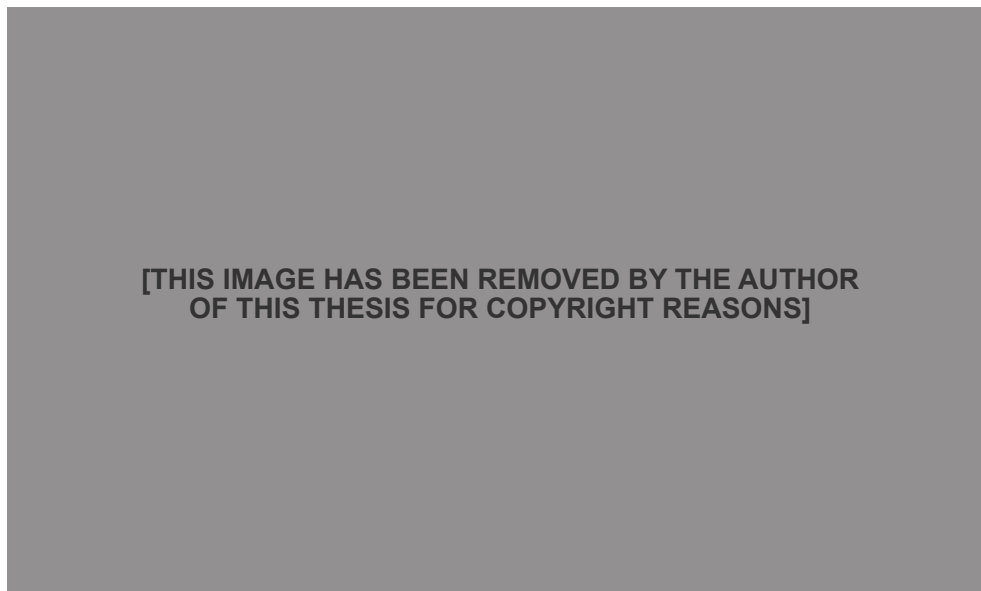


Figure 4. Spread from *Oxiseau* (Pittau and Gervais, 2010).

2.3.2 Data and information visualisation

Non-fiction children's books have occasionally adopted visual features and graphic representations from scientific and technological fields, borrowing the use of diagrams, graphs, charts, sections, and other visual conventions for the display of information and data. Despite their low naturalistic modality, these representations can be perceived as more real than a photograph given their high modality in

technological or abstract coding orientations (Kress and van Leeuwen, 2006). Such depictions may be seen as able to reveal an essential truth beyond external appearances, the reliability of which is preferable in certain circles and fields due to their apparent lack of subjectivity (Kress and van Leeuwen, 2006).

The perceived reliability associated with these conventions might derive from the expectation of an impartial representation of data, as it is presumed from the scientific and technological contexts in which they are frequently used, but also from their visual appearance. In contrast to representations in which the hand of the author is more apparent, the visual austerity of pictograms, technical representations, and related visual conventions appears to offer few possibilities to conceal the creator's dispositions. Statistician and expert in information graphics Edward Tufte (2001) advocates, in fact, for the use of as little ink as possible in their creation to ensure the representation of only relevant information, hence directing the reader's attention to the data and not to any redundant, distracting, or unnecessary graphics or decorations. His definition of graphical excellence as that which 'gives to the viewer the greatest number of ideas in the shortest time with the least ink in the smallest space' (2001, p.51) would suggest that using the visual resources efficiently, and limiting their role to the communication of information, would hinder any possibilities of misrepresentation and falsehood. This is not to say that these representations cannot be biased: a danger about which Tufte warns in his work (2001; 2006). Although information graphics should aim to convey unbiased information, those who visually interpret and design the data can distort it and interfere with the reader's attempt to decipher the underlying reality through their choices in the representation of information. However, this is no different, as Tufte (2001) points out, to the use that can be made of other verbo-visual representations in order to deceive their intended audience.

While the intention behind the use of these resources might not be limited to an attempt to convey truthfulness, but also to achieve an effective and clear presentation of data, their presence in children's books is not exempt from the reliability that information graphics hold in their original contexts. The following analysis examines the use of these conventions in non-fiction picturebooks in four categories, each addressing a specific visual approach to the representation of data in picturebooks: symbols and pictograms; charts, graphs and diagrams; mechanisms that reveal the inner workings of beings or objects; and geographical projections and representations of space.

(i) Symbols and pictograms

The most notable example of the use of symbols and pictograms in children's non-fiction may be found in the books produced by the Isotype Institute under the Max Parrish Imprint from 1942. These early works made use of a method of visual explanation called ISOTYPE (International System Of Typographic Picture Education), which looked into 'assembling, configuring and disseminating statistical information through pictorial means' (Walker, 2012, p.345). Initially devised by Otto Neurath in the context of the Vienna Circle, the development and application of this system would continue after his death by a team directed by his widow Marie Neurath, responsible, in the span of two decades, for the production of more than eighty informational children's books (Walker, 2014).

Likely influenced by the positivistic views of the Vienna Circle, Otto Neurath envisioned the use of signs as a way to educate and make knowledge accessible, on the basis that images, unlike words, are devoid of bias: a view he manifested in his slogan 'Worte trennen, Bilder verbinden' (words separate, pictures unite) (Jansen, 2009, p.229). Neurath saw great potential in the universal understanding of pictograms, and showed clear and ambitious ideas concerning the presentation of information for children, as he did for visual education (Neurath, 2010; Walker, 2012). The preface to *Visual science* (1950–1952) is illustrative of the calculated process behind the design of each one of the Isotype images:

As you turn the pages of this book, you will notice that it uses more pictures and fewer words than most schoolbooks you have seen. These pictures, called Isotype charts, are not meant to show you exactly how things look but to give you information about them, like a map or an engineer's blue-print. Because they have an unusual job to do they are made in an unusual way. Everything which would not help you understand the meaning, or which would confuse you, is left out. Colours are used only to help make the meaning clearer, never simply as decorations. This means that every line and every colour in these pictures has something to tell you (Neurath and Lauwerys, 1950).

Although Tufte himself gave little – and negative – attention to the works produced by the Isotype Institute (Jansen, 2009), the previous passage creates notable connections with some of his criteria for graphical excellence, as it addresses the fact that any superfluous information is left out to avoid confusion or a misinterpretation of the images. In these representations, even the use of colour is an informational resource, and not a decorative or aesthetic choice. This highly practical conception of the images is consistent with Tufte's argument towards the presentation of the greatest amount of

information by the fewest resources, which requires making use of all the constituent parts of an illustration to convey meaning. In this sense, in their conception, the Isotype representations seem to aim for the clarity, precision and efficiency that Tufte's guidelines expected from infographic displays (figure 5). While some contemporary works may maintain a similar visual aesthetic, such as *A world of information* (Platt and Brown, 2016), it is rare for representations of data in children's non-fiction to abide by Tufte's principles to the extent of graphical purity that the Neuraths applied in their work.

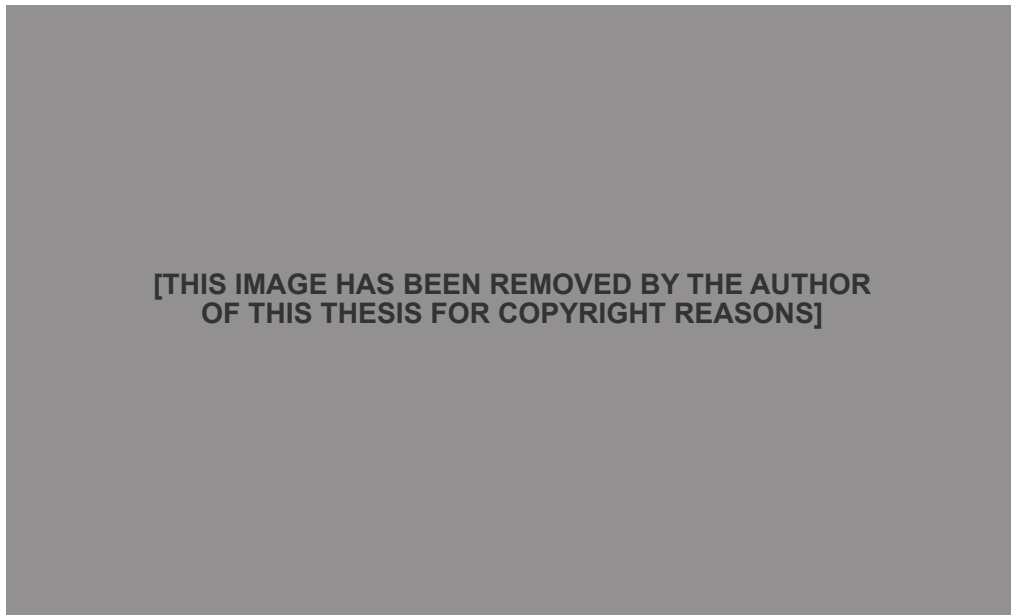


Figure 5. Spread from *The wonder world of land and water* (Neurath, 1957).

(ii) Charts, graphs and diagrams

The flexibility that the picturebook as a medium enables in the depiction of information graphics is particularly noticeable in recently published non-fiction titles. While these works share with Tufte's principles an intention to present the information clearly and efficiently, they also enable the inclusion of visual elements beyond those essential for the communication of data. For instance, *Timeline: a visual history of our world* (Goes, 2015) turns the concept of a timeline into a pictorial interpretation where the selected historical events are visually merged in detailed illustrations. *Yo y el mundo* (Me and the world) (Trius and Casals, 2019) shows the differences in the lives of children around the globe by collecting information about demography, housing, food, culture or sports, creatively representing data through resources such as maps, pie charts, bar graphs, pictographs, and other infographic visualisations, which become illustrations in

their own right (figure 6). Including diagrams not as a means for data representation, but as a narrative element, Emiliano Ponzi's *The Great New York Subway Map* (2017) describes the creative process of Massimo Vignelli, bringing the lines of the subway to life so they become integrated with the illustrations, symbolically depicting the untangling of ideas.



Figure 6. Spread from *Yo y el mundo* (Trius and Casals, 2019).

Although information graphics are usually associated with technical fields, Kress and van Leeuwen, upon describing the connotations different geometrical forms carry because of their shapes, suggest that the origin of diagrams is not only found in technical drawing, but also in abstract art (2006). The interpretation of abstract shapes as being linked to the technical as well as to the creative seems to manifest in *Geo-gráficos* (Geo-graphics) (Giménez, 2021). In this book, artist Regina Giménez illustrates specific data about Earth and the universe exclusively through the use of diagrams and infographic representations. Her visual approach results in depictions that oscillate between the precision of information graphics, and the sensibility of geometric art. As opposed to the work produced by the Isotype Institute, Giménez's choices of colour do not have an exclusively informational purpose and seem to mainly respond to aesthetic decisions. Similarly, the purpose of the representations is not only to display the information. In some spreads, abstract-influenced imagery is used to create scenes in which the graphs take the form of their content: the peaks of a chart turn into a mountain range, or the

circles of a bubble chart become the planets they reference, suspended in the darkness of space (figure 7). In this way, the apparent abstract nature of some of these representations becomes connected to the realities they depict, while maintaining the credibility associated with technological representations.

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Figure 7. Spreads from *Geo-gráficos* (Giménez, 2021) showing depictions of mountains through an area chart (left), and celestial bodies through a bubble chart (right).

(iii) Revealing the inner workings

Technical illustrations can facilitate the representation of elements which are not often visible to the naked eye by employing cut-aways, exploded views, or cross-sections. Contemporary non-fiction reconsiders the use of these visualisations by focusing not only on the pictorial, but including additional features that can enhance the reader's engagement with the book. In interpretations of anatomy manuals, such as *Illumanatomy* (Davies and Carnovsky, 2017), the naturalistic images in the book depict various layers of the human body. The novelty can be found in the use of lenses of red, green, and blue to enable the reader to discover the skeleton, muscles, and organs in the manner of an X-ray. With a stylised visual approach, *What's inside?* (OKIDO, 2013) presents the inner workings of various elements, which can be revealed by holding the page up to a light. This book addresses topics such as the human body, machines, nature, and buildings, but also includes a section in which the reader is invited to draw what they imagine might be inside certain objects, enhancing the interactivity of the experience. A further example of the reinterpretation of these visualisation techniques is found in *Inside the body*, by Joëlle Jolivet (2022). The use of flaps, a mechanism traditionally employed in early anatomy manuals, is introduced in this book along with representations that show a contemporary sense of illustration and design (figure 8). With these books encompassing a range of visual languages, it can be inferred that the reliability is found on the nature of visualisations that reveal the inner workings, and the

acknowledgement that these belong to scientific, technical, and informational fields. This suggests that certain strategies that express reliability depend on the associations implied by certain representational conventions, rather than on the rendering of images, or the chosen visual approach.

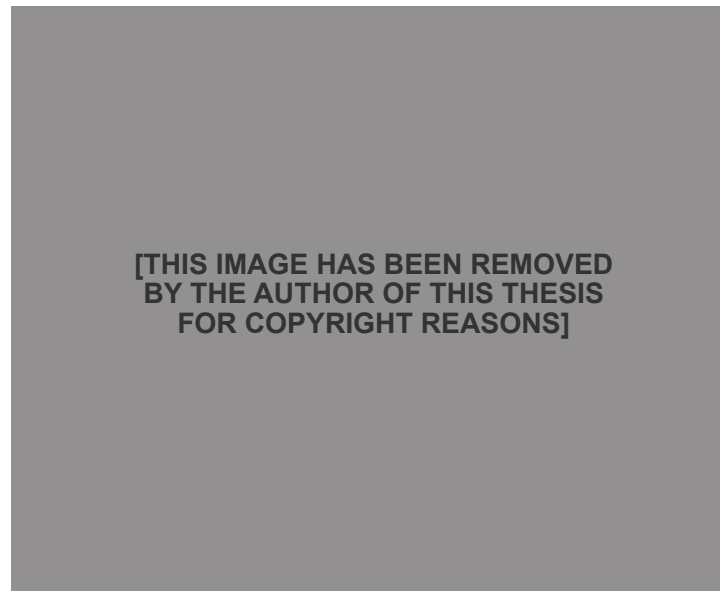


Figure 8. Spread from *Inside the body* (Jolivet, 2022).

(iv) Geographical projections and representations of space

The use of specific conventions for representing space can influence the perceived modality of the depictions. Technical perspectives, such as the axonometric projections employed by Mitsumasa Anno in his illustrations of various worlds and scenarios in titles like *Anno's Britain* (1982), can evoke a sense of reliability. However, adhering to graphical projections imposes a series of restrictions on the illustrator that make of this a rare feature in children's books, with only a few scattered contemporary examples, such as the work of Masato Tanaka (2020) or Didier Cornille (2014) utilising such approaches.

Besides these representational choices, maps may be amongst the most prevalent approaches for the visualisation of space in picturebooks, with geographical atlases constituting a specific subgenre of non-fiction. Series such as *A minha cidade* (My city) (2016–2019), published by Pato Lógico, demonstrate how a map can become an independent children's publication through the use of a fold-out format (figure 9). This collection is comprised of twelve books representing locations from around the world that

include Beja, Edinburgh, Coimbra, Madrid, Quito, São Paulo, or Viseu, each approached through the singular viewpoint of an illustrator (Ramos, 2021). While the information presented may be regarded as factual, the selection is dependent on the individual experience of each artist, who combines features of maps, travel guides, and short stories into these works. As a result, the books of this collection reinterpret the function of maps by introducing an openly subjective view in both the concept and the visuals. In doing so, they foster a connection between the author and the reader that reduces the distance between the two through the book's visual and textual tone.

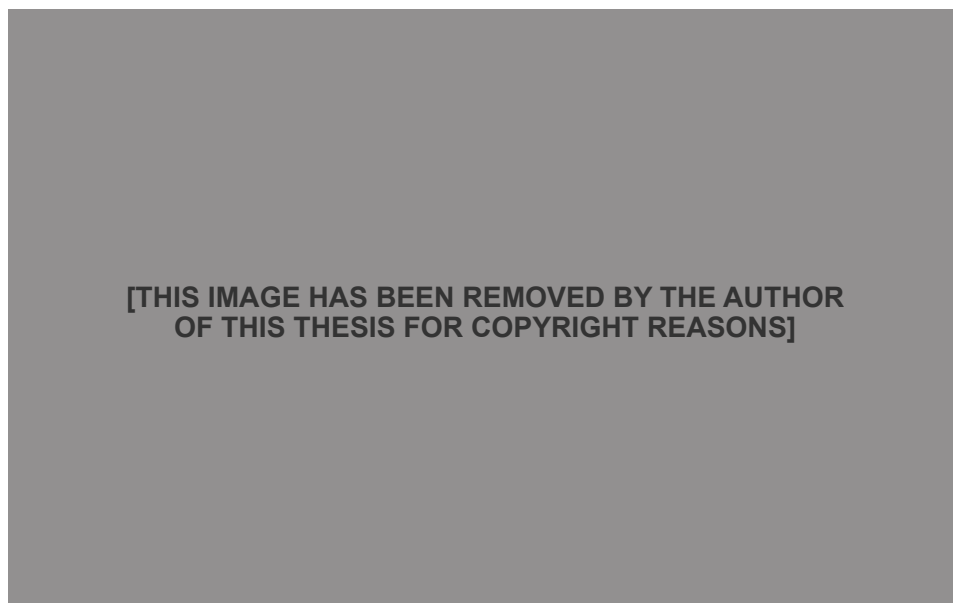


Figure 9. Fold-out map from Catarina Sobral's *Coimbra* (2019).

When discussing cartographical representations in contemporary non-fiction children's books, a mention needs to be made of the best-selling title *Maps* (Mizieliński and Mizieliński, 2013). Despite its popularity and significance in the context of contemporary non-fiction, as noted in section 2.1, this book could be considered to include a series of inaccuracies and omissions that may be obscured by an initial sense of reliability associated with maps. Some of these are common in geographical projections, such as the historically Eurocentric tendencies in their representation, or the inaccuracies derived from the impossibility of translating a spheroid into a two-dimensional image (Brotton, 2013). However, others evidence the subjectivity of the makers of this book, as it can be perceived in the choice of the countries to be represented, with the first edition including forty-two (Mizieliński and Mizieliński, 2019), or the way in which the information is selected and located in relation to the map, which is likely governed by aesthetic choices (figure 10).



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Figure 10. Spread from *Maps* (Mizeliński and Mizeliński, 2013).

Both *A minha cidade* and *Maps* include, more or less overtly, the voice and subjectivity of the illustrators, which manifests in the ideation, selection, and presentation of the information. Books such as these stand as testament to the laxity of the picturebook as an informational medium. The picturebook offers a freedom that results in decisions which, in other contexts, would be sufficient to question the reliability of the representations, but that are not seen as an impediment for the communication of information in children's books. Instead, the unique visual and conceptual approach a work can present is celebrated as a strength in non-fiction picturebooks.

2.3.3 Visual connections with informational media

Illustrators of children's books have occasionally established connections, visual or otherwise, with spaces or publications historically associated with the organisation and dissemination of information. This largely involves institutions and publications that originated during the modern era, such as museums, newspapers or encyclopaedias. These are, after all, products of the Enlightened Europe, and as such have largely shaped how we organise, disseminate and relate to information to this day, particularly in the West. The reproduction of their features in children's books can be associated with

the reliable, as these contexts have been considered to constitute relatively trustworthy vehicles of information through time. These spaces and publications are not, however, without criticism and faults.

Despite its role in contributing to a more informed society, the Enlightenment is also the originator of systems of oppression due to its proclaimed belief in an external and objective truth (Williams, 2004). Consequently, the institutions and publications which developed under its precepts cannot be divorced from the politics, power dynamics, and ideology inherent in them. Museums, often seen as epitomes of institutionalised imperialistic values, have been the focus of substantial criticism, which has prompted a critical examination of their displays and collections (Hein, 1998). The criticism placed on them is also directed towards publications crafted by dominant institutions, due to the Eurocentrism and bias they have, likewise, historically presented. In spite of the scrutiny these institutions and publications have faced, with museums having been described as symbols of ‘unchanging solid modernity’⁷ (Hooper-Greenhill, 2007, p.1), they have had a notable significance in mediating our relationship with knowledge. This hints at their potential in offering strategies for presenting information and providing a sense of legitimacy in non-fiction picturebooks.

The power of establishing connections with institutions and publications that have been lengthily associated with knowledge and instruction has not escaped the attention of picturebook makers. Strategies from these contexts, although present throughout picturebook history, feature into contemporary titles manifesting, especially, in a renewed interest in encyclopaedic values (Claudine Hervouët, 2014), and in a sense of nostalgia (Cowdrey, 2017 in Merveldt, 2020, p.121). The assimilation of features and qualities associated with spaces and publications of modernity into non-fiction picturebooks can go beyond these approaches to influence the layout and design, as well as the pictorial language in a book. In the following analysis, I will examine the influence these contexts have in non-fiction by focusing on how characteristics typical of newspapers, dictionaries, encyclopaedias, museums, and instructional books feature in picturebooks.

7 *Solid modernity* is defined in opposition to *liquid modernity*, a concept introduced by Zygmunt Bauman in the homonymous book (2000). Solid modernity refers to the moments of stable and predictable social, economic, and cultural structures in modern societies, which contrast with the flexibility, fluidity and uncertainty that characterises liquid modernity.

(i) Newspapers

Perhaps owing to their rigid layout, newspapers have not often been imitated in picturebooks, where they most commonly feature as an exceptional spread, rather than as the entire approach to the book. An example of their occasional use can be found in *The book of bees* (Socha, 2016), a compendium on the relationship between bees and humans, visually presented as an encyclopaedia. The book includes two spreads conceived as part of a fictional newspaper, *The daily buzz*. Although these pages make use of the newspaper layout, this primarily serves as a strategy to collect and present a series of fun facts, explanations and recipes. The design is thus employed in the service of creating of a visual collage of information, imitating newspapers aesthetically, without attempting to mirror their function.

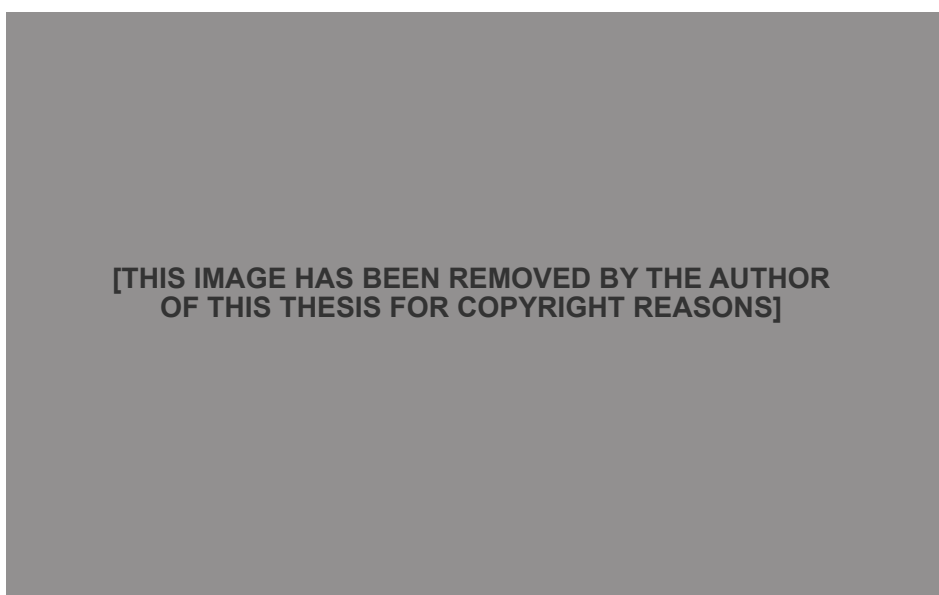


Figure 11. Spread from *Robos de leyenda* (Romero Mariño and Blasco, 2020).

Conceiving the totality of a book in the form of a newspaper is unusual, as not many topics might lend themselves to this design. The collection *Fuera de la ley* (Outlaws), comprised of *Robos de leyenda* (Legendary robberies that made history) (Romero Mariño and Blasco, 2020), *Grandes fugas de la historia* (Legendary escapes and jailbreaks) (Romero Mariño and Blasco, 2021) and *Espías míticos* (Top secret: the book of spies and agents) (Romero Mariño and Blasco, 2023) appear to be an exception. These picturebooks compile, in the form of an anthology, newsworthy stories referring to historically notorious escapes, thefts, and espionage feats. The arrangement of image

and text imitates the layouts of newspapers through the use of columns, clearly defined headlines and decks, cut lines, and mastheads (figure 11). Kress and van Leeuwen consider the credibility of newspapers ‘rests on the belief that photographs do not lie and that ‘reports’ are more reliable than ‘stories’” (2006, p.149). Although the images in these books are not photographs nor photorealistic images, they include features reminiscent of the medium. The limited colour palette and textures present in the illustrations are evocative of the restrictive colour range and use of half-tone characteristic of early photographs. This creates a visual connection with the images which would have been found in the front pages of the newspapers that originally featured the events collected in these books. In these examples, referencing newspapers through the design and the pictorial confers a sense of reliability to the content, while also being a thematically fit approach for the subject-matter.

(ii) Dictionaries

The presence of illustrated dictionaries in picturebooks and the literature surrounding them is scarce (Iversen, 2020), as it would seem their function as a language learning instrument has been largely assimilated by books of a similar nature, such as concept or ABC books. Although there is variety in the types of illustrated dictionaries produced, the characteristics and appearance they present as children’s books are not dissimilar from those typical of their adult counterparts. In both cases, visual and textual resources are used for the representation, definition and, occasionally, exemplification of a series of headwords in one or more languages (Iversen, 2020).

The presentation of lexical information can be considered to grant dictionaries an aura of authority and objectivity, despite the subjective and culturally biased perspective through which the representation of language is commonly tackled (Benson, 2001). This authority can be reinforced through the adoption of visual approaches perceived as objective. Although dictionaries may present illustrated scenes in which a series of entry-words is collectively depicted into the same picture, it is not uncommon to represent the concepts individually, removed from the background or setting entirely. Kress and van Leeuwen (2006) see in the omission of a setting a compromise with the truthfulness of visuals under a naturalistic coding orientation, as the removal of a section of the image would lower its modality. However, in isolating the depicted element from its context, a picture can also be perceived as prototypical and universal, allowing images to become representative of a category, rather than of individual

entities. While this implies a sacrifice of the complexities of the realities depicted, with the potential risk of falling into reductive stereotyping, a prototypical representation of a concept enhances its educational applicability, as it is often required in this type of books (Iversen, 2020).

Contemporary examples of children's dictionaries have begun to more overtly show the subjectivity of their author(s). *Mis primeras 80.000 palabras* (My first 80,000 words) (Ferrer, 2002) presents a highly subjective interpretation of the idea of dictionary, reframing its function and the expectations placed on the form. For the development of this project, Spanish publisher Media Vaca invited more than three hundred graphic artists from over twenty countries for each to produce an illustration of their favourite word in their language, and select their preferred definition. The publisher's interest laid in presenting, through the chosen words, a view of the world through the eyes of illustrators, allowing the reader to (re)discover words from a new perspective (Media Vaca, 2025) (figure 12).

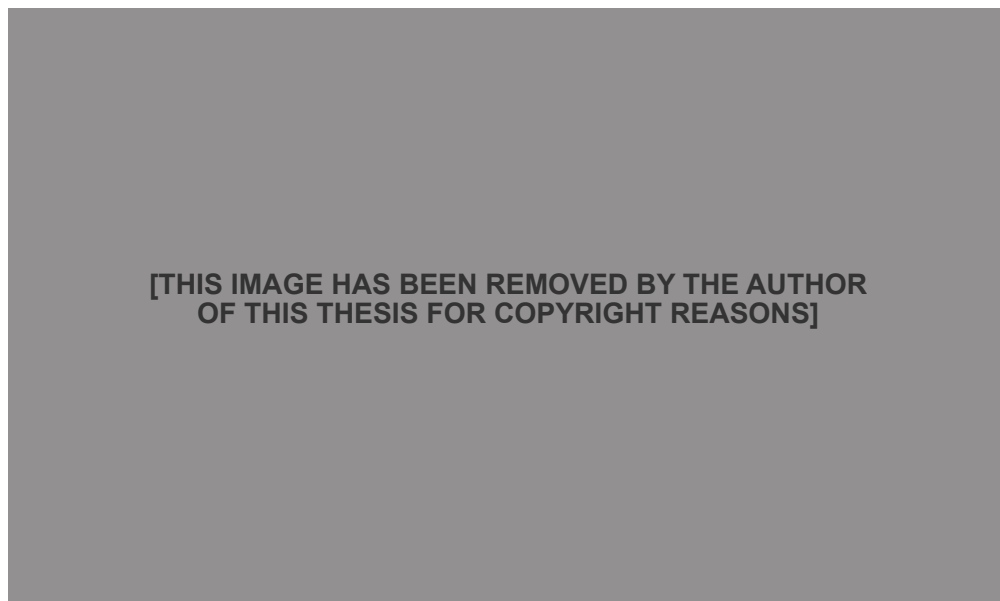


Figure 12. Spread from *Mis primeras 80.000 palabras* (Ferrer, 2002).

Besides this collectively subjective approach, other titles may include hybridisations between the dictionary and other genres. Portuguese publisher Pato Lógico released a series of thematic dictionaries, including *Mar* (Ocean) (Henriques and Letria, 2012), *Teatro* (Theatre) (Henriques and Letria, 2015), and *Dança* (Dancing) (Henriques and Letria, 2022) under the collection *Atividários* ('Actividaries', a portmanteau of *activities*

and *dictionary*). Aside from fulfilling the traditional role of a dictionary, these titles include practical activities for the reader to engage with on their own, or in a family or educational contexts (Pato Lógico, 2022). The introduction of activities takes the dictionary beyond its original function, leading the reader to engage with the content more actively. In addition to this, the definition of the different entries, not limited to the lexical, facilitates the establishment of connections with broader areas of knowledge. The pictures depict a series of highlighted headwords per spread, which constitute prototypical examples of that which they illustrate. In combination with a layout and distribution typical of a dictionary, the images show a balance between prototypical representations and the creative expression of the illustrator, showing the maker's personal interpretation of each concept (figure 13).



Figure 13. Spread from *Mar* (Henriques and Letria, 2012).

The examples discussed make use of stylistic and design features typical of dictionaries, while reinventing and recontextualising the book's function and purpose. These titles are therefore able to generate an interplay between the associations created with an apparently objective visual approach, and the individuality and subjectivity of the maker, effectively adapting these forms to contemporary practices.

(iii) Encyclopaedias

Visual features associated with encyclopaedias have prominently appeared in non-fiction picturebooks, both historically and at present. The visual approach that characterises them is not dissimilar from that of dictionaries, perhaps owing to the comparable purposes of both, with dictionaries presenting information about language, and encyclopaedias about the world (Iversen, 2020). Encyclopaedic depictions often correspond to the description Kress and van Leeuwen make of visualisations with a taxonomic purpose, in which they note that the elements 'are often shown in a more or less objective, decontextualised way. The background is plain and neutral. Depth is reduced or absent. The angle is frontal and objective. Frequently there are words inside the picture space' (2006, p.77). These visual features appear in works such as Tchoukriel and Aladjidi's *Illustrated Compendia* (2016). In this series, the layout is also reminiscent of encyclopaedias, with thematic double spreads including multiple, illustrated entries that present information relating to the natural world.

The European encyclopaedic tradition is abundant and, as such, has manifested differently in contemporary children's books. Apart from incorporating the previously mentioned features, there are books that have aesthetically referenced the first published encyclopaedias. In *Paisajes perdidos de la Tierra* (How life on Earth began) (2020), illustrator Aina Bestard sought to imitate the visual appearance of early illustrated plates on palaeontology, as indicated in the book's original afterword, paying homage to the artistic works used for educational purposes in the 19th century. These inspirations are evidenced in the black and white illustrations of fossils that appear throughout the book, which adhere to the characteristics that Kress and van Leeuwen describe as typical of taxonomic depictions (2006). Aside from this, the full-colour panoramic images constitute the most conspicuous connection with the plates of Henry de la Beche and other notable paleoartists Bestard is referencing with her work (figure 14). The use of lines, dots, and textural pattern in her mark-making, and even the presence of a frame surrounding some of the pictures, seems to respond to an attempt to imitate the qualities of early lithographs of scientific subjects. This enhances the connection to early encyclopaedias and the credibility associated with them not only through the design, but also by visually referencing the defining features of the techniques used in the production of their original illustrations.

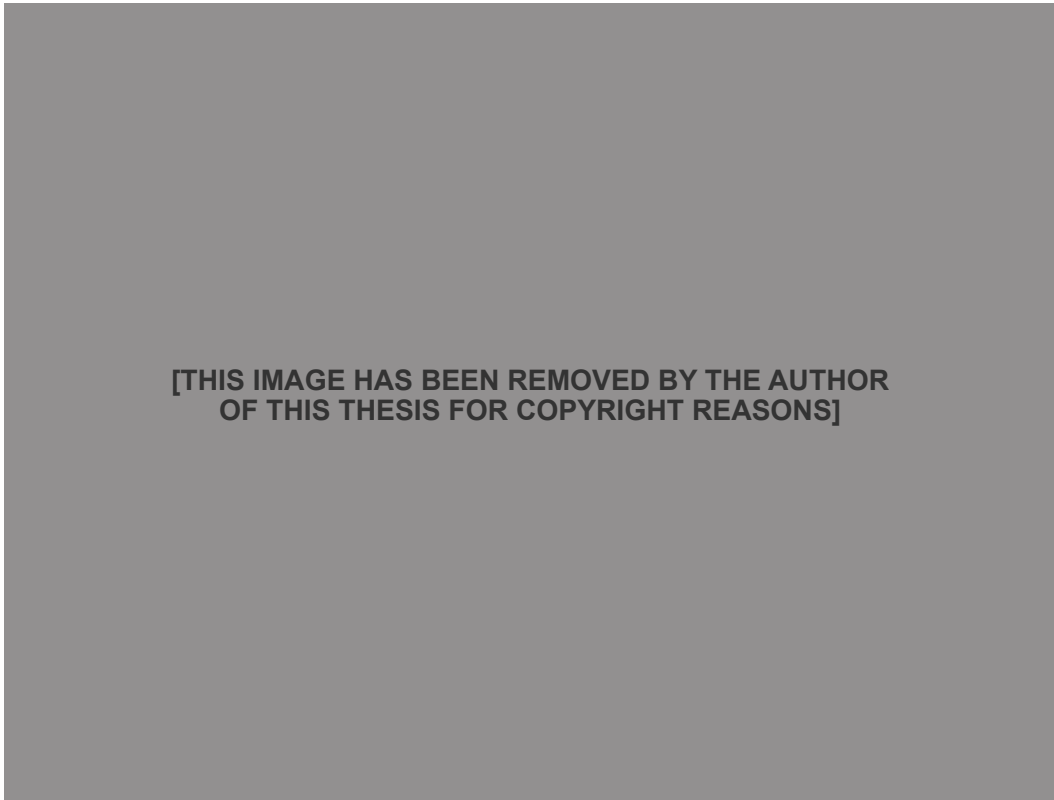


Figure 14. Spreads from *How life on Earth began* (Bestard, 2020) showing black and white drawings (above) and scenes in full colour (below).

(iv) Museums

Museums share with encyclopaedias an instructional function, with the mandate to 'collect, display, preserve and teach' (Merveldt, 2020, p.115) being present in both. The similarity of these purposes with those of the non-fiction book, and the connection these institutions hold with education (Hein, 1998; Hooper-Greenhill, 2007), has led museums to be frequently introduced in children's non-fiction as a context for narratives, and for the presentation of information.

In some books, the inspiration drawn from the museum manifests in a literal depiction of the inside of the building. The spreads of *Animo museum* (Animal museum) (Belhadj and Spiers, 2021) show the different rooms of a natural history museum, including its visitors and personnel. After an invitation for the reader to enter the *building*, found in the opening endpapers, the index appears in the form of a museum map, showing the themes that will feature in each spread, and hinting at how the cataloguing of knowledge will contrast with that expected from a conventional museum. Rather than classifying the

content using a taxonomic rank, the information is divided according to the animals' different body parts, such as skeletons, eyes, or teeth, which enables the reader to establish comparisons between the creatures included in the book. The reader is prompted to wonder about which animal the exhibited element corresponds with, using flaps as a mechanism to reveal and discover the answers. Through this, the object of exhibition is also connected with its original context: before being lifted, the flap shows the element in the museum, separated from its original setting and exhibited as an object for contemplation. Upon lifting it, the reader can find, along with the answer, an illustration of the animal it belongs to in their natural habitat (figure 15).

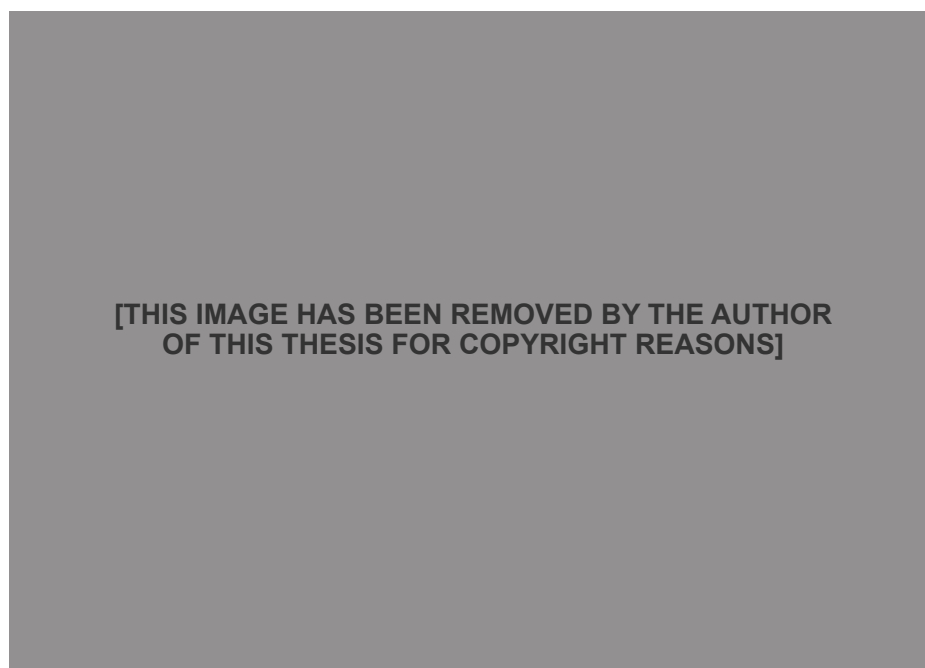


Figure 15. Spread from *Animo Museum* (Belhadj and Spiers, 2021).

A different approach to the representation of the museum can be found in the series *Welcome to the museum* (2014–2025). This best-selling collection addresses disciplines such as botany, history, astronomy, anatomy or palaeontology, currently comprising ten primary titles.⁸ Produced in a sizeable and lavish hardback edition, these books include detailed and sophisticated illustrations, as well as complete factual information about the topics they address. Rather than providing a literal depiction of the space, the books in this series become a metaphor for the museum, with a narrator welcoming the reader and

8 The success of the *Welcome to the museum* series has led to the publication of activity books, postcard books, and poster books based on the ten original titles, contributing to the expansion of the series.

encouraging them to ‘wander through the pages’, ‘pause to inspect each exhibit carefully’ and to ‘tour its galleries’ (Broom and Scott, 2014). The connection with the museum is mainly established through the written text, although visual connections with these spaces can also be identified. While most of the titles from this series are illustrated by different artists, the naturalistic approach across the volumes is reminiscent of early scientific illustrations and original taxonomical plates. These images occasionally include features which could be identified with museum displays, such as glass domes (figure 16). Besides this, the books include divider pages to differentiate their sections, which translate the spatiality of the museum into the book form, separating and distributing the content in a manner comparable to how the rooms or galleries of a museum do. Most notably, an immediate visual connections with museums can be found in the presence of an admission ticket in the book cover, which would grant access to the inside of the *exhibit*, and which also establishes a visual link between the books of this collection.

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Figure 16. Spread from *Botanicum* (Willis and Scott, 2016), from the *Welcome to the Museum* series.

(v) Instructional books

Books that describe step-by-step activities or procedures form a significant portion of children’s non-fiction, addressing themes such as crafting, physical activities, recipes, as well as other instructed exercises often tied to common hobbies and interests of children (Løvland, 2016). Early examples of instructional books can be found in works published

by Père Castor, with works such as *Ribambelles* (Paper chains) (Parain and Guertik, 1932). In this title, the book not only provides examples to inspire creation by presenting options of increasing difficulty, but also functions as the medium through which the activity can be conducted. The element of interaction and feasibility of the actions is precisely what determines the modality of these books. The reliability of the content does not depend on exclusively visual elements, but rather on a pragmatic understanding of truth: the content may be perceived as true because it can be replicated in practice, and has a potential for realisation (Løvland, 2016).

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Figure 17. Spreads from *Enciclopedia visual de los sonidos* (Ferrer, 2021).

The visual approach that can be applied to instructional books is diverse. *Enciclopedia visual de los sonidos* (Visual encyclopaedia of sound) (2021), developed by Isidro Ferrer in partnership with Museo Nivola in the context of the COVID-19 pandemic, uses photographs to propose, rather than direct, a series of activities relating to sound. Showing moments of the making process, presented as procedural steps, Ferrer suggests tasks, techniques, and materials which aim to open possibilities to interpret the perception, reproduction, and translation of sound into a graphic language (Atónitos Huéspedes, 2021) (figure 17). Other contemporary examples, such as *The handbook of forgotten skills: old fashioned fun for a new generation* (Crowley, Batiste and Duriez, 2023) follow a traditional step-by-step design, illustrating processes that refer to a variety of abilities for children to follow and learn, and relying on different coding orientations for this matter. Consequently, the depictions associated with these books are not aesthetically bound to a particular visual language and, far from presenting a uniform approach as a genre, can comprise representations ranging from photographs or photorealistic depictions, to images more akin to data visualisation.

The chosen representational approach may not necessarily respond to an intention to visually connect with the reliable, which hinges on the feasibility of the actions, but to enable the reader to more easily follow the instructions, and actively engage with the proposed activities.

2.4 The potential of expressions of modality

Non-fiction children's books feature a repertoire of visual strategies that have the potential to be used to organise and structure the content, foster informational literacy in children, and reinforce the perceived factuality of the accounts. The devices which affect the perception of reliability are not exclusively located in the stylistic approach to images, but can also be found in the associations made through the book's layout and design, and the connotations certain concepts bear in relation to the broader historical and cultural context. A photorealistic rendering of images, the use of information and data visualisations, and the application of design or pictorial references to newspapers, encyclopaedias, dictionaries, museums, or instructional books can be considered strategies the illustrator can use to determine and interpret the modality of the content. As noted by Nikolajeva and Scott '[a]rtists have means, based on conventions, to influence interpretation' (2006, p.174).

The relevance of referencing newspapers, encyclopedias, and other comparable printed forms may be put into question as their presence becomes increasingly diffused among newer generations of readers. However, the analysed examples suggest that these publications can be considered to have acquired a symbolic value beyond their original meaning. In discussing conventions on the literary page in artists' books, visual theorist Johanna Drucker highlights how certain layout devices associated with the newspaper 'are so codified that they can be quoted without any verbal content' (2004, p.163), which she also finds to be true in the case of dictionaries and sacred texts. As these publications are deeply entrenched in the Western collective imagination, they have become symbols of a loaded cultural significance, surpassing the necessity for their original source to have a predominant presence for their meaning and connotations to be understood.

The analysis of literature suggests that visually referencing established literary forms can become part of the language available to book makers in the design of non-fiction picturebooks. Although these conventions often convey a sense of reliability, their re-examination in the context of contemporary non-fiction can provide opportunities

for the illustrator to support, challenge, or question the implications these strategies embody. Doing so would enable illustrators to reconcile some of the traditional conventions found in the genre with practices and approaches aligned with present-day perspectives and views. The possibility for makers to recontextualise and explore strategies considered to convey reliability suggests that illustration practice can become a suitable method for the examination of their creative potential in the making of non-fiction picturebooks.

3 Methodology

3.1 Practice-based research

Upon contextualising the research with an initial review of primary literature, practice was used as the main method through which to explore and address the research questions. However, and despite its significance in artistic disciplines, the integration of practice into doctoral programmes is a relatively recent development. The conceptual backdrop to current research paradigms in creative subjects stems from Christopher Frayling's seminal paper *Research in art and design* (1994), where he introduced three possible approaches to research applicable to these disciplines. Drawing from Herbert Read's distinction between teaching *through* art and teaching *to* art (1944), Frayling creates a tripartite model that differentiates between research *for*, *into* and *through* art and design. Each defines a relationship that can be established with the act of research: research *for* art and design involves the subordination of research to the aims of practice; research *into* art and design, the critical study of the work of others; and research *through* art and design, the use of practice as the main means through which to conduct an investigation.

This model has been recently brought into the study of illustration⁹ by researchers and educators Rachel Gannon and Mireille Fauchon in *Illustration research methods* (2020). Maintaining the defining characteristics of the categories as originally formulated, Gannon and Fauchon offer definitions for each in relation to this discipline. They define research *for* illustration alluding to its instrumental role in informing the development of a project or outcome, contemplating actions such as the sourcing of visual materials, or the acquisition of new technical competences. Positioning practice not as the objective, but as the object of study, they identify research *into* illustration with the examination of theoretical works that discuss diverse facets of the field, including the outcomes of practice, applicable methods, and historical notions. Finally, they describe research *through* illustration as an investigation conducted by means of illustration practice, this involving the exploration of tools and materials, the consideration of alternative approaches, or the engagement with inquiry processes that may contribute to the development of

9 While *Illustration research methods* (2020) is the first book to adapt Frayling's model in relation to illustration practice, his theories had already been applied to the methodological contextualisation of practice-based PhDs in illustration, and more concretely in the field of children's books (e.g. Manolessou, 2012; Palmer, 2016; Tzomaka, 2017).

creative outputs. Although these approaches differ in their aims and in the processes they entail, they are not mutually exclusive (Yee, 2010), with all three converging in my investigation. Research *into* and *for* illustration have been conducted as a means of contextualisation and literature review, visual research, and experimentation, thus informing the visual and conceptual development of practice, as well as its critical discussion. This thesis as a whole is considered to be, however, an example of research *through* illustration.

Far from representing a uniform approach to a query, research *through* illustration encompasses multiple forms of research rooted in practice which, despite their apparent similarities, diverge in how they position the role of making within the investigation. Although the terms and definitions used to describe these approaches can be contentious, *practice-based* and *practice-led* appear amongst the most commonly employed labels to refer to investigations of a practical nature, creative or otherwise¹⁰ (Candy, Edmonds and Vear, 2021b). In the context of illustration, these terms define two similar but distinct approaches to a research question, with the former involving the development of illustrated works as the method through which to obtain insights into the inquiry, and the latter the use of research to reach new understandings about creative acts (Candy and Edmonds, 2018; Gannon and Fauchon, 2020). In this thesis, practice occupies a central space. Illustration becomes the main vehicle to explore the incorporation of visual and material strategies into non-fiction children's books, with the outcomes generated constituting the main contribution to knowledge. This use of practice as both an interrogative process and as a means to produce the final artefact is generally agreed to be defining of practice-based research (Biggs and Büchler, 2008; Yee, 2010; Candy and Edmonds, 2018), leading me to situate the methodology grounding this investigation within this approach.

10 The debate around forms of research which involve the use of practice has given rise to a series of terminological variants of subtle but significant differences (Candy, 2019; Vaughan, 2021). These include 'practice research, practice as research, practice-led research, research-led practice, evidence-based practice, research-through practice, practice-related research, artistic practice, professional research' (Candy, Edmonds and Vear, 2021b, p.28). Due to the complexity of the discussion and similar nature of these approaches, authors have often made use of umbrella terms to refer to them (e.g. practice-as-research in Nelson, 2013). It is not within the scope of this study to discuss the existing nuances amongst them. For the sake of simplicity and consistency throughout my writing, I am relying on Candy and Edmonds' (2018) definitions of practice-based and practice-led research to allude to two of the most frequently identified models within this paradigm.

Regardless of their focus and nature, academic studies share the requirement of producing a substantial contribution to knowledge to be recognised as such, of which practice-based inquiries are no exception (Candy, 2019; Candy, Edmonds and Vear, 2021a). The insights that these investigations generate are to be evaluated and examined so as to be accepted by the wider research community. This involves following criteria which, in practice-based research, generally respond to whether the outputs can be considered 'original, validated, contextualised, shareable, and retainable' (Candy, Edmonds and Vear, 2021a, p.199). For these judgements to be made, the outcomes need to necessarily be communicated in clear and unambiguous terms, for which practice alone tends to be, arguably, insufficient (Candy and Edmonds, 2018; Candy, 2019). To subdue this limitation, in doctoral practice-based investigations, the practical outcome, or artefact, is to be accompanied by a written component, or exegesis, that contextualises and describes the significance of practice in the research (Nelson, 2013; Candy and Edmonds, 2018). While the artefact is capable of embodying the insights obtained during the investigation (Candy, 2019; Candy, Edmonds and Vear, 2021b), the exegesis is commonly needed for the findings to be verbally articulated, allowing practice to 'find a discursive form' (Barrett and Bolt, 2019, p.33), shaping the results into concrete conclusions capable of reaching a wider audience. The exegesis complements the creative practice in facilitating the dissemination of the knowledge obtained through and from making, while also enabling the practitioner to state their position, critically engage and reflect on the inquiry, and articulate any insights gained throughout the process (Nelson, 2013; Candy and Edmonds, 2018).

As anticipated in chapter 1, in view of the benefits of complementing the practical outcomes with a textual account, and abiding by current doctoral regulations, this thesis comprises a body of creative work, and an accompanying exegesis. The compilation of creative practice in Appendices B, C, D and E includes the records and results of the investigation, showing both process and final work. The written element, on its part, contextualises my practice and research, and serves as a record of the process that verbalises the knowledge obtained through making, as well as a critical evaluation of the research in its totality.

3.1.1 Bricolage as a methodological approach

The multiplicity of disciplines and inquiries to which a practice-based approach can be applied may account for the difficulty in reaching a unanimous consensus in terms of definitions and regulations (Niedderer, 2007; Candy and Edmonds, 2018). This fragmentary discourse around practice-based forms of research precludes the establishment of a standardised framework applicable to all practitioners and investigations (Schön, 1983; Gray and Malins, 1993; Frayling, 1994), providing few guidelines for researchers in art and design disciplines to follow. Far from being considered a limitation, the lack of a defined methodology has been described as a 'useful indeterminacy' (Yee and Bremner, 2011, p.3) which allows the flexibility and space for the researcher to build a methodology apposite to their enquiry. As a result, methods associated with other research paradigms are often borrowed and reframed in what has been defined as 'pick and mix' (Yee, 2010, p.16) or, more commonly, 'bricolage' approach (Burnham, 1971; Denzin and Lincoln, 2005; Yee and Bremner, 2011). Comparing the role of the designer with that of the *bricoleur* highlights the dynamic nature of this model (Yee and Bremner, 2011). By having to select appropriate methods, rather than passively adhere to those predetermined by the corresponding paradigm, the researcher is able to shape the approach to the investigation and respond to the emerging needs of the study, as well as their own. The adaptability of this approach is appropriately described by Burnham (1971) in discussing the work of Lévi-Strauss, who pioneeringly introduced the concept of bricolage, noting that '... [the *bricoleur*'s] forms or materials have no preordained function; they find their place according to spur of the moment notions and activities' (1971, p.10).

Bricolage is employed in this investigation on account of the possibilities it offers for the construction of a personalised methodological approach to the research questions. While the investigation takes place *in* and *through* creative practice, this being the primary method employed to address the inquiry, additional methods were introduced in view of the complementary views and perspectives they could provide, reinforcing the notion that methods in illustration research 'are always context specific and must be relevant to the task at hand' (Gannon and Fauchon, 2020, p.19). The combination of various methods to interrogate the research question, further expanded on in section 3.4, is suited for the complexities inherent in an investigation in creative arts. The complementarity of the findings derived

from this methodological pluralism contributes to constructing a more nuanced understanding of the research focus which, in turn, can play a role in enhancing the rigour of the investigation.

3.2 Rigour in practice-based research

The combination of interdisciplinary methods in practice-based research is inevitable as a result of the absence of a standardised methodology, and necessary due to the 'indeterminate nature of design' (Yee and Bremner, 2011, p.1) and diversity of inquiries which can be pursued as a consequence. However, incorporating methods from non-artistic fields could be deemed demeaning towards the use of creative practice in denying its 'intellectual maturity' as a basis for research (Sullivan, 2009a, p.95), in what Donald Schön (1983) defines as the dilemma of rigour and relevance. This dilemma 'tempts the practitioner to force practice situations into moulds derived from research' (Schön, 1983, p.308), which suggests that practice is made to fit conventional research methods to enhance or legitimise the rigour of the investigation, presumably relying on the assumption that the insights derived from practice alone cannot be measured in terms of validity or rigour. This notion might stem from the idea that the tacit knowledge involved in practice, usually associated with the practical and experiential as per Polanyi's coinage of the term (1978), is not suited for research due to its, generally, non-propositional nature (Yee and Bremner, 2011; Niedderer, 2021). This issue is accentuated by the lack of guidelines and unified understanding regarding the integration and communication of tacit knowledge in doctoral studies, hindering the discussion around it and making its purpose and role unclear within this context (Niedderer, 2021). However, while the practical cannot be scrutinised following the same precepts as those applied to the hard sciences (Schön, 1983, p.33), accepting methodologies beyond the scientific allows the researcher to devise criteria and standards of rigour better aligned with the requirements of practice-based investigations (Elkins, 2009; Nelson, 2013).

Indicators of research quality characteristic of quantitative methodologies, such as objectivity, validity, reliability and replicability (Gray and Malins, 2016, p.129), are unfit for the openly subjective and personal nature of practice-based research, highlighting the necessity for alternative criteria. In their critical work *Naturalistic inquiry* (1985), Yvonna Lincoln and Egon Guba suggest techniques through which the 'trustworthiness' of an

investigation can be ensured in frameworks which elude positivist paradigms, alluding instead to the credibility, transferability, dependability and confirmability of a research study. Not all of the techniques presented in their work can be directly applied to this investigation due to their greater affinity to the social sciences, this being the framework under which they were originally formulated. However, the kinship between these traditions and artistic research (Borgdorff, 2010) has enabled the consideration and reframing of some of these strategies into the context of practice-based investigations (as seen in Palmer, 2016).

In the first instance, 'prolonged engagement' and 'persistent observation' are suggested by Lincoln and Guba (1985) as means towards achieving the credibility of an investigation providing, respectively, scope and depth to the research (1985, p.304). The former involves the sustained immersion in a situation during a period of time sufficient for the researcher to acquaint themselves with its every aspect, while the latter refers to the possibility of identifying the most relevant elements of the object of study in order to examine them in detail. As observed by Rebecca Palmer in her own practice-based thesis, these naturally occur 'where the inquiry takes place in the course of the inquirer's own practice' (2016, p.21). Indeed, engagement with the research question through creative practice and its constant examination through time result in a familiarisation with its different facets. This continuous examination can lead to observations capable of supporting or challenging the practitioner's dominant understanding, therefore contributing to the rigour of the study.

The obtention of an external perspective is also identified as a valuable strategy for its role in providing transferability and credibility to the research, with 'peer debriefing' appearing as a suitable method to achieve this (Lincoln and Guba, 1985, p.308). This involves the researcher discussing their understanding of the inquiry with a peer as a way to bring to light otherwise unnoticed aspects of the investigation. Such idea may find parallels in Linda Candy's 'reflection-at-a-distance' (2019, p.256) where, by means of detaching the work from the maker, either by shifting the context or, as in this case, by exposing the outcomes to other audiences, the practitioner is given the opportunity to experience their work anew, and notice aspects of it which could have been unintentionally overlooked. Adding to the regularly held supervisory sessions, formal and informal conversations with peers took place inside and outside the academic environment which became sources of feedback,

and offered complementary views to my own. International conferences where I shared the outcomes of my investigation (see section 3.4.1) provided additional fora for discussion, and led to the obtention of further insight into my research from alternative standpoints, disciplines and traditions. This outside perspective, gained through external dialogue and idea exchange, is complemented by self-reflection and analysis, which could be compared to having a conversation with oneself (Gannon and Fauchon, 2020, p.212). In this process, the 'reflexive journal' (Lincoln and Guba, 1985, p.327) is considered to be a suitable means to collect and provide information about the inquirer as an instrument of the research, and insight about the process and methodology employed. During this investigation, dated sketchbooks and diaries were used as records of practice, and as tools for self-interrogation and analysis. The regularity of the records was, however, sporadic as, similarly to illustrator and researcher Vassiliki Tzomaka (2017), I found that progress in practice-based research occurs in 'short concentrated bursts of activity' (2017, p.32). Despite the erratic nature of the entries, the reflections that arose from them allowed me to recognise preconceptions susceptible of affecting my research, identify areas in need of further investigation, and find synergies between theory and practice, more deeply explored in section 3.4.2.

Lastly, 'thick description' is introduced to contribute to the transferability of the conclusions drawn from the investigation (Lincoln and Guba, 1985, p.316). Originally conceived in the field of ethnography, it consists of the detailed description of a phenomenon. This concept could find its equivalent in practice-based research in the idea of making the tacit explicit, commonly perceived to be a source of rigour (Biggs and Büchler, 2007; Nelson, 2013). Both techniques would be, therefore, attempting to ensure a clear communication of an experience so as to facilitate its understanding, and the applicability of its conclusions into other contexts. Aforementioned methods, such as keeping research journals or engaging in discursive activities of different nature, were employed as ways to formalise and conceptualise knowledge in the form of language, ensuring its transferability. In addition to this, establishing connections between procedural, propositional, and experiential knowledge through means of literature review, discussion of practice, and critical reflection contributed to creating a framework for an approximation to the verbal communication of the tacit.

3.3 A visible researcher

The subjectivity of the practitioner affects aspects beyond the choice of procedures employed to ensure the quality of the research. It is a factor that permeates the investigation in its totality, affecting the analysis of the object of study, the framing and angle adopted for its scrutiny, the methods deemed appropriate, the selected findings, and the communication of the conclusions (Malterud, 2001). This highlights the need to explicitly address the influence that the practitioner's background, preconceptions, biases and experiences pose over the inquiry (Gannon and Fauchon, 2020).

Considering that research takes place, mainly, through one person's creative practice, the active involvement of the maker is unavoidable. As a result, there is a rupture with the positivist assumption that subject and object are disconnected entities, in favour of views which instead encourage researchers to 'reflect upon their own ideology and values ('where they are coming from') in relation to the cultural practices of the object of study' (Nelson, 2013, p.53). The application of standpoint epistemologies, as well as autoethnographical approaches, can legitimise and endorse the visible presence of the inquirer in the investigation, incorporating the analysis of their experiences and identity as part of the research.

While this study does not intend to be regarded as autoethnographic, I acknowledge the value in addressing how my own personal, educational, professional, and cultural contexts have, implicitly or explicitly, shaped the approach and development of the investigation. For this purpose, the identification of conditioning factors through self-interrogation was crucial in achieving a better understanding of my thinking process, and in uncovering assumptions affecting the investigation. While attempting to describe all aspects influenced by my own subjectivity would be an unfathomable task, there are two main factors, rooted in my early experiences and educational background, which have fundamentally contributed to shaping my approach to practice and position towards the query. The first refers to my exploration of the book's materiality in children's non-fiction, and the second to my preference for the museum as a source of inspiration in the development of practice.

As a practitioner, my interest in exploring book making initially manifested during my Fine Art undergraduate degree at the University of Salamanca (2011–2015). During this period, I turned my focus to the possibilities of the book as an object, conceiving the sketchbook as an independent artefact and outcome, rather than

a mere instrument for practice. While at the time my focus was placed on large-format painting, rather than on illustrative work, this experience laid the foundations for further exploration of the book's materiality while studying the MA in Children's Book Illustration at the Cambridge School of Art (2015–2017). Being introduced to screenprinting during my studies, and using this technique to develop final artwork, affected the nature of the book projects I could envision and develop as part of my illustration practice. Limited by the challenges of binding screenprinted pages in the form of a codex, I began to explore formats which could allow for the use of original prints in their making, finding book forms such as the concertina to be particularly suited for these purposes (figure 18). My intention to produce and assemble the final versions of each project using direct production methods whenever possible has, ever since, influenced the formats considered and chosen as part of my personal exploratory practice.

In addition to shaping the form my projects take, the use of screenprinting likewise impacted my visual language. Utilising limited colour palettes and relatively fluid shapes in my illustration work resulted in a stylistic approach whose suitability I began to question during the investigation in relation to my own assumptions on the visual requirements of informational depictions. Reflecting on the balance between indulging my artistic intent, or sacrificing it in favour of the image's communicative purposes, became a constant concern throughout the research. The quandary about the relationship between communicative intent and subjective expressiveness is reflected in the initial stages of the investigation, and manifests in the work presented in Appendix B.



Figure 18. *The Odyssey*, a screenprinted concertina developed during my MA in Children's Book Illustration. The format was chosen for its narrative suitability, and for enabling the use of original screenprints as the outcome.

Apart from impacting the visual and material choices, my personal experiences have also influenced my approach to the conceptual. In my investigation, informational publications and spaces are regarded as valuable references in informing the organisation, design and material features of non-fiction picturebooks, with the museum appearing as a frequent source of inspiration. My view of the museum as an approachable space of the everyday determined my predilection towards it in my practice, which I can trace back to its presence during my formative years as an integral part of my educational environment. The impulse to preserve the ethnographic and cultural patrimony of my home town in North-western Spain in the context of its rapid industrialisation led to the creation of an integrated museum in one of the town's primary schools (figure 19). The positive reception this initiative received from the wider community led it to be mirrored by the school at which I attended, resulting in donated artefacts, such as looms, yokes, and agricultural tools being labelled and exhibited on its corridors and walls. Blending the idea of museum into the schools enabled students, including myself, to be introduced to their immediate past and local cultural heritage, while ensuring the preservation of the exhibited and archived objects, photographs, and documents. The understanding I developed of the museum as an available feature naturally integrated within the learning environment impacted my perception of it, and led me to consider it an attractive resource for my practice.

**[THIS IMAGE HAS BEEN REMOVED BY THE AUTHOR
OF THIS THESIS FOR COPYRIGHT REASONS]**

Figure 19. Exhibited objects on the walls of the primary school Monte Caxado (Monte Caxado, n.d.).

This was reinforced by the interest I developed in curatorial practices during my undergraduate studies, with the notion of the museum thereby becoming a constant in my understanding of education, and the communicative and expressive potential of its display methods influencing my approach to the presentation of information. When discussing such spaces, however, it would be remiss to overlook the criticism museums as institutions are currently receiving, with their roles in a cultural and social context being questioned and re-examined, partially owing to the power dynamics and imperialistic values they often can be seen to embody, as it will be noted in section 5.2. While I acknowledge the challenge in attempting to separate museums from the values they are considered to epitomise, their presence in my practice does not intend to uncritically incorporate the narratives associated with these spaces into the work produced. My interest in this study is rather placed on their potential in structuring and displaying information and artefacts, although with a parallel consideration of the connotations these strategies may imply.

3.4 Methods

The three primary methods used in this research are literature and practice review, creative practice, and reflective practice. In accordance with the bricolage approach, additional methods were incorporated into the investigation as needed, including picture visual search, visits to museums and galleries, formal and informal feedback sessions, testing of materials and tools, and documentation through photographs and drawing. Due to their frequent subordination to a greater purpose (e.g. visits to museums serving to inform illustration practice), these forms of research *into* and *for* illustration have not been described under separate categories, and are instead mentioned under each of the three main sections.

3.4.1 Literature and practice review

Making an original contribution to knowledge in doctoral research often requires a comprehensive understanding of the field of study from a historical and current perspectives: what Nelson defines as the 'location in a lineage' of the investigation (2013, p.34). This contextualisation, commonly carried out by a literature review, enables the researcher to question, interpret and explain the object of study (Sullivan, 2009a), as well as to shape and position their research, and connect it to other

relevant investigations (Gray and Malins, 1993). In practice-based studies, it has been suggested that this examination of literature is complemented by a practice review as a means to obtain further insight into investigations that follow similar procedures (Nelson, 2013). Although this provides depth to the study, the scope of the literature and practice review is necessarily limited to the published or publicly available, which becomes particularly problematic in arts and design due to the lack of universally recognised core journals, and the absence of a professional body occupied with the dissemination of knowledge (Biggs and Büchler, 2007, p.66).

While the academic study of contemporary non-fiction is incipient, it is quickly gaining ground in picturebook studies. Despite the rapid growth it is experimenting, its relatively recent history accounts for the scarce scholarly literature on the subject, making an analysis of academic contributions insufficient to provide an accurate contextualisation of my area of study. The review presented in chapter 2 is, instead, concerned with the analysis of recently published children's books. Engaging with primary sources can illuminate the subject area more efficiently by placing the focus on concrete aspects relevant to the research, thereby providing a more fitting context for an investigation conducted through practice. Scholarly literature is, however, considered, discussed, and referenced in this study, albeit in a different manner. Rather than addressing its significance within the investigation in a dedicated, independent chapter, its role in the research is discussed in the following account, and demonstrated in the analysis of practice found in chapters 4, 5 and 6. While the contextualisation provided in this study may not align with a conventional literature review, it has an equivalent function, as the scope and focus of the material examined enabled me to effectively situate the research in relation to contemporary practices and publications.

In view of these considerations, the literature and practice review conducted for this investigation involved analysing published children's books relevant to my investigation; examining academic literature; exploring studies developed by practitioners; and attending at conferences to gain insight into current, unpublished research. Combining all four enabled me to obtain a complete understanding of my area of study, and subdue any limitations derived from the potential inconsistencies of the dissemination of knowledge in the field.

(i) Non-fiction children's books

The examination of primary sources provided insight into the common strategies and conventions currently employed in non-fiction picturebooks for the communication of information, with an emphasis on their potential to express modality. The analysis focused on the visual language, design, layout and, when relevant, written content and materiality of the examined picturebooks. The criteria for selecting the titles responded to the books' relevance to the research questions, the clear representation of the features discussed, and the books' availability and accessibility in temporal and geographical terms:

- All picturebooks in the sample can be described as informational, in accordance with the definition of *non-fiction* provided in chapter 1. Alternatively, they have been identified as such by their author and/or illustrator, publisher, or surrounding critical or academic discourse.
- As the investigation has a clear focus on visual features, illustration has a prominent presence in the selected titles, with the non-fiction picturebooks deemed relevant to this research being chosen in view of the clarity with which they display the pictorial and design characteristics under examination.
- Considering the recent shift in non-fiction picturebooks (Merveldt, 2018; Gotti, 2020; Grilli, 2020a), my attention was directed towards titles published from the early 2000s, only addressing earlier examples (e.g. books published by the Isotype Institute, or by Dorling Kindersley) in view of their historical relevance, or influence in later works.
- The geographical scope was primarily Western-European, including books published, mainly, in the United Kingdom, Spain, Portugal, France, and Italy, and therefore privileging those more easily accessible in terms of language, geographical proximity, and cultural affinity.

The discussion of the reviewed material, found in chapter 2, references representative titles, with the full list of examined non-fiction picturebooks being collected in Appendix A. Given the criteria described above, the analysed sample cannot be considered to provide a comprehensive overview of non-fiction children's books as a unified genre. Yet, their review provides a suitable contextualisation for the focus of the investigation, and serves as a starting point for the exploration of practice.

(ii) Scholarly literature

In conjunction with the review of primary literature, I examined academic contributions to the study of non-fiction picturebooks. This process revealed the perspectives commonly used to approach the genre, key trends and foci of interest over time, and under-researched areas of knowledge. By obtaining an overview of the existing research and its gaps, I was able to situate my practice in the current academic context, and justify its relevance.

The angles through which non-fiction picturebooks have been traditionally examined are indicative of the evolving nature of the roles and functions these books have been perceived to have. Besides a tendency to approach the study of the genre through a taxonomical lens, categorising non-fiction children's books around their theme (e.g. Fisher, 1972; Cianciolo, 2000) or typology (e.g. Mallet, 2004; Defourny, 2013; Gotti, 2020), the most common perspectives for their investigation have been historical, literary, and educational. The formative potential of non-fiction has been examined with particular interest, given the instructional purpose associated with the genre. Studies from this perspective have addressed the responses of readers, the development of informational literacy in children, and the figure of the adult as a mediator in formal and informal educational contexts (e.g. Pappas, 2006; Colman, 2007; Gill, 2009; Kesler, 2017). By contrast, the book's features, particularly the visuals, have received less widespread attention in the academic discourse. The awareness of a shift in the publishing tendencies (Kiefer and Wilson, 2010; Bader, 2011; Aronson, 2011 in Zarnowski and Turkel, 2012) pointed, precisely, at the limited interest that illustration had historically attracted in scholarly literature: although the value of images was recognised, their study had often been secondary to that of the written narrative. Indeed, works addressing the maker's perspective commonly discussed the views of writers, and not illustrators (as seen in Carter and Abrahamson, 1990).

As these studies strayed from my research focus, the scholarly works I reviewed followed the increasing interest in the picturebook's multimodality that emerged after the turn of the century. Most of the literature reviewed for this study developed, in fact, after the publication of Nikola von Merveldt's dedicated chapter *Informational picturebooks* in *The Routledge companion to picturebooks* (2018). Von Merveldt's definition of informational picturebooks identified their visual conceptualisation as a contemporary trait of the genre, advancing the focus on visuals that academic works were starting to

manifest. Such was the case of *Verbal and visual communication methods in non-fiction* (Goga, Iversen and Teigland, 2021b) and *Non-fiction picturebooks: sharing knowledge as an aesthetic experience* (Grilli, 2020a), where greater attention was directed towards the examination of the role of illustration from literary, semiotic, cultural, and educational perspectives. The incorporation of interdisciplinary views in these volumes is indicative of the expansion of the genre, and demonstrates the value of approaching the study of non-fiction through alternative frameworks. In particular, Teigland's (2021) application of Kress and van Leeuwen's (2006) semiotic theories to children's picturebooks was of relevance for my research, supporting the analysis of primary sources presented in chapter 2. Besides these volumes, scholarly works authored by illustrators likewise influenced my practice. Ana Lartitegui's *Alfabeto del libro de conocimientos* (ABC of the informational book) (2018), for instance, directed my attention towards the ludic potential of the book, which would become relevant in the projects developed at later stages of the investigation. Her insightful perspectives on the historical, formal, conceptual, and critical illustrate the value of including the maker's voice in the academic discourse.

While my review of scholarly literature mainly consisted of studies focused on the visual characteristics of non-fiction, perspectives beyond these were needed to inform my creative practice. The discussion of contemporary non-fiction has addressed the relationship these books establish with knowledge, and the effect this has in their conceptual shaping. Such notions are notably examined by Joe Sutliff Sanders in *A literature of questions* (2017) where he posits that, when the interrogative potential of the genre is emphasised, non-fiction children's books can contribute to active learning and critical thinking in children. He identifies practices, mainly manifesting in the textual, which signal gaps in the author's authority, contributing to presenting knowledge as something fallible and provisional, rather than static, immutable, and objective. Recognising the risk of inhibiting critical thought through the way children's books are formulated led to a careful evaluation of the fundamentals of my investigation and practice. The incorporation of characteristics originally belonging to informational publications and spaces into the picturebook could be interpreted as an attempt to extend the notion of authoritarianism through the use of visuals and design. The work of Sanders led me to reflect on the implications of using these resources, and the balance needed to avoid extreme authoritarian connotations when incorporating them into my practice. This can be appreciated, for example, through the discussion on the monumentality of the museum's architecture in chapter 5.

The crucial role the review of scholarly literature played in the investigation is evidenced through the examples highlighted above, as well as those later discussed in relation to practice. Besides enabling the identification of a gap in knowledge, it provided the contextualisation for my practice, informed the processes of analysis and reflection, shaped my approach to making and, as I will be discussing in section 3.4.2.2, impacted, at points, the direction of the research,

(iii) Practitioner research

Although the number of practice-based PhDs has been rapidly growing in the UK since the early 2000s (Yee, 2010), studies from the point of view of the illustrator in the analysis and making of children's books are scarce, which is more evident in the case of non-fiction. In view of this, the review of practice-based studies I conducted was not restricted to works thematically fit for this specific investigation, and was instead approached more broadly, considering picturebook research from the maker's perspective at large. Most of the theses published in recent years on this area of study originate from the Centre for Children's Book Studies (CCBS) at Anglia Ruskin University, where this doctoral study was also undertaken. The examination of previous theses produced at the CCBS was used to identify commonly employed strategies underpinning contemporary picturebook research through practice, serving as a conceptual and methodological reference to develop my own.¹¹

The theses of Katherina Manolessou (2012) and Rebecca Palmer (2016) were particularly influential in this regard. While each investigates different aspects of the picturebook, with the first focusing on animal character development and the second on the convergences between comics and picturebooks, they contributed to my understanding of the use of creative practice as a method to explore the research question. On its part, Vassiliki Tzomaka's practice-based exploration of the possible hybrids between fiction and non-fiction (2017) was notably relevant to my study. Tzomaka's use of illustration and design to explore narrative non-fiction, and her extensive contextualisation of the genre, enabled me to thematically position my research, and to better define my research focus.

11 While this may be perceived as a narrow scope, Anglia Ruskin University offers, as of 2025, the only doctoral programme specifically focused on Children's Book Illustration, meaning that relevant contributions outside the CCBS are scarce.

Additional academic publications authored by practitioners were likewise relevant. The works of Martin Salisbury (2004; 2015; 2022; Salisbury and Styles, 2020), Uri Shulevitz (1985), Alan Male (2017), as well as the aforementioned Ana Lartitegui (2018), are paradigmatic in demonstrating the insight that the point of view of the maker can provide in the discussion of illustration as a discipline. The relevance of the authors' expertise and professional trajectory as illustrators is paramount in their analysis of other practitioners' work, in their explanation of the creative process, and in the guidance provided. Although not all of the works reviewed were thematically relevant, recognising the perspective that the illustrator can offer contributed to shaping my approach to the examination of the work of others, and to the reflection on my own practice.

(iv) Conferences

While conference contributions on non-fiction children's books may have been relatively sparse in the past, their presence has grown noticeably during the last decade. The academic interest behind non-fiction has, in fact, led to conferences being organised exclusively around this theme. Notably, the 7th edition of the *European Network of Picturebook Research* (Bergen, 2019) versed around the theme of *Verbal and visual strategies in non-fiction picturebooks*, and would later result in the edition of a volume of the same title (Goga, Iversen and Teigland, 2021b).

The predominantly theoretical focus from which picturebook research is approached manifests not only in published scholarly works, but also in conference contributions. While different editions of established conferences in illustration, such as the *Conference on Illustration and Animation* (CONFIA) and the *Illustration Research Symposium*, often include a balanced mix of scholars and practitioners, this does not seem to be the case for events which have children's books as their sole focus. The *International Conference of the European Network of Picturebook Research*, or the *International Board on Books for Young People* (IBBY), have featured limited and scattered practice-based contributions throughout their history, in what may be a testament to how the exploration of children's literature from the point of view of the illustrator is still a relatively uncommon approach in academic contexts. However, conferences are valuable resources for the identification of current academic trends in the study of picturebooks, providing insights into unpublished investigations currently being developed in children's literature. For instance, the increased attention placed on

notions such as the objecthood of the book, its material production, or the interactivity it can offer, as witnessed during the 18th edition of *The Child and the Book Conference* (Rouen, 2024), contributed to shaping my understanding of such ideas.

Besides serving to obtain a deeper understanding of my area of research, the attendance at conferences enabled me to present the ongoing results and conclusions of my investigation, whether this was done on my own, or in collaboration with other practitioner-researchers (see Chronology of events). Conferences to which I contributed, independently or with others, include CONFIA (Caldas da Rainha, 2023), *The International Academic Conference of the Croatian Association of Researchers in Children's Literature* (Zagreb, 2023), and *The Child and the Book Conference* (Rouen, 2024). These experiences proved to be particularly valuable through the discussions that arose with other academics. These highlighted relevant perspectives, theories, or references I would not have been able to otherwise access, bringing to my attention, for instance, early works demonstrating the historically close relationship between museums and picturebooks.

3.4.2 Creative practice

Practice is, ineluctably, at the core of practice-based investigations, constituting the main method through which the research question is examined, and the primary source of contribution to knowledge (Schön, 1983; Candy and Edmonds, 2018). In this thesis, creative practice encompasses drawing, illustrating, writing, and designing. All these processes have been generally subordinated, to a lesser or greater extent, to the generation of illustrated book projects, which were developed as dummy books, prototypes, or final pieces. As a result, in this research, book making is approached both as a form of inquiry, and as the method to generate the final artefacts.

My illustration practice had a changeable nature, transforming in view of the purpose(s) behind its use, and the stage of the investigation. In early phases of project development, drawing was an instrument through which to brainstorm and materialise ideas in sketches, using the visualisation of concepts to determine their relevance and viability in addressing the research questions. These processes accounted for the use of practice in a speculative manner, resonating with Graeme Sullivan's idea of working from the 'unknown to the known' (2009b, p.48). This notion is rooted in the idea of approaching unfamiliar spaces that have the possibility of

providing new critical insights regarding the known, embracing uncertainty as part of the process. The unpredictability characteristic of these exploratory phases is echoed by Henk Borgdorff in discussing the 'erratic nature of creative discovery', noting that '[j]ust as in many other academic research studies, it involves doing unpredictable things, and this implies intuition and some measure of randomness' (2010, p.57). Later stages involved a more systematic approach to making, using drawing for the development of the ideas originating from this exploratory phase. This stage, rather than being limited to a relatively open process of idea generation, also concerned the definition of the narrative and technical aspects of each book through storyboarding, the development of prototypes, and the planning of their physical realisation. It was through the process of making that the most suitable approaches for the communication of ideas were explored, the techniques for their development studied, and the materials and formats tested.

3.4.2.1 The context of practice

The processes of idea generation and planning materialised, for the most part, in the sketchbook. This is defined by Gannon and Fauchon as a 'container for thoughts, observations and memories' (2020, p.72), functioning as an instrument to collate information and document the production of visual artwork. Its function in my practice, described in *Illustrator's sketchbooks* (Salisbury, 2023), aligns with this idea, with the sketchbook serving as a 'comprehensive record of raw ideas and images' (2023, p.230), but also as a physical testimony of progress that can facilitate subsequent reflection. The sketchbook constitutes the context of most of my making: from the documentation of visual research and initial ideas, to the refinement of designs. Given the investigation's later focus on materiality, these sketchbook-bound processes were occasionally complemented by the making of dummy books as a preparation for the development of the final versions of each project. Building dummy books and mock-ups was particularly relevant when exploring the book's format, as they evidenced the necessity for modifications that could only be identified by physically handling and experiencing the book. Obtaining a defined idea of each project through these prototypes was also crucial to prevent avoidable mistakes in the production of the final artwork, especially in cases in which direct reproduction methods were employed.

As creative practice was predominantly developed in the sketchbook, the investigation took place, for the most part, in the context of the studio. This is sometimes defined in analogy with the laboratory owing to the parallels that can be drawn between the two settings, and the experimentation occurring within them (Edmonds et al., 2005; Sullivan, 2009a; Candy and Edmonds, 2021). In my case, the studio was a dedicated, private space where I was able to engage in exploratory sketchbook practice, small-scale printing experiments, and book making. Given the inevitable limitation of technical resources in such context, practice was also developed in the Cambridge School of Art's printmaking and 3D studios, where I used the printmaking and laser-cut facilities to develop experimental and final work. Contrasting with the characteristic confinement of the personal workspace, developing creative practice in a shared environment fosters dialogue and discussions with like-minded makers. Exchanges of this kind may influence the researcher's practice, as found by Manolessou during her own investigation (2012). Discussions on the processes, techniques, and materials in these shared studios contributed to my understanding of assembly processes, logistically influencing the design and building of the prototypes discussed in chapter 5.

3.4.2.2 Initiating practice

The approaches to creative practice employed in this research, from initial sketches to the production of final art, are comparable to those I follow in my professional practice, outside research. This is not an uncommon occurrence, as other picturebook researchers have found that methods and processes normally employed in their commercial practice were intuitively applied to research, despite their investigations taking place outside an industry setting (Tzomaka, 2017; Álvarez Astacio, 2023). Self-reflection and external feedback revealed, however, that my approach to making was having an unwanted effect on the work I produced during the investigation. Previously learnt habits, such as attempting to conceive the outcome from the outset, inadvertently subordinated the practice to a pre-determined final form, inhibiting an open exploration of the subject. As a result, risk-taking and experimentation were minimised due to an excessively self-conscious approach. To separate the patterns derived from my professional experience from my process of making in the context of research, and enable the transition from practitioner to 'practitioner-researcher' (Nelson, 2013, p.23), it became essential to find alternative ways of initiating practice.

(i) Initiating practice from the conceptual

Creative practice is not conceived or created in a conceptual or epistemological void. Throughout the course of my investigation, practice was influenced by theoretical notions drawn from the literature and practice review, but also by ideas and concepts which emerged through discussions, visiting of exhibitions, and attendance at courses and conferences. The review of literature notably prompted project ideas and approaches to making in early stages of my research, during which I became more reliant on academic works to theoretically support, contextualise, and guide the direction of my investigation.

The influence that scholarly studies had in my early practice, discussed in section 3.4.1, reflects Nelson's remark regarding the crucial role that reviews have in initial phases of research, noting how these should be 'undertaken simultaneously with the commencement of the practical inquiry to mobilize an interplay between practical doing-thinking ... and more abstract conceptual thinking' (2013, p.29). Allowing the conceptual to feed into the practical during the research was as relevant as it was unavoidable. However, this connection was not unidirectional, and has been described by Bolt (2006) as a 'double articulation ... whereby theory emerges from a reflexive practice at the same time as practice is informed by theory' (2006, p.3). In accordance with Bolt's remark, just as some of the projects I developed stemmed from theory or were influenced by it, the aspects I chose to explore were shaped and directed by the trajectory of my studio practice. The role of theory thus evolved alongside my understanding of the research questions, challenging assumptions and misconceptions, informing the development of practice, and leading to the (re)framing of my investigation.

(ii) Initiating practice from visual experiences

Examining published children's books, conducting picture visual search, investigating extra-literary artistic manifestations, and visiting locations relevant to my inquiry served both as methods of research *for* illustration, and as starting points for practice. For instance, examining the visual features of informational publications and spaces mainly responded to an intention to understand possible approaches to the display of information in contexts outside the picturebook. However, in doing so, I began to consider the incorporation of such features into my illustration work. Resulting

from this, my practice was notably influenced by physical locations in both the visual and the material. This is evidenced in chapter 5, where the architecture of Sir John Soane's Museum is discussed in relation to *Dorothea*, a project inspired by cabinets of curiosities. On its part, the project *Communication*, later described in chapter 6, was inspired by Marcel Duchamp's series of assemblage pieces *La boîte-en-valise* in its exploration of the notion of collection.

While working from the conceptual implies the generation of tangible imagery derived from an abstract idea, drawing from visual stimuli operates in a more horizontal manner. In the second instance, practice can be initiated by creating direct, explicit connections with the source material, with the parallels between the original reference and the resulting work becoming visually apparent upon their examination. Comparing the purposes and implications of the features employed in their original contexts and in the book can provide, through the combination of these two perspectives, a more nuanced understanding of the roles and meanings that these strategies have in communicating information.

(iii) Initiating practice from the material

Although making is generally understood as a process which follows a measure of reflection, in methodologies reliant on the use of practice this order can be reversed, with making becoming the initial generator of ideas (Mäkelä and Routarinne, 2006, p.22). From this, it can be inferred that the development of practice could be used as a starting point to prompt new views, and develop theories from them. This approach was applied when the focus of my research shifted from the exploration of images to the consideration of format. Investigating possible book forms by directly handling, folding, and cutting paper led me to generate prototypes without envisioning a pre-defined outcome. The possibility to conceive projects from the material, and not from the content or the conceptual, became crucial in devising the first versions of the projects seen in chapter 5.

This self-imposed limitation highlighted the potential of introducing decisive constraints during practice. The incorporation of restrictions into the creative process is not an uncommon occurrence, as this strategy has been found to encourage creativity by limiting the possible approaches to making. Due to their dichotomic nature, being 'both a hindrance/restrainer and a resource/enabler for creative agency' (Mose Biskjaer and

Halskov, 2014, p.37), these practices may not always have a productive outcome. In this investigation, the introduction of restrictions had, for the most part, a positive effect: by establishing a focus on the exploration of the format, I arrived at different design solutions to my practice, which resulted in one of the creative turning points of the research.

3.4.3 Reflective practice

Reflection is, alongside making, a fundamental aspect of practice-based research. The moments of reflexivity propel the investigation forward (Gannon and Fauchon, 2020), and allow the critical consciousness of the practitioner to emerge (Skains, 2018). This process highlights the role of the researcher not merely as a detached reporter, but as an active enquirer who questions and explains the construction of the findings, which contributes to the transparency of the investigation (Mortari, 2015). In practice-based doctorates, reflection is evidenced through the exegesis, manifesting explicitly through the critical discussion of theory and practice, and implicitly through the documented progression of the work produced.

Reflection and practice are inextricably bound together (Schön, 1983), with the concept of 'creative reflective practice' (Candy, 2019, p.44) referring to their convergence. However, the implications that their relationship has in the practitioner's process may vary depending on whether reflection and practice take place concurrently, or asynchronously. Donald Schön's pragmatist approach to reflective practice, presented in *The reflective practitioner* (1983), discusses this idea. This work is recognised as one of the most widely-accepted models for the analysis of the role of reflection in investigations involving a practical component (Yee, 2010), with the insights it provides being still considered relevant to date (Candy, 2019). Schön (1983) identifies reflection as a process which can occur during making, as well as retrospectively, in what he defines as reflection *in* and *on* action. The former, occurring simultaneously to the act of practice, generates new understandings based on experience and enables the practitioner to reframe and adjust the course of practice as it unfolds. The latter, on its part, involves reflecting on an already concluded activity as to gain a better understanding of the experiences it entailed, and the decisions that were taken while it took place. Being aware of these two models of reflection from relatively early phases of my investigation influenced my approach to it, leading me to more actively consider the possible rationale behind the decisions made, the nature of the strategies employed, and the potential creative paths which could be pursued.

Moments of reflection *in* and *on* action were documented throughout the research, with the first being especially influenced by what Lyle Skains describes as documentation *in situ* (2018, p.88). Through this idea, Skains suggests creating a thorough record of the process, including thoughts occurring during action, stumbling blocks, emerging ideas, as well as other factors that may directly or indirectly influence practice during its development. Reflection *on* action was documented considering diverse objects of reflection, such as developmental and final practice, the conceptual framework surrounding the investigation, and my own performance as a researcher. This was done in order to identify patterns, influences and potential biases, some of which were described in section 3.3. Despite their different foci, both reflection *in* and *on* action were recorded in a similar manner. Various approaches to journaling, such as maintaining dated research logs, taking notes in sketchbooks, photographing the process, and keeping audio recordings of my *in* action thoughts, were used as means to achieve an exhaustive record of the ideas and perceptions behind the making, becoming what could be considered to be 'valuable inroads into the tacit and private world of the creative practitioner' (Candy, 2019, p.8).

This documentation serves different purposes. In the first instance, it provides a record which allows for reflection, extraction of conclusions, and generation of theories from what would otherwise be a solipsistic exercise, strengthening the doctoral nature of the investigation (Barrett and Bolt, 2019). Secondly, the thorough nature of the documentation, especially *in* action, becomes a conscious attempt to obtain a genuine account of the process to avoid, to the greatest extent, its artificial reconstruction at a later time. However, despite the benefits of a thorough documentation in relation to reflection, attempting to create a comprehensive record generated a surplus of information and excessive awareness of the process of making, interfering with practice. Scenarios of this nature are dismissed by Schön (1983), who argued that this interference is originated by a misunderstanding of the relationship between thinking and doing. Contrary to him, I find that this issue is not necessarily rooted in failing to understand the complementarity between these two actions, but rather on the potentially conflicting duality of roles generated within the inquirer when the purposes of thinking and making are not aligned. In these instances, the researcher becomes simultaneously, in Cartesian terms, 'the subject-who-reflects' and 'the object-who-is-reflected-upon', which can interrupt the course of practice in moments of extreme self-consciousness. There is, ultimately, a difference between there being consciousness and reflection in making, and subjecting practice to an overly analytical approach.

This imbalance between thinking and making was particularly evident in the early phases of the investigation. It manifested as a difficulty to move past the initial stages of an idea, failing to explore its different iterations due to a tendency to over-analyse and question each step. Salisbury notes this is a common occurrence in the development of practice-based PhDs, where there frequently is a 'clash between speculative, intuitive creative enquiry and excessive self-analysis' (2018, p.347). Indeed, the hindrances derived from this duality are not an experience exclusive to this investigation, and have been encountered by other practitioners during the development of their research (e.g. Manolessou, 2012; Palmer, 2016). Although Salisbury remarks that 'each researcher has to find a personal method and chronology of reflection and analysis that does not inhibit process' (2018, p.347), Palmer's and Manolessou's approach proved to be also beneficial in my own practice. Similarly to their experiences, I found that occasionally alternating moments of practice and reflection, directing the focus to only one of these actions at a time, enabled me to both resume practice when it was paralysed, and to more attentively evaluate the process, experiences, and results of the research.

Proceeding in this manner allowed me to overcome the limitations of extreme rationalisation in making by encouraging reflection *on* action, and controlling the moments in which *in* action thinking could be detrimental for the act of making. Adopting this approach is what ultimately enabled me to use practice to generate insights into the research questions, determine the direction of the study, and advance the investigation.

4 Visual strategies in the codex

4.1 Initial explorations

This study was initially approached through an open, exploratory period of making which signalled areas with research potential, and contributed to a reevaluation of the inquiry (Appendix B). Following this stage, I developed *Hats*, the first project of the investigation, and focus of this chapter. This consisted of a non-fiction picturebook through which I explored the book's structure, narrative, peritextuality, point of view, and visual approach (Appendix C). Its development would yield insight into these areas, and lead to findings that would determine the direction of the research.

The early stages of making required a simultaneous review of scholarly literature to inform and contextualise my practice. Through this, it became apparent that non-fiction representations in children's books have often been associated with fidelity to nature in their rendering. When literary critic and academic Maria Nikolajeva describes the graphic versatility of picturebooks, noting how depictions can range from photographic realism to abstracted images, she attributes each end of the spectrum to specific expectations (2010, pp.35–36). According to Nikolajeva, illustrations characterised by abstraction or distortion are typically perceived as fictional, while those exhibiting greater naturalism are viewed to represent factual information (2010, p.37). Attributing the visually descriptive to non-fiction and the abstracted to fiction may be, however, an oversimplification that perpetuates the divide between the fictional and the informational, and which does not account for the expressive potential of the picturebook. Besides the possibility to associate various reality principles and modality degrees to informational depictions, the frequent combination of indicators of both high and low modality in picturebooks (Lewis, 2001a) further impedes generalisations of this nature. Adding to this, recent developments in children's literature have broadened the visual wealth of the genre. Indeed, the new generation of non-fiction picturebooks has been described in view of its varied visual approaches, media employed, tone of the images, and stylistic references (Grilli, 2020b, p.31), demonstrating that the illustrations of these books are far from being limited to a mimetic intent.

While this visual diversity is often celebrated, Sanders has noted that there is a reluctance to 'recognize non-fiction that foregrounds its artistic intentions' (2020, p.262). Sanders believes this to be possibly rooted in 'the fear that illustrations intent

on being artistic must sacrifice a neutrality that somehow feels more scientific, plainer and therefore closer to the truth' (2020, p.260). His observation reveals a complex relationship between the illustrator's creative intent, and the visual appearance informational depictions are expected to have to be regarded as such. The intricacies of this duality are also reflected in the diverse approaches illustrators assume in their creative practice. In *Non-fiction picturebooks: sharing knowledge as an aesthetic experience* (Grilli, 2020a), a group of illustrators was interviewed to obtain insights into their practice and perception of non-fiction as a genre, which revealed different understandings of the role of images and their expected modality within this context. In discussing her approach to making, German illustrator Britta Teckentrup considered accuracy may be required in non-fiction to better represent reality (Grilli, 2020c, p.285), confirming a frequent expectation from the genre (as seen in Carter and Abrahamson, 1990). On her part, *Botanicum* (2016) illustrator Katie Scott noted non-fiction does not necessarily demand a different relationship with reality than fiction (Grilli, 2020c, p.286), which suggests that she detects a degree of interpretation and creative freedom in picturebooks that may not be as prominent in other informational forms.

I approached my creative practice considering the complex balance that has been identified between the artistic and the didactic in non-fiction illustration (Grilli, 2020b). The practice I initially produced intended to explore, precisely, the relationship between informational depictions and artistic intent. My initial aim was to investigate in what respect illustrations could deviate from a faithful rendering of reality, and identify factors which could impact the illustrator's negotiation between expressive image-making and precision in the visuals. To explore this, I focused on challenging the degree of accuracy needed in informational depictions, intending to find how aspects such as the selected topic, context, or media could influence the illustrator, leading them to adapt their visual language to these requirements. In view of the multimodality of picturebooks, my investigation aimed to also consider the verbal text accompanying the images, as its role in explaining, describing and presenting the information could potentially impact their rendering, or the visual language altogether.

Initially, I produced images that intentionally lacked precision. My concerns were formal and not conceptual, with a focus on the exploration of various degrees of abstraction through the rendering of details and the alteration of shapes. The images created during this time were conceived without a specific story or narrative in mind. Not pertaining to

specific projects, the illustrations explored themes that, I assumed, required diverse visual approaches, such as historical events and figures (figures B1–B21), branches of knowledge including medicine or biology (figures B22–B25), concepts and scenes relating to the natural world (figures B26–B35), and invisible notions, such as sound (figures B36–B45). Many of the subjects addressed during this stage reappeared at later points of the investigation. Historical events and scenes, or allusions to medicine, feature in the first book developed during this research, later discussed in this chapter. Themes of sound and representations of the intangible, on their part, resurface in the making of the project addressed in chapter 6, becoming its thematic focus.



Figure 20. Speculative tests, exploring the use of paper cuts to simplify shapes.

The practice produced during this period allowed for an open exploration of various techniques, types of representation, design approaches, and visual conventions in informational illustrations. Collagraphs, monoprints, and screenprints were developed alongside exploratory sketchbook work, with the particularities of each medium influencing the production of images, as well as their tone (figure 20). For instance, the shapes that I was able to achieve by cutting paper with scissors, or by carving card with a scalpel, resulted in simplified and angular figures that distanced the resulting images from mimetic approaches.

In negotiating a balance between expressivity and accuracy, the aesthetic potential of the images was often prioritised over likeness and precision. This can be appreciated in the historical portraits produced, as well as in the representations of fauna, which challenged naturalistic approaches through the rendering of the elements, the use of colour, and the lack of perspective (figure 21). As the images were not bound to a narrative, or to the pictorial space of a book spread, it was possible for me to explore various compositions, designs and conventions. This is apparent in the resulting body of practice, which comprises illustrations ranging from the depiction of isolated elements, to the representation of complex scenes that considered interactions between its parts. In some illustrations, I explored the organisation of information into small sequences, or through timelines that condensed the content they represented into a single image (figures B54–B56). Other images addressed the representation of data through cut-aways and visualisations associated with informational contexts (e.g. figure B37). The varied nature and functions of the illustrations produced are indicative of the broad investigative focus of the research during this stage.



Figure 21. Examples of collagraphs exploring the influence of the technique employed in the visual approach.

The combination of visual and written elements had been one of the objectives of this exploration. In the images I produced, words were often included to designate the concept or element being depicted, in most cases appearing as an intraiconic text visually integrated within the illustration (e.g. figures B47–B53). The main function of the text was to *anchor*, in a Barthesian understanding of the term (1977), the meaning of the image to a specific interpretation. Besides this function, I found that a visual approximation to the textual enabled the use of various typographies for their potential to evoke certain connotations, and contribute to the communication of an idea. This was particularly relevant in images about sound, whose tonal qualities could be suggested through the visual characteristics of the typographies employed (figures B45–B46).

Upon reflection on my practice, I found the necessity to shift the focus of the research. Challenging the naturalistic modality of illustrations on a pictorial level had required the modification of my own visual language, which I found to be an unproductive direction for the study. In addition to this, I noticed that, without an accompanying narrative, the verbo-visual interaction which characterises picturebooks (Nodelman, 1988; Sipe, 1998; Nikolajeva and Scott, 2006; Salisbury and Styles, 2020) was not being fully explored. The brief textual accounts included in some of the images I developed during this time (e.g. figure B53) evidenced the necessity of establishing a clearly defined narrative in order to better explore the multimodal nature of the picturebook, and draw conclusions from the interplay of text and image. In view of this, I began to redefine the inquiry, with the main focus of my investigation shifting from purely formal concerns in relation to the rendering of images, to an exploration of creative strategies used in the presentation and delivery of information in non-fiction picturebooks.

This decision led to the development of a non-fiction picturebook with the provisional working title *Hats* (figure 22). Thematically, this book intended to offer a perspective of historical events and facets of human culture through a selection of headwear. The narrative built on the uses, symbolic meaning, and functions of different head coverings to provide a vision of history that highlighted significant events and everyday aspects of human cultural, social and economic realities. Through the incorporation of themes present in my previous image-making, such as medicine or history, I examined the representational possibilities that informational depictions such as these could have in the context of a picturebook. In addition to this, the development of this project enabled me to explore considerations that may arise during the development of a non-fiction picturebook, and to reflect on the illustrator's role in devising visual and material strategies in response to these.



Figure 22. Dummy book of the last version of *Hats*.

4.2 The book's internal organisation

The development of *Hats* enabled an examination of the processes involved in picturebook making, which had been unexplored during the initial stages of practice. My approach was shaped by an analysis of existing non-fiction works, as identifying their formal possibilities, as well as the influence these have over the design of the book, provided a foundation for the development of my own practice.

A noticeable trait of contemporary non-fiction picturebooks, evidenced through my review of primary literature, is that these have significantly grown in size over the past decade, with big, lavish, hardback editions being now commonplace in both libraries and bookshops (Grilli, 2020b; Salisbury and Styles, 2020). As books have become larger, their length has also increased, with newly published titles frequently exceeding the picturebook's 32-page industry standard, to reach lengths of over a hundred pages. A case in point is the best-selling *Maps* (Mizieliński and Mizieliński, 2013), discussed in chapter 2, whose popularity contributed to the generalisation of larger and more extensive works in the children's publishing industry (Mizieliński and Mizieliński, 2019). The possibility to produce lengthier titles can result in works of a richer informational depth which, in turn, requires an appropriate organisation of the content to ensure its effective communication to the reader.

In the context of practice, the book's internal organisation can be used as a resource to facilitate the reader's navigation of the content, as well as to shape the communication of the intended message. This foregrounded the necessity of approaching the organisation and presentation of the information in *Hats* as the first step of its development. However, the project's broad thematic scope affected this process, as the most suitable classification criteria were not immediately apparent due to the variety of possible approaches to the theme. As informational products, non-fiction children's books tend to generally reproduce rational schemes inherited from the systematic logic traditionally employed in scientific fields (Lartitegui, 2018, p.74). While these are social constructs and cannot be considered universal, they could suggest classifications based on principles perceived as objective, which, in this case, could correspond to the geographical origin of hats, the style of headwear, or the material used in their making. Following these criteria would not have been able to convey the connections that *Hats* aimed to provide, as the focus would have been placed on the objects, rather than on their social and cultural significance. Instead, the content was organised around the uses of hats, revealing similarities between various eras, locations and purposes through the discussion of headwear (figure 23). This revealed

The internal logic of non-fiction picturebooks may not always be visible, leaving the reader to find and interpret the connections that determine the book's structure (Lartitegui, 2018, p.77). The relatively intuitive organisation of the content in *Hats* presented challenges due to the permeability of the boundaries between categories, and the possibility to locate the same hat in multiple sections. As the book's internal logic was not immediately identifiable, it became necessary to explicitly show it, for which I considered the use of section dividers. This is not an uncommon device in non-fiction books, and it often appears in works of a certain length, where chapters are visually separated by an illustrated double spread, or recto page. Such is the case of *Everest* (Francis and Feng, 2018) and *The Great Barrier Reef* (Scales and Feng, 2023), both belonging to the series *Earth's incredible places*, in which full-bleed, double spread illustrations separate the chapters and provide a sense of place to the reader. The use of section dividers in *Hats* primarily intended to visually separate each section, reveal the organisation criteria, allow the reader to anticipate the content, and complement the main text by incorporating depictions of additional hats. Although this strategy was conceived in storyboards and prototypes, it was not fully explored in practice and is unresolved in the last dummy book, where sparsely illustrated double spreads appear as a provisional resource for structuring the content (figure 24). The dividers in *Hats* are not successfully integrated into the multimodal text, and needed further development to become an element that organised the content without disrupting the narrative flow. Nonetheless, their presence underscores the potential of section dividers as a strategy to structure the book, regulate the rhythm of the sequence, and introduce visual elements that enhance the main narrative.



Figure 24. Section divider used in the last dummy book of *Hats*.

4.3 The peritextual as an informational device

The use of section dividers as a strategy to define the book's inner structure led me to consider the incorporation of additional paratextual elements for their potential to contribute to the narrative. Literary theorist Gérard Genette famously introduced the concept of paratextual in his influential work *Paratexts: threshold of interpretation* (1997) to refer to the elements surrounding a published main text that affect its reading and interpretation. As per Genette's definition, the paratextual is comprised of both the peritext and epitext. The former refers to elements which are contained within the book itself, while the latter encompasses materials outside it which may influence the reader's perception of the content, such as authorial correspondence or book reviews. Although Genette's understanding of 'text' is narrow and focused on a single, verbal modality, his theory has been applied to media beyond textual works, including audiovisual forms, digitised media and, notably, picturebooks (e.g. Nikolajeva and Scott, 2006; Pantaleo, 2018). Due to the combination of semiotic modes in these forms, Kress and van Leeuwen (2001) advocate for the use of the term 'multimodal text' instead, with picturebooks being, at the very least, bimodal examples of this.

The exploration of the paratextual in this study is exclusively concerned with peritexts, as epitexts escape the processes of book making. In the context of non-fiction, peritexts have been regarded as a defining, almost essential, characteristic of the genre (Merveldt, 2018). They comprise elements such as the book's 'front and back covers, dust jacket, endpapers, half-title and title pages, and dedication page' (Sipe and McGuire, 2006, p.291), with Sanders applying this descriptor to 'sidebars, captions, epilogues, bibliographies' (2017, p.109), as well as to other informational features frequently present in children's non-fiction. The presence of some of these elements has been considered to contribute to supporting the accuracy of the content, or to reinforcing the credibility of the author (Costa, 2021). Peritexts can, in fact, indicate the non-fictional nature of the picturebook, influencing the reader's attitude towards it by introducing information about the book itself, its content, or the angle through which it is approached (Sanders, 2017; Daly, 2021). Besides this, features such as reading lists may be used to invite the reader to explore the topic beyond the multimodal text, expanding the picturebook's function as a learning tool by reinforcing the notion that knowledge is broad, developing, and extends beyond the book (Lartitegui, 2018, p.76).

In *Hats*, I employed the peritextual visually rather than textually, considering the potential of images to supplement the content. I primarily explored this through the book's endpapers (figures C11–C12). These have been profusely employed by picturebook makers in both fiction and non-fiction as a resource to support or contradict the narrative (Nikolajeva and Scott, 2006, p.241), or complement the information present in the main text (Lartitegui, 2018, p.40). I was particularly influenced by the collection *Libros para mañana* (Books for tomorrow), especially *Así es la dictadura* (This is a dictatorship) (Equipo Plantel and Casal, 2015), where the narration of the multimodal text, describing characteristics of totalitarian regimes, is complemented by a series of portraits of tyrants in the endpapers, connecting the content of the book to specific examples from recent history. The role of endpapers in contextualising and enhancing the main narrative led me to consider how they could be used in *Hats*. I decided to approach these as a visual glossary that could include clear depictions of the hats referenced in the book's main text. In the provisional endpapers appearing in the last dummy book, eighty of the hats mentioned in the text are represented and named (figure 25). Apart from facilitating their identification, this makes of endpapers a resource that could be used and referenced during the reading of the book.



Figure 25. Provisional endpapers of *Hats*.

Besides the exploration of the endpapers, the initial and final pages of the book were also regarded as opportunities to incorporate elements that could provide further insight into the topic. In the opening page, a figure tips their hat to the reader, and removes it in the final spread as a sign of salute (figure 26). While not describing information *per se*, including elements referencing hat etiquette and the use of hats in social interactions can be perceived to complement the narrative. Based on this, it appears that visual peritexts have the potential to strengthen and extend the content of the multimodal text, serving both aesthetic and functional purposes in non-fiction picturebooks.



Figure 26. Figure tipping their hat at the beginning of the book (left) and removing it at the end (right).

4.4 Considerations of layout and rhythm

Besides addressing the peritextual, my practice focused on the layout design of the book's internal spreads, finding that this could favour an investigation of specific strategies for illustrators to use in the arrangement and delivery of information. Owing to the multimodality and flexibility of the picturebook, illustrators and designers have been able to approach the distribution of text and image in the page through a range of designs. Uniform layouts maintained throughout a book provide a sense of cohesiveness and order, and may respond to an intention to achieve a symmetrical balance between text and image, with examples like the classic Ladybird books allocating equal space to each mode (Lambert, 2018; Kümmerling-Meibauer and Meibauer, 2021). In other cases, illustrators may strive for visual variety in their work, and instead design layouts that purposely reject uniformity in their realisation (Kümmerling-Meibauer and Meibauer, 2021), as it can be appreciated in the informational series published by Dorling Kindersley. The titles belonging to *Eyewonder* (2001–2025), for instance, address in each double page a different facet of the topic discussed, presenting diverse approaches to the use of the pictorial space

(Garra13n, 2013). In these titles, various types of imagery are combined and juxtaposed in designs that have been described as a ‘visual zapping’¹², which encourage the reader to explore images non-sequentially, and without a set hierarchy (Garra13n, 2013; Lartitegui, 2018). *Visual zapping* has, in fact, become a commonplace approach in contemporary non-fiction, appearing in illustrated books such as Marc Martin’s *Lots* (2017), or Yuval Zommer’s *The big book* series (2016–2025), in no small part due to the open, interactive, and multidirectional reading this design can foster (Lartitegui, 2018, p.106).



Figure 27. Visual research conducted to inform my practice during the stages of drawing.

Conscious of the role page layouts have been noted to have in the design of sequences and their progression (Nikolajeva, 2010), I intentionally avoided uniformity in the spreads I designed for *Hats*. I explored the distribution of text and image in the page by interpreting the two as visual elements, relying on the notion that ‘both [written language and pictures] are things to be seen’ (Nodelman, 1988, p.44). However, given the scope of the project, the amount of text in the design was greater than anticipated, with the ‘quantitative ratio of texts and pictures’ (Nikolajeva and Scott, 2006, p.6)

12 The concept of *visual zapping* may be inspired by the ‘frame-jumping and shifting’ (Drucker, 2014, pp.45–46) required by online environments. While I discuss this concept in relation to page layout, visual zapping can refer not only to the visual design of a page, but also to the book’s internal organisation (Lartitegui, 2018).

influencing the page designs in two ways. Firstly, given the extensive research needed for both the writing of the narrative and the development of the visuals, the refinement of sketches and the development of the text was relatively asynchronous and done in stages, alternating moments of writing and drawing rather than allowing both processes to take place concurrently (figure 27). Adding to this, the variety of possible approaches to the distribution of elements was determined by the space needed to allocate the text. This required a consideration of the book's final dimensions to better determine the relative size of the text in relation to the page, and the possible compositions I could design.

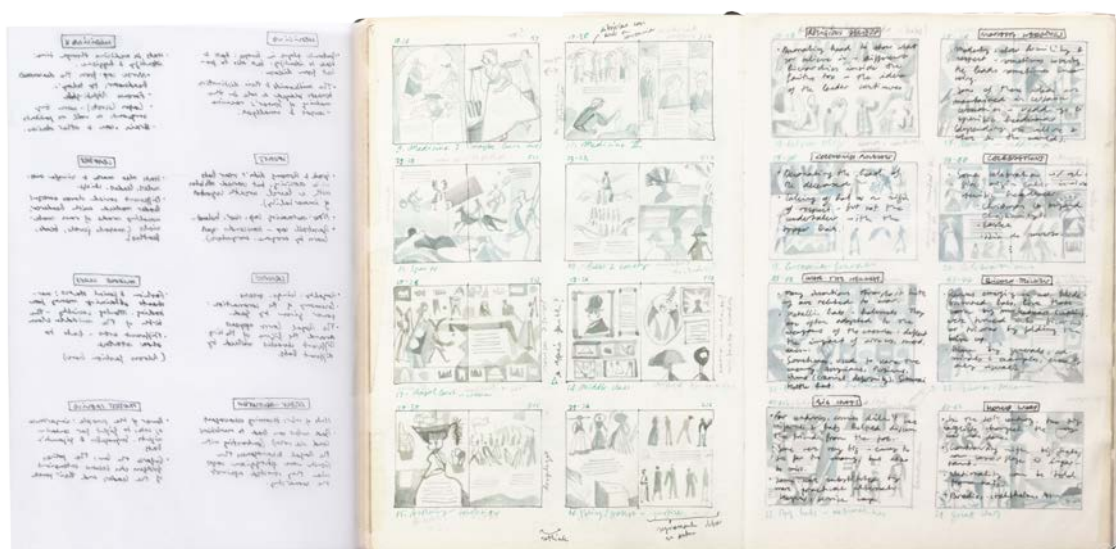


Figure 28. Storyboard showing the development of the visual and written content of the book, attempting to achieve variety in the designs of the sequence.

The development of storyboards enabled the visualisation of each individual spread, contributing to a balanced arrangement of image and text in the designs, and ensuring the visual variety of the sequence (figure 28). I complemented the devising of storyboards with the making of dummy books, as these are considered to be effective methods for obtaining an accurate impression of the visual rhythm and turning of the page (Salisbury and Styles, 2020). Alternating single and double spread designs in the sequence contributed, precisely, to regulating the pace of the narrative through the specific reading affordances of each. Double spreads require the reader to linger on the picture (Lambert, 2018), creating a 'narrative pause' in the sequence (Nikolajeva, 2010,

p.37), while single spreads can be considered to more rapidly advance the narrative. The book's layout and rhythm were likewise affected by the type of depictions employed, which could be thought to correspond to Kress and van Leeuwen's understanding of conceptual and narrative representations (2006, p.59) (figure 29).



Figure 29. Screenprints produced as an early attempt to find a unified visual language for the conceptual and narrative depictions of the book.

The first type, concerned with showing participants in terms of their 'stable or timeless essence' (Kress and van Leeuwen, 2006, p.59), manifested through impersonal depictions of hats as objects. These illustrations required a certain degree of accuracy in their rendering, and often involved the removal of the surrounding context as to provide a sense of objectivity. I found that this approach could result in designs akin to *visual zapping*, as it enabled an open distribution of visual elements in the page, which could encourage their non-linear examination. Narrative representations, on their part, are characterised by the presentation of 'unfolding actions and events, processes of change, and transitory spatial arrangements' (Kress and van Leeuwen, 2006, p.59). I often employed these for the depiction of historical events or actions, which I frequently presented in double

spreads so as to include greater detail in the illustrations (figure 30). Planning each spread of the sequence involved considerations of layout and page design, which underscored the significance of visual choices in presenting and shaping the content (figures C13–C25).



Figure 30. Examples of conceptual (left) and narrative (right) representations in the last dummy book.

This exploration signalled how specific layout designs could be more suited for the depiction of specific approaches to informational depictions, while also affecting the visual rhythm of the narrative, and how the content is perceived. Finding potential in using the distribution of elements in the page to influence and direct the reading experience, I decided to further my exploration of layouts in non-fiction picturebooks by incorporating features from informational sources.

4.5 Introducing conventions from informational sources

The development of practice was simultaneous to the review of existing non-fiction children's books, which was decisive in the identification of visual strategies commonly used in the genre (chapter 2). Through this examination, I found that non-fiction picturebooks occasionally rely on features representative of familiar physical or literary informational contexts, such as encyclopaedias or museums. As discussed in section 2.3.3, these can be employed as resources to visually distribute the information on the page, but they can also become strategies to convey reliability through visual cues, textual references, or design elements. In light of this, I approached the possibility of expanding on the connections that can be established between spaces or publications of an informational nature and picturebooks. I drew inspiration from contexts and publications commonly referenced in the literature

I reviewed, such as museums and encyclopaedias, which led me to more deeply examine the relationships between these sources and the book through the arrangement of visual and textual elements on the page.

In order to explore these connections, I isolated a page from *Hats* about a medieval hood, around which I made a series of variations. The elements I represented were common to all the sketches: a figure wearing a hood, wheat and a sickle to suggest their work in the fields, and two variations of the chosen headwear. As shown in figure 31, many of the elements adopted from informational contexts into my designs corresponded to objects, containers, and frames. In versions **a**, **b**, and **c**, I included plinths, display cases, boxes, and frames as display devices commonly identified with museums. In other versions (**d**, **e** and **f**), I introduced compartmentalised display cases for the distributing purpose they have in the context of cabinets of curiosities, and which could be translated into my practice. In addition to these spaces, I also drew inspiration from publications such as encyclopaedias, atlases, and manuals, from which I borrowed the use of numeric labels to reference, in the text, the specific elements shown in the illustration (versions **g**, **h**, **i**, and **j**). Further versions aimed to replicate characteristics from instructional books and newspapers (versions **k** and **l**), but proved less effective due to the overly specific nature of the references introduced.

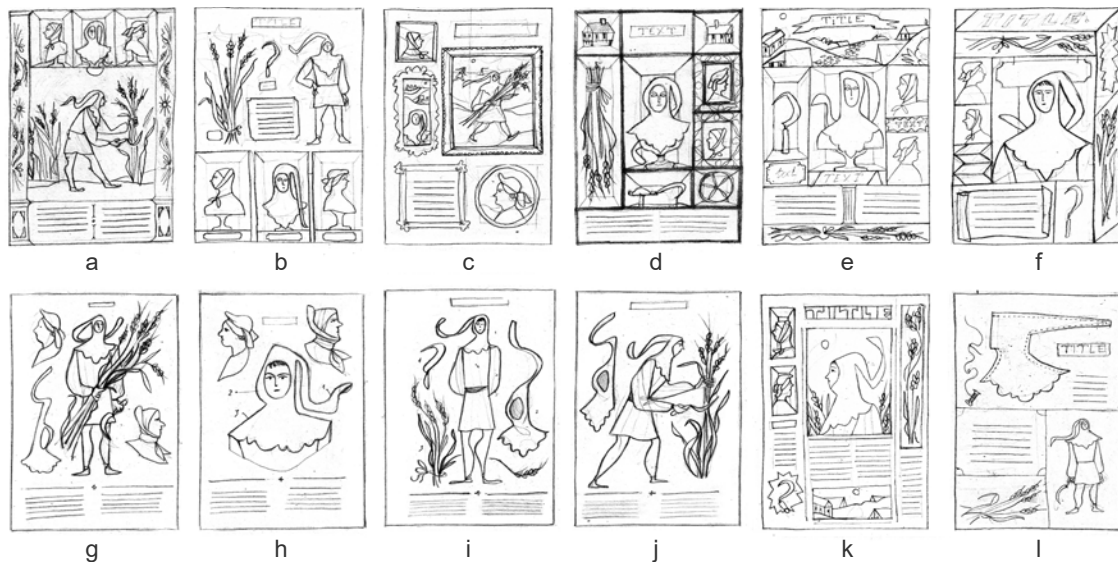


Figure 31. Sketches of page layouts that integrate conventions from informational sources.

From these sketches, I selected three to develop into final images, each referencing a specific informational source through the elements they featured (figure 32). In the first image, the influence from museums was evidenced in the presence of column-like structures that frame the content, in the display cases that showcase variations of headwear on exhibition mannequins, and in the introduction of a space to allocate text reminiscent of exhibition labels and panels. For the second illustration, inspired by cabinets of curiosities, a display box was introduced as a way to distribute the information, isolating narrative and conceptual depictions within each compartment. Lastly, the third image presented an interpretation of an encyclopaedic layout, where numeric labels were visually integrated next to the elements they reference.



Figure 32. Finished illustrations, with an allocated space for the text on the bottom of each, inspired by museums (left), cabinets of curiosities (middle) and encyclopedias (right).

The analysis of the images revealed a notable uniformity across the outcomes, despite their diverse sources of inspiration. This was especially noticeable in the placement of the components on the page, with the three examples featuring a similar distribution of image and text, a compartmentalised structure, and decorative frames. Although the similarity of the approaches is a consequence of my own creative decision-making during their development, it also reveals the presence of visual prescriptions derived from the application of specific framing, labelling, and distributing elements. These strategies can offer a structured approach to the distribution of the information in the pictorial space. However, an over-reliance on their use may result in excessively gridded compositions, limiting the illustrator's creative freedom in designing the layout.

Developing these images provided insight into the challenges derived from the visual incorporation of elements from informational contexts into two-dimensional representations, as well as the design constraints which can emerge as a consequence of their use. Finding that the literal reproduction of these conventions in the illustrations had the danger of becoming formulaic, I decided to explore approaches beyond the pictorial and the design in the presentation and organisation of the content, which led me to consider the book's materiality as part of my investigation.

4.6 Point of view in the written and visual narratives

My early exploration of material strategies was simultaneous to a consideration of the tone of the text in presenting the narrative, leading to an examination of the figure of the narrator in both the writing and the visuals. Nikolajeva and Scott (2006) follow the distinction made in narratology between point of view ('who sees'), in Genette referred to as 'focalisation' (1990), and narrative voice ('who speaks'), suggesting that 'in a picturebook we should probably treat the words as primarily conveying the narrative voice, and pictures as primarily conveying the point of view' (Nikolajeva and Scott, 2006, p.117). In children's non-fiction, the omniscient narrator has been identified as the most frequently used narrative voice (Yannicopoulou, 2011). Despite the apparent impartiality of its tone, this approach carries ideological implications, as its neutral appearance is intended to facilitate the assimilation of facts as truths (Yannicopoulou, 2011; Lartitegui, 2018). However, its presence both in the written narratives and in the visual point of view remains dominant in the genre (Yannicopoulou, 2011).

The narrative voice in *Hats* is that of an extradiegetic narrator who blends narration, description, and explanation. These approaches to the writing feature an omniscient voice, which is maintained throughout the text, and which could be considered to present an authoritarian tone. As noted in section 3.4.1, Sanders (2017) is critical of the authority often found in non-fiction books, advocating instead for the stimulation of an inquisitive attitude in the reader through methods which can contribute to the questioning of the information provided. He identifies resources that can generate a break in the authority of the text, such as a polyphony of narratives, the presence of a visible narrator, or the use of formulae which indicate a provisional, rather than definite, nature of knowledge. Although in *Hats*

the overall tone of the text is informative, presenting the content as factual, hedges¹³ were introduced to encourage the reader's questioning of the authority of the narration. This was done through the use of modal auxiliary verbs, adjectives and adverbs such as 'possible' or 'perhaps', and constructions such as 'are thought to' or 'are believed to', indicating an element of doubt and uncertainty in the accounts presented. Using these resources can open the narrative to discussion, connecting the writing with the sense of humility in the delivery of information that has been found to be characteristic of contemporary non-fiction picturebooks (Grilli, 2020a).

Although the narrative voice was considered in the writing, greater attention was given to the point of view in the conception of images. Illustrations in *Hats* reflect a detached perspective, equivalent to that of the written text. Kress and van Leeuwen (2006) note how the intended objectivity of an image can be visually communicated through its composition, point of view, or framing. By drawing an analogy with the way in which physical distance determines social interactions, they posit that the distance from which images are depicted can suggest a greater or lesser connection with the represented element (Kress and van Leeuwen, 2006, p.125). While *Hats* includes a range of compositions and framings, the distance shown in most of the illustrations consistently suggests what Kress and van Leeuwen call an 'invisible barrier' (2006, p.128) with the reader, indicating that the depicted element is presented for the viewer's contemplation. Although the objectivity implied by this approach was not a conscious intention at the time, identifying its effects in my practice led me to explore resources that could challenge the detachment that this point of view can suggest.

Considering that children's books are explored manually as much as they are visually (Lartitegui, 2018, p.20), the book's potential for interactivity was examined for the possibilities it has in fostering closeness and engagement with the narrative (Nikolajeva and Scott, 2006; Timpany and Vanderschantz, 2012). The use of features which can be 'rotated, lifted, pushed or pulled' or 'arise from the flat surface in three dimensional form' have been noted to be capable of enhancing the text and contribute to entertaining, as well as educating, the reader (Staples, 2018, p.180). In view of this, I introduced flaps, cut-outs, and elements that can be lifted or slid in my practice to encourage interaction in

13 In applied linguistics, 'hedges' refer to words and expressions used to convey ambiguity in a sentence and diminish its assertiveness (Hübler, 1983). In Sanders' view (2017), the use of this resource opens possibilities for the child reader to question the presented information, thus allowing them to engage in critical thinking.

accessing the information. I explored these devices in my sketchbook by isolating specific spreads or images from *Hats*, to which I incorporated movable elements (figure 33). Some tests relied on the use of flaps to generate spatiality, emphasising the contrast between the exterior and interior of a location. This was applied, for instance, to a spread about monarchs, which required the opening of door-like flaps to discover a scene of a European royal court (figure C26). In other experiments, I continued to incorporate elements characteristic of informational settings, such as display boxes or frames, which appeared in the form of flaps, or as cut-outs (figure C27). Further tests involved the incorporation of flaps as a resource to double the space available, presenting a hatted figure on the outside, and a text about the depicted headwear on the inside (figure C28). Although the visual point of view in these images is not altered, the presence of movable elements can be considered to challenge the detachment derived from the approach to the visuals. This led me to find parallels between the function of interactive features in the visual and narrative devices in the textual, such as hedging, as both disrupt connotations of authority by offering an alternative manner to engage with the content. The material features of the book can thus provide various possibilities for interaction, fostering a more active involvement of an implied reader, and affecting the initial sense of detachment that the visual or textual narrative may suggest (figures C29–C36).



Figure 33. Exploration of various types of movable devices in the sketchbook.

The practice discussed in this chapter determined the trajectory of the investigation. While no specific outcome emerged from the initial period of inquiry, the work produced introduced conventions, themes, and approaches which would prove relevant in later stages of the research. The exclusive focus on the pictorial, and the limitations derived from a lack of written narrative in these explorations resulted in *Hats* (figure C37). This project foregrounded the illustrator's role in shaping the book's structure, narrative, and relationship between image and text. Although *Hats* was not finalised during the course of this doctorate, its development offered preliminary insights in response to the research questions. Besides this, the practice generated opened areas for subsequent research, broadening the scope of the investigation by contemplating the book's design and material features alongside the pictorial. The exploration of the affordances of various designs and layouts, the introduction of three-dimensional elements within the codex, and the use of conventions from informational sources would become the basis of further investigations into the book's format and its potential to represent informational spaces.

5 Representing a space through the book's format

5.1 Book formats in children's books

Engaging with the book's materiality during the development of *Hats* led me to give greater consideration to the format as a means through which to interpret conventions defining of informational spaces. The investigation that followed would give rise to two projects, *Dorothea* and *Greenhouses* (Appendix D), in which the book's potential to generate a space was explored in relation to cabinets of curiosities and museums. Through these projects, I aimed to provide insight into how characteristics of informational spaces could influence the book's structure, organisational features, and perceived modality when applied to non-fiction picturebooks.

Exploring the book's potential for spatiality often involves considering options that transcend conventional approaches to the codex, this being the most commonly used format. When Johanna Drucker acknowledges its predominance, she does so by pointing to its possibilities as much as its limitations, as she considers it to be a 'very restrained form' (2004, p.121). While her assessment is made in the context of artist's books, her insight is no less significant in children's literature,¹⁴ where the presence of the codex is dominant not only because of the 'efficiency and functionality' (2004, p.122) Drucker ascribes to it, but also due to the affordability of its production from the industry's cost-effective perspective. The versatility of the codex has enabled makers to explore its creative affordances through strategies such as the incorporation of transparencies, pop-ups, and die-cut elements. Titles like *Illuminature* (Williams and Carnovsky, 2016), *Under the ocean* (Boisrobert and Rigaud, 2013), or *Anatomy* (Druvert and Druvert, 2017) are representative of the potential of employing the book's materiality to expand the creative and communicative possibilities of the codex. However, this format has a limited capability to fully duplicate characteristics distinctive of physical spaces when it is used in its conventional form. Examples discussed in chapter 2, such as the collection *Welcome to the museum* (2014–2025), resort to the use of textual and visual cues, and to establishing connections between the museum's internal distribution and the book's structure, to emulate the characteristics of these spaces. While effective, the described strategies operate within a two-dimensional framework, being unable to fully convey the spatiality of a physical location into the book.

14 Drucker herself acknowledges the similarities between children's books and artists' books (2018), a notion also supported by Beckett (2012, p.213). Drucker finds both share 'conventions and codes of presentation (format, design, graphics, typography, and so on) and engage with the potential of the codex book as an expressive means of visual communication' (2018, p.291).

The publishing market has embraced an exploration of the book's materiality by providing room for variations of the codex that reject flatness in their configuration, such as pop-ups and three-dimensional, movable books. While movable books are not a recent phenomenon, dating back to the late 18th century (Montanaro, 1993), their communicative potential makes them appropriate vehicles for a contemporary exploration of space in non-fiction children's books. Under forms of varying complexity, and through the use of diverse mechanical elements, movable books are able to combine the narrative, the visual, and the ludic in order to entertain and engage the readers (Reid-Walsh, 2017). However, the features that accentuate their singularity are also responsible for the complexity of their production, given the assembly of these books requires the handwork of multiple professionals (Montanaro, 1993; Drucker, 2018), resulting in costly and intricate manufacturing processes. As the projects developed for this research are of an investigative nature and are not subjected to commercial cost implications, I was able to contemplate the use of variations of the codex, as well as formats beyond it, in my practice (figure 34). The possibility of exploring the third dimension provided me with the opportunity to make use of an additional aspect of the book to incorporate features of spaces connected with the delivery of information into the projects I developed.

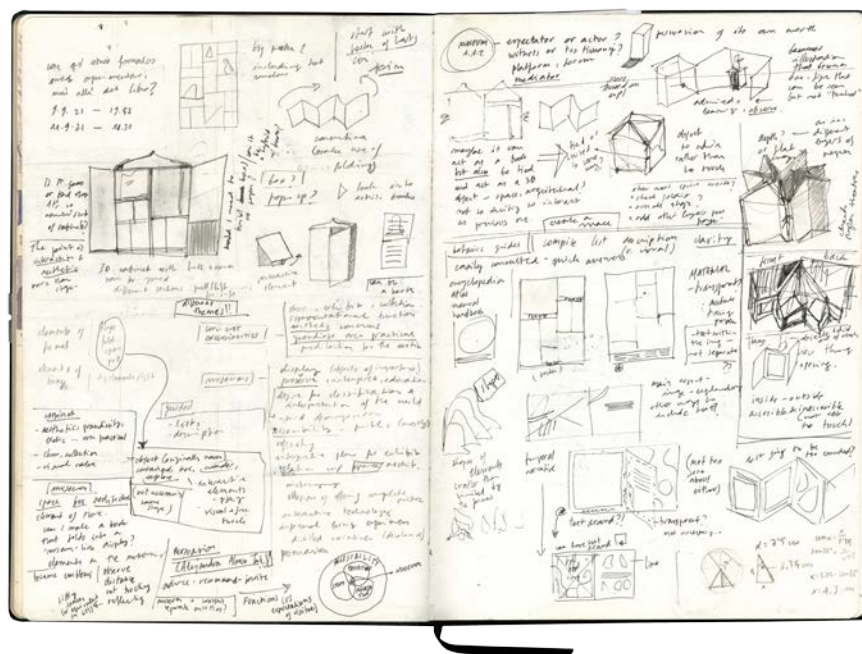


Figure 34. Sketches exploring formats that could communicate a sense of space.

5.2 Contextualising spaces of exhibition

Deciding to materially interpret spaces in my practice led to the consideration of various possible contexts based on their connection with information and instruction. Structured educational spaces, like the school classroom, or informal learning environments, such as libraries, were contemplated given their familiarity to children. My focus was placed, however, on spaces of exhibition, and more specifically museums: initially in their early forms as cabinets of curiosities, and later through museum buildings, and the collections they can contain. Besides responding to a personal preference, as discussed in chapter 3, and connecting with my previous review of literature and practice, the historical significance and ubiquity of museums have contributed to the definition of specific traits that represent and evoke these spaces. Often analysed in curatorial studies, the organisational and structuring devices typical of museums provide clearer strategies than other informational contexts for their identifiable translation into the book form.

Referencing characteristics originally belonging to exhibition spaces into the book's format requires, however, addressing the implications, connotations and controversy that accompany them. As anticipated in chapter 2, museums have established themselves as powerful symbols and re-interpreters of culture within Western societies. Grounded on principles representative of the Enlightened modernity, they embody the narratives associated with this period, reflecting the prevailing episteme(s), intellectual climate, and accepted practices of that era (Pearce, 1993, p.233). As a result, more often than not, museums carry an unresolved legacy of colonialism and oppression, where not only the institution itself stands as a symbol of an imperialist past, but the methods through which the objects in their collections were acquired further perpetuate this notion. Often obtained through force or theft, objects in museums are removed from their original contexts to be relocated to spaces where their original narratives may be obscured or downplayed (Taylor, 2024), with these spaces remaining, to this day, generally representative of controversial practices.

Due to this, in post-colonial societies, museums have been critically scrutinised (Hooper-Greenhill, 1992). Efforts to decolonise these institutions have emerged, partially driven by an awareness of their external perception (Taylor, 2024), with varying degrees of success in addressing or acting on the power dynamics and traditions tied to their origins and collections. Contemporary museums have thus experienced a shift in their roles, as having to justify their position in the current context has often involved appealing to their educational

function (Hooper-Greenhill, 1992; Hein, 1998). Today, the International Council of Museums (ICOM) emphasises in their definition of museums that these are “[o]pen to the public, accessible and inclusive, ... [and] foster diversity and sustainability’, also noting how ‘[t]hey operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing’ (2025). Although the success of this may be debated, there appears to be a deliberate effort to counteract the effects of exclusionary and imperial practices that originated within these institutions, to instead focus on the diversity and inclusivity museums can foster.

Regardless of this, a museum is not a neutral space, but rather a context which continues to carry a series of implications and associations that problematise the adoption of its features into creative practice. As discussed in section 3.3, separating the museum’s mechanisms from the values associated with them is, at best, as challenging as it is naïve. In my practice, I rely on the central role the museum has played in the dissemination and organisation of knowledge in Western societies, promoting ‘a more democratic culture of public education’ (Hunt, 2022). However, I do not intend to ignore or conceal in this discussion the oppression these institutions have signified, and recognise that the function and significance of museums have come, in some cases, at the expense of the exploitation and abuse of other cultures. By examining the organisation, structuring, and display elements from these spaces I am not looking to uncritically perpetuate the dominant discourses and narratives associated with museums. Instead, my intention is to extract their defining morphological elements to reinterpret them within the context of contemporary children’s books, using these features to structure the content, encourage interaction, and reconsider the role of these conventions.

5.3 The cabinet of curiosities

5.3.1 Opening and discovery: connecting the book and the cabinet

My initial explorations of format required a prior examination of spaces of exhibition, which began with a consideration of cabinets of curiosities. Often referred to by the German term *Wunderkammer*, cabinets offer some of the earliest attempts at presenting an encyclopaedic view of the world in the form of a collection (Hooper-Greenhill, 1992). Despite displaying an apparently arbitrary and unsystematic organisation, the arrangement of the artefacts they contain is thought ‘to insinuate meaning and educational narratives’ (Taylor, 2024, p.89). These repositories can be considered to have contributed towards

a more scientific understanding of the world (MacGregor and Impey, 2017), which has led them to often be regarded as precursors of museums (Hooper-Greenhill, 1992, p.79). Analysing the features of cabinets, and examining the relationship between these spaces and their contents, provided a starting point for practice.

This analysis was complemented by a visit to Sir John Soane's Museum encouraged during a supervisory meeting, which inspired the first approximations to recreating a cabinet through the book's format. Preserved in its current condition since Soane's death in 1837 by his express desire (Thomas, 2017), the museum offers a glimpse into the breadth and array of a Georgian-era private collection, as if it were fixed in time. Antiques, sculptures, architectural models, paintings, and furniture are presented in the space where the architect used to live and work, blending the concepts of museum and house. This draws particular attention to the setting in which the objects are arranged, and reinforces in the visitor the notion that they are standing in a physical and architectural context full of meaning in and of itself, as it is typical of historical or biographical museums (Arnold, 2016). The theatricality in the display of the collection which Soane accumulated during his lifetime, combined with the defined character of the architectural setting as a source of meaning, rather than as a container of feigned neutrality, seems to be closer in concept to seventeenth-century cabinets of curiosities than to contemporary museums. The connection of Sir John Soane's Museum with these chambers is emphasised by the design of the Picture Gallery, the walls of which are composed of moveable panels which can be opened, in the fashion of a cabinet, to reveal additional paintings which belong to the collection. This idea of opening and revealing a space for the audience to discover would become defining of my subsequent explorations of practice.

The initial attempts to transition from the flat book to a three-dimensional object involved the use of a lift-the-flap approach. This strategy features in picturebooks that appear to be visually influenced by cabinets of curiosities, such as Guillaume Duprat's *Univers: des mondes grecs aux multivers* (The universe: from the Greek cosmos to the multiverse) (2018) and *Le livre des terres imaginées* (The book of imagined lands) (2008). Both titles establish, on their covers, an immediate visual connection with cabinets of curiosities. These show a wooden cabinet containing elements referring to the theme of each book, some of which are fantastical or intangible, adding a sense of wonder. Although there are no other visual references that continue the illusion of the cabinet, the book's materiality serves this purpose through the use of flaps on the inside. Flaps enable the reader to

reveal further information through lifting, but also contribute to presenting a sense of spatiality and discovery into the book, which maintains a codex format.



Figure 35. Initial prototype inspired by cabinets of curiosities.

I aimed to achieve a similar effect to that of Duprat's work by integrating flaps into my practice. Previously considered in *Hats* (section 4.6), I revisited the use of this strategy through the development of a triptych addressing the history of music (figures D1–D3). Inspired by the Picture Gallery, this prototype was divided into multiple sections, some of which included movable elements that required actions of lifting, opening, or pulling to reveal the information (figure 35). This initial test featured approaches which would become relevant in later projects, such as a compartmentalised presentation of objects, and an open reading order of the content. However, the complexity derived from the number of movable elements in the design led me to consider, on reflection, simpler interpretations of the cabinet. As a result, the ensuing explorations became focused on emphasising the cabinet's spatiality through object-like outcomes which included fewer interactive components. In these versions, I used flaps for their potential to generate a sense of surprise in the reader (Alaca, 2018), conceiving them as doors that could be opened to reveal the collection inside the cabinet (figure 36). To accommodate these into the prototype, I began to interpret cabinets as portable pieces of furniture, as I found that this approach could offer greater possibilities for the exploration of the cabinet's features into the book's format (figures D4–D6). These tests led to the development of *Dorothea*, a project in which a three-dimensional interpretation of the cabinet hinged on the action of opening doors to reveal the book's content.



Figure 36. Variations of a possible cabinet-inspired format.

5.3.2 Creating a narrative through artefacts

Incorporating features typical of cabinets into my practice impacted the format, the pictorial choices, and the arrangement of the information in the prototypes I developed. Drawing visual inspiration from these spaces opened the possibility of presenting a narrative not through the depiction of scenes, but through a collection of objects. This notion is rarely explored in picturebooks. While concept books for preliterate children and early readers, such as alphabet or word books, could operate in a similar manner, their primary purpose is showing the connection between a signifier and the signified, not being necessarily concerned with storytelling. In *Dorothea*, however, the depiction of objects had a narrative intent, as their selection and design was at the service of narrating a biographical account.

The inspiration for this thematic choice was rooted in multiple factors. It partially derived from the insight Soane's collection offered into his life and interests, showing how objects and possessions can serve as a reflection of one's life and interests. Besides this, it was also influenced by my participation in the *Biennial Graduate Student Children's Literature Conference* (Lostalé-Seijo, 2021), for which I investigated the motivations and consequences of the idealised approaches through which biographical narratives have often been depicted. Besides connecting with my research interests at the time, this choice was also motivated by practical considerations, as I found that the nature and volume of the information I would be depicting could facilitate a concise and direct

approach to the narrative. This would enable me to elude the organisational challenges that had arisen during the development of *Hats* as a consequence of the book's broad scope and word-image ratio. Although working with less information does not eliminate the need for the selection, organisation, and visual interpretation of the content (Panaou and Yannicopoulou, 2021), the possibility of presenting a short narrative was suited for the development of a brief, experimental project.

In order to avoid preconceptions, I selected a figure unfamiliar to me, with the expectation that it would enable me to focus on the artefacts and the information, rather than on constructing a predetermined persona. I chose to address the life of astronomer Dorothea Klumpke through a constructed collection of objects. These were devised and selected not by virtue of their inherent, connotative meaning, but for the denotative significance ascribed to them in the context of the life and experiences of a person. While biographies commonly show a linear narrative, from the birth to the death of the represented figure (Goga, 2020), in *Dorothea* the story was built by juxtaposing a series of artefacts, presented without a set reading order. While the information that can be observed upon opening the doors is mainly pictorial, the connection between each object and Klumpke is revealed in a written biographical account found at the back of the prototype. Alphabetical labels were used to associate each of the depicted artefacts with the events narrated in the text, thus framing their interpretation, and anchoring their meaning (figure 37). By using objects to represent the biography, there are no scenes, actions, or clear depictions of the person whose life is being portrayed, with Klumpke only appearing in a small portrait at the back of the prototype. This project was therefore not conceived as a conventional retelling of a life, but as the representation of the curated visual imagery associated with it.



Figure 37. Fragment of the final artwork for *Dorothea*.

The visual and material approach to this biography could be considered to have an impact in its perceived reliability. In traditional biographical accounts, the connection between the author's statements and reality may be reinforced through the peritextual, as incorporating a backmatter with additional information, consulted sources, photographs, documents, records, or a list of titles for further reading can complement and validate the content (Panaou and Yannicopoulou, 2021), and provide a sense of legitimacy. In *Dorothea*, it is the depiction of artefacts and their placement in a cabinet that may contribute to this. Architectural settings have been found to largely affect how the objects within them are understood and perceived (Yanni, 2005). This could suggest that visually and materially representing a cabinet of curiosities, or a museum-like context, could influence the reader's perception of the content by appealing to the reliability associated with informational spaces (figures D7–D8). In addition to this, representing the narrative through objects and not scenes could be considered to generate a distance between the implied reader and the subject's life, likewise affecting the perceived objectivity of the account.

5.3.3 The design and handling of the book: the illustrator as a curator

Developing *Dorothea* involved making decisions about the objects that would best portray specific moments of a biography (figure 38). By devising, selecting, interpreting and depicting these, I began to find parallels between the role of the illustrator and the curator, and the activities and processes in which both figures engage.



Figure 38. Final outcome of *Dorothea*, with its doors open.

Curators traditionally select the most suitable elements to exhibit in view of their intended message and narrative (Hooper-Greenhill, 1992; George, 2015), with illustrators fulfilling a similar role when they are in charge of devising and organising the content of a book. The way in which curators distribute the works in a space may additionally be compared to the illustrator's use of layout in view of the book's form. In both cases, these activities may involve the assistance of a designer, who would contribute to the organisation of the elements in exhibitions (Hooper-Greenhill, 1992), or with the book's development in the case of publishing (Salisbury and Styles, 2020). Writing the captions of exhibition labels also bears a resemblance with the formulation of texts in picturebooks, as these require research, a consideration of audience, and the use of accessible and unambiguous language (George, 2015). The analysis of the roles of both figures reveals that curators and illustrators engage in storytelling and can influence, through their decisions and vision, the perception of the displayed realities, while still allowing the viewers to craft and elaborate their own meaning.

The similarities between the two do not necessarily end at their storytelling capacities, as both curators and illustrators need to ensure an accessible presentation of the information. In the context of museums, the comfort of the visitor is often considered to be a prerequisite to learning (Hein, 1998, p.137). In children's books, this condition is no less significant. The design of a book, similarly to the design of an exhibition, should be conceived with an aim to facilitate the access to the information and offer a positive experience, as the opposite would hinder any potential learning. As noted in chapter 1, the focus of this research is not to explore user reaction and reception, but rather to investigate the authorial and curatorial potential of the picturebook from my perspective as a practitioner. However, the handling of the prototype became a necessary consideration to ensure the project's design would not impede the communication of the content to an implied reader.

The literal reproduction of a space in *Dorothea* presented challenges in its design, and in the reading experience it could offer. Although it was possible to draw comparisons between the format used in this project and a book, with the outcome's closed doors serving as a cover (figure 39, left), the final version of *Dorothea* resembled a maquette of a cabinet, lacking the ease of handling that characterises the codex. The visual information, revealed upon opening the doors, was distributed inside the cabinet, while the textual account that explained its significance was located at the back of the object (figure 39, right). By handling the prototype, I found that the physical separation of text and pictures

resulted in a disconnection between the visual and textual modes, despite the use of alphabetical labels to associate the narrated events with the depicted objects. This separation prevented the exploration of the complementary relationship between image and text typically found in picturebooks. As a result, the format became an impediment, rather than an advantage, in the process of meaning-making.



Figure 39. Front view (left) and back view (right) of *Dorothea*.

The design of *Dorothea* highlighted the potential of considering curatorial practices and incorporating features associated with exhibition spaces into book making. This project presented a two-fold interpretation of the cabinet: visually, as a compartmentalised layout and, materially, as a physical container. Its development resulted in finding an alternative approach to sequential narratives and to the depiction of biographies, making use of a design akin to *visual zapping* to suggest an open reading order. While privileging form over function enhanced the spatiality of the project, this also subjected the visual arrangement of images and text to a predetermined design. The location of the text, removed from the visuals it referenced, required the continuous turning of the prototype in order to connect the depicted elements and the narrative to which they belonged. While different formats have particular affordances for their viewing and reading (Drucker, 2022, p.37), the design of this prototype challenged its handling in excess, foregrounding the necessity of more consciously considering the reading experience in the planning of subsequent projects.

5.4 The museum

5.4.1 Defining features of museums

As anticipated in section 5.2, museums emerged as a suitable option to capture the essence of an exhibition space into the book's format in my practice. These institutions, in their various forms, have been responsible for the shaping of knowledge for over six centuries, distilling at each moment the epistemological values of the time (Hooper-Greenhill, 1992). Besides being associated with the exhibition and display of knowledge in a public setting, the concept of museum has been noted to commonly evoke the image of a building (Macdonald, 2010). The connection between the concept of museum and its physical form invited a consideration of the correspondences that can be established between the museum's architecture, and the format of the book.

Museums are, and have historically been, 'thoroughly bookish enterprises' (Arnold, 2016, p.31), which is palpable in the attention that has been put on the production of catalogues of their contents and collections. Catalogues have, in fact, traditionally served as a way of conceiving the book as an extension of a museum's exhibition, or as a form of exhibition in itself (Drucker, 2004). These publications democratise the access to the museum's contents through the printed reproduction of objects, aligning with Malraux's concept of *musée imaginaire*, or museum without walls (Malraux, 1965; Drucker, 2004; Foster, Krauss and Bois, 2012). In catalogues, the photographs of artefacts often have their surrounding spatial elements removed, directing the reader's attention exclusively to the objects, and facilitating their examination and analysis (Arnold, 2016). Based on this, it could be construed that catalogues have succeeded in translating the concept of museum into the book form, as they are able to reproduce its contents, and make them accessible to an audience. However, in ignoring the references to the setting and to the internal strategies for structuring information within the space, these publications necessarily dismiss the contextual features of the spaces where these objects are exhibited.

Ken Arnold defines the walls as the 'most symbolically significant parts of the museum' (2016, p.28), partly due to their dual function: they contain objects, while removing external distractions that could interfere with their viewing. The characteristics of museums are, however, not limited to the isolation of objects for their study and examination. In museum displays, a distance is often established with the visitor, presenting the exhibited elements as objects of contemplation. The morphology of the museum is therefore not only defined

by the external walls, but also by its internal boundaries and limits. The presence of barriers has led museums to be commonly organised around the sense of sight, preventing the touch of the objects on display (Pearce, 1995; Stewart, 1999) in what Nodelman has described as a '[l]ongstanding tradition [which] dictates that museum visitors may be touched by the art but never touch it' (2024, p.59). The fact that the exhibited objects are often behind a glass, frame, or velvet rope, and cannot generally be touched or directly interacted with, remains, to a degree, at the core of their narrative.¹⁵ Far from limiting the experience, some see in this distance the possibility to elevate and entice the spectator's imagination. Arnold points to this when he states that 'being able to get hold of things in museums would in fact be a banal letdown. For touching the essence of an idea, a memory, a moment or a feeling would almost inevitably make it disappear' (2016, p.100).

Regardless of Arnold's view, the characteristics of this understanding of the museum may not result in a constructive experience for the visitor. Physical boundaries can have an undesired impact, and affect the possibilities of acquiring knowledge within the museum's walls. The imposing nature traditionally exhibited by some museum buildings, originally meant to highlight the importance of their collections, may also endow them with an inaccessible appearance due to their architectural features being evocative of authoritarian institutions (Hooper-Greenhill, 1988; Pearce, 1995; Hein, 1998). Museum educator George Hein illustrates this reality when he states that some museum buildings 'may suggest a bank, a courthouse, or other public building entered only when necessary, rather than a place that is desirable for learning and enjoyment'¹⁶ (1998, p.157). As a result, the notion of veneration occasionally identified with museums can alienate visitors from the displayed objects (Pearce, 1993). The risks of presenting an approach characterised by monumentality needed consideration in my approach to practice. This led to a negotiation between the intention to reproduce a museum space to organise the book, and the necessity to challenge a grandiosity which could compromise the reader's engagement with the content.

15 While these traits seem to be defining of a conventional understanding of the museum, Hooper-Greenhill advises against generalisations around this concept, stressing that 'the museum is not a pre-constituted entity that is produced in the same way at all times' (Hooper-Greenhill, 1992, p.191). This is further explored in chapter 6, where the interactivity that can take place in these spaces is addressed.

16 This statement applies to museum buildings of a grandiose architecture, mainly referring to those constructed in Europe during the 18th and 19th centuries. Modern examples may strive for a more vernacular and neutral appearance, as it is the case of the white cube aesthetic introduced in the early 20th century. However, these may face similar issues in how they affect the visitor's perception. As discussed by O'Doherty in *Inside the white cube* (1999), the apparently antiseptic appearance of the museum can be regarded as coercive, as works within it acquire a semi-sacred aura that problematises their reading.

5.4.2 Interpreting museums through the book's format

The commonalities shared by museums and picturebooks have not gone unnoticed (Moebius, 2017; Nodelman, 2018; Dinç and Alaca, 2021), as both are considered to 'stage their visual, textual and material affordances similarly' (Dinç and Alaca, 2021, p.237). Due to this, museums have often featured in picturebooks, notably as the central theme or space in which a narrative takes place (Nodelman, 2024). The primary aim of my investigation was not, however, to develop a book on museums, but rather to translate the architectural characteristics and barriers typical of these spaces into the book to determine how this could affect the organisation and presentation of information, and the perception of modality.

My approach to practice was focused on exploring various formats that could integrate the architectural features of museums. The first of these experiments utilised a French doors format through which the information was revealed by unfolding the pages on either side of the book (figure 40, left). Although the handling of this prototype was more logical than that of *Dorothea*, the format was unable to fully translate the idea of walls, barriers and space into the book (figures D9–D10). A second version represented a space with four stances through a carousel book format. This design maintained the use of flaps as a strategy to reveal the content, while generating a sense of space through the depth that the various layers used in its construction could provide (figure 40, right). Although neither of these prototypes were developed beyond this stage, they constituted a prelude for further explorations of the book's materiality and spatiality. The carousel became, in fact, the format through which I would continue to explore the translation of museum features into the book.



Figure 40. Explorations of format, based on a French doors format (left) and carousel books (right).

Besides representing the spatiality of the museum, the carousel format enabled me to resolve the design and handling concerns that had emerged during the development of *Dorothea*. The carousel was not disruptive of the picturebook's multimodality, as there were opportunities for text and image to be perceived simultaneously. In addition to this, this format offered various possibilities for its reading: besides having the option of handling the book as a codex, seeing one spread at a time, the carousel format could be opened completely, with the front and back covers coming together by tying a ribbon. Presenting the book in such a manner generated an object of spatial qualities, reinforcing the interpretation of the book as a physical container, and its connection with the museum as a building. Through this, it emerged that the carousel format could favour the selection of certain themes over others. The configuration of the book in its open form shows no clear beginning or end, with the first and last scene being placed next to one another, creating a narrative continuum. This looped sequence could favour the representation of themes that are cyclical or have a flexible reading order, as is the case of *A year in nature* (Maskell and Taylor, 2018), where the carousel format is used to represent the passing of seasons. In my practice, the intention to explore the museum's features led me to first produce a prototype representing various stances of a fictive museum, arranged in a sequence with no defined beginning or end. Comprising five sections, each scene represented a different area of knowledge (figures D11–D12). Some of the sections included doors that could be opened, using the notion of barrier to generate a distance between the reader and the object of contemplation, while also offering a measure of interaction. Despite the literality of this approach, the development of the prototype provided insight into the particularities of the carousel format, and its potential for interactivity (figure 41, left).



Figure 41. Prototype depicting a fictive museum (left), and initial approach to *Greenhouses* (right).

Following this initial test, I developed *Greenhouses*. This consisted of a further prototype designed in a carousel format (figure 41, right), later produced as a laser-cut and screenprinted book, which represented the history of these structures through time. The theme partially emerged from the analysis of the previous prototype, as the spatiality that could be achieved through the carousel demonstrated the potential of depicting spaces or scenes to fully explore the three-dimensional possibilities of the format. By selecting a theme unrelated to museums, the connection with these spaces was no longer grounded on visual elements, being instead suggested by the book's format alone. The chosen theme also emphasised how children's books can reinterpret and expand the notion of museum, as *Greenhouses* introduced a concept for an exhibition space that would not be viable in a real-world setting, but which could be realised through the book as a medium. In representing a space, non-fiction picturebooks about museums are considered to 'allow children to explore space metaphorically, physically and socially in abstract and embodied ways without strict restrictions' (Dinç and Alaca, 2021, p.242). In the case of *Greenhouses*, the carousel format could offer an alternative approach to the reader's spatial exploration of a museum through the book itself (figure 42).



Figure 42. Sketches exploring the three-dimensional scenes of *Greenhouses*.

In *Greenhouses*, the spatiality of the book was further explored through the peritextual, and the communicative possibilities the front and back covers could provide. These can shape the reader's response to the book (Nodelman, 1988), but also constitute a narrative space beyond the multimodal text that would allow for the visual plot to start on the front cover, and conclude on the back (Nikolajeva and Scott, 2006; Nikolajeva, 2008; 2010). On the front cover of my project, characters are shown entering a greenhouse, creating a sense of anticipation with an aim to exhort an implied reader to likewise step into the book's narrative. By turning the book, a depiction of the rear of the building can be found, accompanied by a brief summary of the book's contents, which adheres to the conventions of back cover designs (Nikolajeva and Scott, 2006) (figure 43). Besides introducing the theme and generating an invitation for a possible reader to open the book, peritexts were used in *Greenhouses* for their potential to reinforce the identification of the format with a building, strengthening the notion of the book as a conceptual space.



Figure 43. Front and back covers of *Greenhouses*.

5.4.3 The function of framing

The carousel format in *Greenhouses* influenced the type of depictions that I could include. The visuals in this project were conceived differently from those of *Dorothea*, where the represented objects had been isolated and removed from their original context to be placed into a cabinet-inspired design (figures D13–D16). Instead, the carousel

book accommodated specific scenes which could maintain their contextualisation. These consisted of five chronologically arranged sections, each corresponding to a moment in the history of greenhouses, situated behind a frame. Frames played, in fact, a crucial role in the book's concept and design, serving as an interpretation of the museum's internal barriers, a strategy to mediate the reading experience, and as a space where to allocate the text (figures D17–D18).



Figure 44. Framed scene in the final outcome of *Greenhouses*.

In picturebooks, frames are considered to have a dual purpose (Scott, 2010). They can have a structural or architectural function, acting as a visual boundary (Scott, 2010), but also a perceptual role, which focalises the reader's attention and demands their involvement (Nodelman, 1988; Lewis, 2001a). The use of frames in *Greenhouses* primarily responded to an intention to imitate the function of barriers and architectural divisions of space found in museums (figure D19). In doing so, this strategy also placed the focus on the depictions contained within them, with frames acting as a window or proscenium through which to contemplate the content (figure 44). This suggests that the functions of frames are equivalent when employed in two-dimensional illustrations, and when used as material devices. In addition to fulfilling structural and perceptual functions, frames are considered to communicate objectivity in picturebooks (Nodelman, 1988; Nikolajeva and Scott, 2006; Lambert, 2018), as enclosing an image enhances a sense of detachment, and reinforces

the separation between the book and the reader. The format used in *Greenhouses* could, however, be considered to challenge the distance generated by frames through the handling expected from the book. As addressed in section 4.6, including three-dimensional features in picturebooks contrasts with their usual flat construction, which can heighten the reader's involvement, and encourage a closer examination of the work (Kümmerling-Meibauer and Meibauer, 2019). The format used in this project may therefore be seen as an invitation for engagement, interaction, and touch, counterbalancing the initial sense of detachment that frames can suggest (figures D20–D27).

Besides this, frames were also used for the display of the written text, which accentuated the correspondences between this project and museums. Each scene of *Greenhouses* is accompanied by a brief, descriptive narrative adjacent to the image, but physically separated from it, echoing the dynamics of museum labels. The role museum labels have in shaping the interpretation of the element they describe has been identified by Nodelman, who considers them to impart a sense of authority (2018, p.13). However, Nodelman's view may only be partially applicable to current approaches to textual elements in museums, as these institutions have begun to evidence an intention to acknowledge the provisional nature of knowledge. The guide *Writing gallery text at the V&A* (Trench, 2018), used in the Victoria and Albert Museum, outlines a set of guidelines to follow when crafting texts for museum labels. This guide suggests the writer adjusts the tone of the text in view of the content, audience, and context, which is likewise applicable in children's literature. Besides this, there is an encouragement to 'admit uncertainty' in the writing as to show transparency (Trench, 2018, p.42), much like Sanders' (2017) invitation to recognise the fallibility of knowledge in picturebooks. While I used the points from this guide as reference during the writing of *Greenhouses*, the limited space available for the text in the frames offered few opportunities to explore the narrative voice through it. Instead, the focus of the writing was on providing the essential information using less than thirty words per scene, as the format determined the project's informational depth.

Greenhouses resolved the issues that had previously arisen in *Dorothea*, offering an interpretation of the museum space in which the handling of the book and the placement of text and image received greater consideration. Through both projects, I highlighted the value of adapting curatorial practices into book making, explored various visual and material strategies by introducing features from cabinets of

curiosities and museums into the book, and analysed, when pertinent, how modality could be expressed or influenced. The layout, the representations of objects, and the depiction of labels visually connected *Dorothea* with informational spaces, while *Greenhouses* referenced museums through the use of exclusively material strategies. In both cases, the representation of the book as a conceptual space was achieved through the format. While this was successful in providing a sense of spatiality, formats like the carousel offered limited opportunities for an in-depth exploration of a non-fiction topic, given the complexity of building scenes through layers, and the limited space available for the text. In response to this, I began to consider the possibility of developing an additional project to explore features of exhibition spaces, without having the format determine the nature or informational depth of the content.

6 The book as a collection

6.1 Introducing interactivity

The development of *Dorothea* and *Greenhouses* brought to light the particularities of translating the architectural features of exhibition spaces into the book's format. In both cases, the content had become a secondary, almost incidental consideration, addressed only after the format for each book had been established. In order to fully utilise the communicative potential of the book, I developed *Communication* (Appendix E). The aim of this project was for format and content to be explored concurrently, and in relation to an alternative understanding of the museum that would not be limiting of the potential informational depth of the project. The work produced, and discussed in this chapter, furthered my investigation of visual and material strategies in the development of non-fiction picturebooks, and provided new insight into how modality can be materially interpreted and conveyed in the genre.

As described in section 3.4.2.2, the decision to initiate practice from the material had a positive impact in my making processes. Using the exploration of format as a starting point for my projects allowed for a more focused study of the spatiality of the book, and foregrounded the book's potential to function as a conceptual space. However, this approach also posed a series of challenges. Prematurely selecting the book's format imposed constraints that the content needed to adhere to, impeding, or largely limiting, the concurrent exploration of both content and form. Drucker notes, however, that the most successful works 'account for the interrelations of conceptual and formal elements, thematic and material concerns' (2004, p.122), advocating for the simultaneous development of the book's every aspect. Abiding by this idea, and looking to prevent a dissonance between format and content, I aimed to contemplate the formal and the conceptual simultaneously, rather than prioritising the former, in the practice that followed.

My intention to achieve a symbiosis between format and content was parallel to the objective of furthering the examination of informational spaces in relation to the book. In *Greenhouses*, I had explored architectural and framing features that conformed with the idea of 'pure spectatorship' (Howes, 2014, p.260) often ascribed to museums. While this conventional view subsists to this day, its characteristics and practices are often perceived as authoritarian and anachronous under contemporary

tenets. Museums are, however, complex and dynamic environments, and as such their contents, purposes, and approaches are manifold (Hooper-Greenhill, 1992). Besides this sensory-restrictive interpretation of the museum, these spaces have also been defined by approaches based on an active and physical involvement of the audience, which places the focus on the visitors, their actions, and experiences (Hooper-Greenhill, 1992). In light of their potential for interactivity, some museums have been described as 'sensory playgrounds' (Classen, 2017, p.115) highlighting, precisely, the incorporation of senses other than sight in the experiences they can present. Coinciding with this focus on the sensorial, touchability has been noted to be an essential component of picturebooks, whether the book is directly handled by the reader, or the experience is mediated by an adult (Nodelman, 2018). The shared consideration of touch, interactivity, and experience in both museums and picturebooks signalled an additional parallel between the two that could be contemplated in my practice.

6.2 Questioning the format: deconstructing the content

Defining the content of the project was the first step towards its development. I began by reflecting on my previous work to identify unexplored subjects and, after revisiting the practice I had produced during the research, I decided to address a theme whose representations were not necessarily tangible. This had only been briefly approached in the initial exploratory period of practice, as noted in section 4.1, when I had attempted to translate sound into visible forms. Finding potential in advancing the exploration of the book's visual and material affordances through representations of the intangible, I resolved to thematically focus on forms of long distance human communication before and besides modern technology. This involved examining a range of communicative methods historically employed to deliver messages, some of which remain relevant to this day. Based on this idea, I started to develop the last project of the research, discussed in this chapter under the title of *Communication*.

The communicative methods featured in the project were selected in view of their relevance to the subject, the thematic and cultural variety they could provide, and their representational affordances. The final selection included bell-ringing, smoke signals, light signals, signal flags, drumming, whistling, and the postal system, with each offering different options for their depiction. Communication methods based on sound

could rely on the representation of artefacts associated with them, or involve visualisations of vibrations or waves. Visual forms of communication could instead offer the opportunity to make use of the material attributes of the book, and the interactivity it can generate. Altogether, the project intended to describe a breadth of communicative methods which would enable the exploration of distinct visual and material strategies for their representation.



Figure 45. Initial prototype of *Communication*.

The development of practice was primarily aimed at associating each of the concepts with a suitable formal approach, with the intention to obtain visual and material variety in the project. In my early experiments, I incorporated material strategies that had previously appeared in my research, such as paper cutting, folding, and mechanisms like flaps and fold-out elements. Through their use, I intended to enhance the dynamic potential of the book, which Drucker considers to be greater when devices such as these are employed in its construction (2018, p.292). The tests I conducted in my sketchbook were, initially, bound to a double spread format, which resulted in iterations of a materially uniform approach. This led to the development of a first prototype with a homogeneous design throughout, straying from my original intent of realising each section differently (figures E1–E4). This dummy book presented, in the book's verso page, a pop-up scene enclosed by a frame, much in the manner of *Greenhouses*. The recto page, on its part, provided the space for the text, as well as for additional depictions that occasionally included flaps to more accurately represent certain communicative devices (figure 45).



Figure 46. An exploration of possible approaches to the various sections of the book.

While this prototype included some opportunities for interaction, in line with the understanding of the museum inspiring my practice, the resulting dummy book was not representative of my explorations of the book's potential to capture each concept through diverse visual and material strategies. The intuitive anticipation of the book's production and assembly had led me to mediate the creative decisions by a consideration of the processes and media involved in the physical realisation of the outcome. As noted in section 3.4.2, these pre-learned habits, while beneficial in an industry-setting, can be counterproductive in an investigation through practice. To minimise the impact of these tendencies during the making process, I decided to disregard the restrictions of the double spread in the practice that ensued, consciously eluding the self-imposed imperative of producing a final product, and avoiding the consideration of the book's definitive design. By working on each element separately, while simultaneously ignoring the feasibility of formally assembling these into a single book, I was able to devise designs that integrated the conceptual and the formal in ways that suited each communication method (figures E5–E6). This process was initially meant as a step prior to combining all elements into a bound volume, once a satisfactory approach for each had been obtained (figure 46). However, as I explored these designs in the sketchbook, I began to envision each part of the project as an element physically independent from the others.

The link between my practice and the concept of collection emerged in response to this decision. Drawn to the idea of designing a collection, I discarded the possibility of producing a single volume with different sections. Instead, I decided to develop seven independent books, or book-like objects, each addressing a communicative method. The components of the project would each be realised in a specific format, and offer a different reading experience through their specific visual, material, and interactive affordances.

6.3 The collection as an interpretation of the museum

Representing a collection enabled me to explore an understanding of the museum that was not solely determined by the translation of its architectural features into the book. Although not all museums have collections (Kador, 2025, p. 35), these spaces have often been defined in relation to the objects they hold, and how these are explored ‘for inspiration, learning and enjoyment’ (Museums Association, 2025). Indeed, art historian Jás Elsner describes the act of collecting as ‘the process of the museum’s creation, the living act that the museum embalms’ (Elsner, 2004, p.155), highlighting collecting as the museum’s defining activity. This suggests that interpreting museums as collectors of material culture, rather than as spatial contexts, could offer a more generalised and universal representation of these institutions. In addition to contributing to defining the museum’s identity and purpose, collections have also been perceived to have a clear pedagogical potential. The object-based learning they can foster facilitates the acquisition of knowledge and cultural understanding through, precisely, a multisensory exploration of items and artefacts (Kador, 2025). The browsing, studying and examining that museum objects can prompt connected closely with the interaction I intended to achieve in *Communication*, underscoring the suitability of exploring this concept in relation to my practice.

Despite the educational and informational value of collections, the translation of their features into non-fiction children’s books is uncommon. While picturebooks that share a theme may be conceived and produced as a series, this differs from a conceptual or material interpretation of a collection. Bruno Munari’s explorations of the book’s form and structure in *I Prelibri* (1980) could, perhaps, be more closely aligned with my understanding of how collections can be presented in picturebook practice, and with my intentions for *Communication*. In this work, Munari intervened twelve small codices

through the materials employed, the binding used, and the interaction generated to invite alternative experiences in their handling and examination. Presented and displayed in a case, this work is not only a collection of books, as it can also be perceived as a complete set and art object. Given that *I Prelibri* was designed for pre-literate children, Munari's focus was on the material exploration of the book rather than on storytelling. This signalled the potential to build upon this approach to book making by developing a collection of books in which materiality was explored alongside textual and visual narratives.

The challenge of finding picturebooks that interpreted collections led me to shift my attention outside children's literature and towards the Fine Arts to find inspiration for my making. In considering my creative references in a broader manner, I was aesthetically drawn to the work of artists influenced by archival practices, such as Sophie Calle, Louise Nevelson, and Mark Dion. More notably, Marcel Duchamp's series of assemblage pieces *de ou par Marcel Duchamp ou Rose Sélavy (La boîte-en-valise)*, where the concept of portable museum is presented, was directly influential to the development of *Communication* (figure 47). Referred to as a 'book' or 'album' by Duchamp himself (Watts, 2016, p.26), and sometimes defined as an 'art book' (Foster, Krauss and Bois, 2012, p.298), *La boîte* contained a collection of small miniatures and replicas of Duchamp's artistic corpus, displayed in the inside of a leather suitcase which functioned as a small-scale art gallery (Watts, 2016).¹⁷ This work noticeably features conventions typical of museums: the miniature works are accompanied by curatorial labels, and the reproductions are made with materials such as leather, paper, cloth, metal or glass (Campbell, Lévèque and Jue, 2012), which confers on them an aura of originality. Despite the hand-made production of its contents, Duchamp did not conceive *La boîte* as a singular piece. Instead, multiple copies were made in seven editions produced over the span of three decades, resulting in hundreds of boxes with slight variations amongst them (Campbell, Lévèque and Jue, 2012). Through this approach, it could be stated that *La boîte* constitutes not only a metaphorical museum, but also a catalogue of sorts.

17 Duchamp was no stranger to the production of *boîtes* under his own imprint, editions Rose Sélavy. In a similar archival aesthetic, he also published *La mariée mise à nu par ses célibataires même*, showing the notes, sketches, and diagrams he developed while working on the *Grand verre* (Drucker, 2004, p.98).



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OF THIS THESIS FOR COPYRIGHT REASONS]

Figure 47. Marcel Duchamp's *La boîte en valise* (1958).

I found the characteristics of *La boîte* could be interpreted into my practice to contribute to the idea of collection, and its connection with the museum. The visually diverse ensemble of miniature replicas representing Duchamp's artistic corpus was relevant to my intention to create a formally and materially heterogeneous set of books. Besides this, I considered that Duchamp's use of the suitcase to convert the museum into a physical box could be adapted into my project, given the conceptual and functional relevance of this element. Further discussed in section 6.4, the box could act as a symbol of the museum which, given its scale and portability, had the potential to bring the gallery experience closer to children, similarly to how picturebooks have been perceived to do (Dinç and Alaca, 2021). In addition to this, the box appeared as a suitable solution for storing the prototypes, while also providing a sense of unity to the project.

The assimilation of features from Duchamp's work into my practice was merely aesthetic, not engaging with the deeper implications of a personal archive that *La boîte* has, the autobiographic character it holds, or the characteristics of the context in which these pieces were originally produced. Nonetheless, Duchamp's conceptual reformulation of the museum and the physical execution of the work served as an inspiration to translate the notion of collecting into a non-fiction book project.

6.4 Format and content: connections and perception

In devising the components of *Communication*, and intending to not only explore the most suitable creative approach for each, but to also create an eclectic ensemble, I considered format and material alongside the content (figure 48). As discussed in chapter 5, the selected format for a book, beyond influencing the reader's response to it (Nodelman, 1988; Alaca, 2018), can expand the meaning of the narrative, and contribute to the reader's engagement (Alaca, 2018). In view of this, each format used in the project had a specific function, contributing to providing a more accurate depiction of a concept, serving as a resource for storytelling, or offering interaction to an implied reader. This was explored by examining the relationship between form and content in three ways.



Figure 48. First version of the components of *Communication*.

(i) The format takes the shape of the content

The direct correspondence between the book's format and its content has recurrently appeared throughout the history of book making, with preserved examples dating to medieval times (Alaca, 2018, p.62). Although this approach represents one of the most straightforward translations of the book's content into a format, its presence in children's books can be mostly identified with the production of toy-like artefacts, which originally rose in popularity during the Victorian period (Reid-Walsh, 2017). Considering that this approach offers the possibility to recreate items through the book form, and given that museum collections inspired this project, designing books shaped like their content seemed particularly fitting for the development of *Communication*.

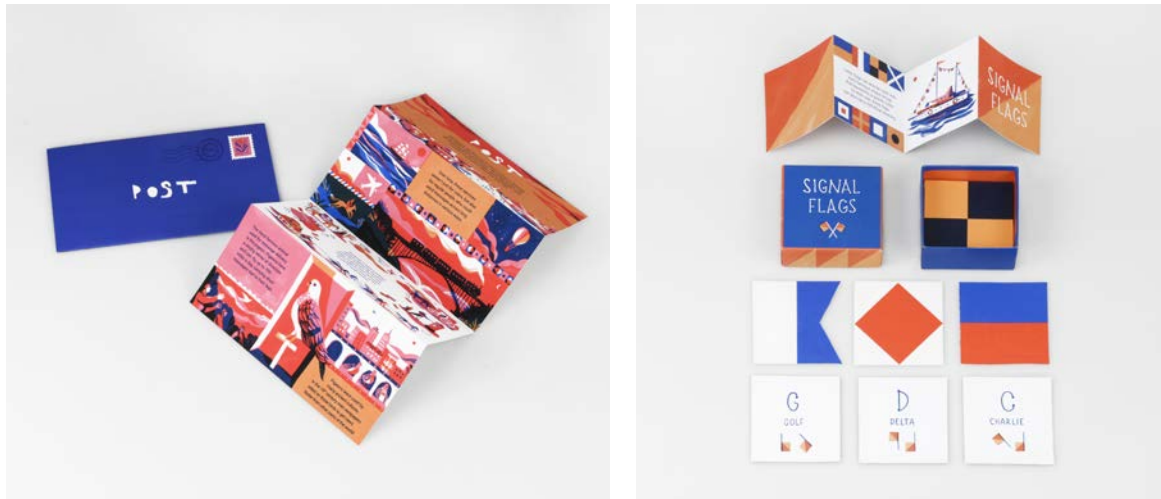


Figure 49. Outcome of the postal system book (left), and box on signal flags with its content (right).

Three of the books in *Communication* materially embody the content they represent, with some becoming hybrid objects that feature characteristics from the element which they reference (figures E7–E16). The history of the postal system is represented as a top-to-bottom concertina that can be folded and placed inside an envelope in the manner of a letter (figure 49, left). The prototype on signal flags, on its part, consists of a box containing an introductory concertina book, and a set of cards representing flags, which could be arranged into a message by the reader (figure 49, right). Finally, the book on drumming is designed in the shape of the instrument, unfolding as a concertina to reveal the verbo-visual narrative (figure 50). In all instances, the communicative strategies referenced in each book can be represented through a tangible, physical object, which enabled the translation of each communication method into a specific shape.



Figure 50. Book cover of the book on drumming (left), and open concertina (right).

As this approach generates an immediate association between the form and the content, I found that repeating the depiction of the referenced object in the illustrations of each book was not always necessary. While representations of drums and flags predominantly feature in the inside illustrations of their corresponding prototypes, the strong connection between format and content allows the omission of significant representations of letters in the postal system concertina. This suggests that, when using this approach, makers can determine whether the format itself is sufficient for the representation of the concept, or whether it is necessary to include additional visual cues. The interplay that can exist between visual and material depictions of the content can allow illustrators to determine whether its representation will gravitate towards a predominantly visual or physical approach.

(ii) The format represents a space

In picturebooks, a pictorial setting can not only indicate the time and place in which the content is situated but, amongst other functions, communicate genre expectations, or set a mood for the book (Nikolajeva and Scott, 2006, p.61). When discussing setting, Nikolajeva and Scott (2006) focus their analysis on how this can be described through the use of words, pictures, or the combination of both. While the book's materiality is not specifically addressed in their writing, the practice produced in chapter 5 demonstrated that certain formats could be used to depict and recreate spaces and locations. This suggests that the book's format could further reinforce the depiction of a place, and express spatial notions that contribute to the meanings conveyed through the book's verbo-visual modes.

In some of the books developed for *Communication*, I chose to highlight the relationship between modes of sound communication and the locations in which they may be used. Folded formats enabled me to enhance a sense of spatiality, with variations of the concertina frequently appearing in my practice given the flexibility this form offers in terms of its shape, design, and reading experiences. The prototype on bell-ringing, for instance, took the shape of a church in which the visual depiction of architectural divisions was used to structure the content. The book is folded into five panels, with one of the sides showing the outside of the building and, the other, various contexts and instances which required the ringing of bells (figure 51). While this could be viewed as an example of the book adopting the form of the content, the primary focus of this prototype was on presenting the church as a context for bell-ringing, rather than on the depiction of bells (figures E17–E24).



Figure 51. Front and back of the book on bell-ringing.

In the book about whistled communication, the attention was instead placed on the distance over which this sound could be heard. In early versions, attempts to convey spatiality through a paper peep-show or tunnel book had been unsuccessful. In discussing the use of these formats, Drucker finds that ‘there is a tendency for such works to be more structure than content, cute and gimmicky rather than actually for reading or interaction in an open-ended way’ (2004, p.154). I arrived at a similar conclusion by reflecting on my practice, as I found the tunnel book format influenced in excess the amount of textual content and nature of visual depictions that could be incorporated in the prototype. Contrasting with this, the concertina allowed for the necessary page space to accommodate both image and text. The two ways in which this format can be read, both page by page and as a continuum (Drucker, 2004; Alaca, 2018; Kümmerling-Meibauer and Meibauer, 2019), featured on each side of this prototype (figures E25–E29). This enabled me to incorporate page by page information on one side, and depict a space on the other, making use of the concertina’s elongated form to contribute to the visual portrayal of the setting (figure 52).

Through these prototypes, I was able to expand my investigation of the spatial potential of the book which I had started to examine in *Dorothea* and *Greenhouses*. While in those two projects I had explored the architectural qualities of the book, by developing *Communication* I found that providing a sense of setting or location through the format could contribute to the narrative capabilities of the work. This could be reinforced by the shape of the book itself, with formats that could represent distance, like the concertina, or depth, like the tunnel book, being able to more effectively evoke spatiality.



Figure 52. Front view (above) and back view (below) of the concertina on whistled communication.

(iii) The format describes an aspect of the content

The relationship between form and content can be explored by symbolically connecting the format with a facet of the theme, without replicating it literally. This approach is prevalent in artist's books, where the defining elements of a book are often freely employed to reflect and enhance the content (Drucker, 2004). The possibility to interpret the content without being subjected to literally reproducing its physical features can provide greater freedom for the maker, and offer an alternative way of strengthening the book's communicative value.

In *Communication*, I found that certain themes naturally lent themselves to the use of specific formats. The book on smoke signals, given its content, demanded a vertical orientation. Although the format I employed in its design is not necessarily uncommon in children's books, it involved a specific set of limitations, as variations of rectangular shapes have been noted to do (Nodelman, 1988). In this case, while the extreme verticality of the book imposed restrictions on the depictions it could include, this format was particularly

suited to communicate the characteristics of smoke in ways that landscape designs, explored in previous prototypes, had been unable to achieve (figures E30–E34). On its part, the book on light signals, originally designed as a hexagon with triangular pages (figures E35–E40), was developed into an explosion book that provided greater space for the representation of the content (figure 53). The folding used in the construction of this format divided the square pages into triangular sections, evoking the facets of prisms, and establishing a connection with this optical device through the angular shapes obtained.



Figure 53. Book cover of the book on light signals (left), and open prototype (right).

By symbolically interpreting the content, format can be aligned with the book's formal requirements, while also expanding its meaning-making potential through the concept behind its form. In the development of the prototypes on smoke and light signals, I found that this symbolic relationship between form and content could be further reinforced by the use of novelty materials. Exploring these in relation to the book form, as described in section 6.5, highlighted the relevance of using every aspect of the book in the construction of meaning.

6.5 Using materials to reinforce the content

Besides being spatial, books are tactile objects whose material features contribute to the experiences and meanings they can create (Drucker, 2004, p.197). Although the publication of titles exploring the book's materiality had been partially disregarded in publishing due to their production costs (Alaca, 2018, p.59), large formats and material considerations have made a comeback in contemporary non-fiction (Lartitegui, 2018; Salisbury, 2020). Perhaps as a response to the dematerialisation that the proliferation of

electronic alternatives began to cause (Alaca, 2018; Salisbury, 2020), greater emphasis has recently been put on the haptic qualities of these books. This has created the opportunity to use materials to appeal to the senses, and to reinforce the content or theme presented in a book (Drucker, 2018, p.294).

The significance materials can have in book making has not been overlooked by practitioners nor scholars, as apart from providing a highly complex sensory experience, they can also impact the reader's attitude towards the book (Nodelman, 1988).

Materials have, in fact, been considered to be 'valuable catalysts' (Alaca, 2018, p.67) in contributing to the audience's engagement with the content, as they can encourage readers to assume a more active role, enhancing their relationship with the book. Their use is particularly effective when these work alongside the form and the content to convey a narrative (2018), adding to the multimodal nature of picturebooks. Books such as the previously mentioned *Illuminature* (Williams and Carnovsky, 2016), or Katsumi Komagata's *Found it!* (2002), evidence how certain materials can heighten the meaning of the content, and provide new experiences to a reader. In these cases, the coloured acetate lenses used to reveal the overlapped illustrations in each spread of *Illuminature*, or the depth achieved by combining layers of tracing paper in *Found it!* provide a sense of discovery that hinges, for the most part, on the material.

The materials used in a book project may be dictated by the age of the implied readers, or by specific demands from publishers (Kümmerling-Meibauer and Meibauer, 2019). In *Communication*, the selection responded to an intention to reinforce the meaning of the content, contribute to the book's modality, and enhance the narrative. The pages of tracing paper used in the smoke signals book, and the mirrored card in the front and back covers of the book on light signals, were intended to reinforce the qualities of the phenomena discussed in each. In the first case, tracing paper was meant to recreate the translucent nature of smoke, connecting the material to the physical qualities of the referenced element, while creating a sense of depth (figure 54). In fact, this could be argued to generate spatiality without the need to alter the book's format (Drucker 2004, p.136). The mirrored card on the light signals book, on its part, is capable of reflecting light, distinctly connecting the material used and the book's content. Finally, the cards representing signal flags established a direct association with the objects to which they allude through the use of fabric in their making.



Figure 54. Book on smoke signals, showing the effect of tracing paper.

The sensory responses that materials can prompt in the reader, connecting the content with aspects of reality through the tactile, could be considered to be representative of a degree of naturalistic modality. In *Reading images*, Kress and van Leeuwen (2006) argue that three-dimensional visual communications can convey modality through the use of specific material elements. They note these choices may be ‘naturalistically motivated’ (2006, p.255) when there is an intention to replicate, through materials, the concept to which these allude. In the signal flags prototype, this is achieved through the use of fabric in the production of each card. However, given the impossibility of literally employing the referenced material in the books of smoke and light signals, this relationship was achieved by symbolically representing these two elements through the characteristics of tracing paper and mirrored card. In accordance with Alaca (2018), this suggests that the use of different papers can connote different values, and elicit distinct responses from the reader. Modality can therefore be explored through an additional dimension in children’s books, as the materials used in their production can not only contribute to meaning, but also enhance, literally or symbolically, the naturalistic modality of the content.

6.6 The structure of the container

Developing *Communication* posed challenges concerning the unity of the whole, and the physical display of its components. It has been noted that the visual approach to a project can enhance its communicative potential, and contribute to its internal coherence (Lartitegui, 2018, p.41). Given the diversity of formats and materials

employed in its realisation, I strived for *Communication* to display a unifying visual strategy, through which I sought to achieve a sense of unity across its parts (figures E41–E42). This intention is reflected in the visual vocabulary and media used, the presence of a shared colour palette, and the cover design of each component, indicating that all seven elements, despite their disparities, belong to a unified whole (figure 55). This sense is further accentuated by the presence of a box in which the books are stored, which contributes to providing cohesion to the project, and to more clearly connecting it to the idea of collection.



Figure 55. Final versions of the seven components of *Communication*.

Developing the box prompted further reflection on the act of collecting, and on the various interpretations this concept can have. Collecting is not exclusively representative of museums, as this has been compared to the fascination children have for gathering that which is strange and compelling (Dindelli, 2020). While motivated by a similar impulse, with both activities responding to the relationship that is established with the material world (Pearce, 1993; 1995, p.33), they result in two different interpretations of the collecting drive: one associated with a formal, institutional sphere, and the other with a private and individual enterprise. The systematic nature of the former, explored through the visuals in *Dorothea*, presupposes an audience and is associated with an organised

display of material knowledge (Pearce, 1993, p.87). The latter, referring to the act of collecting as a personal activity, can more effectively resonate with the experiences of children. This understanding of collecting has been addressed in books such as *The museum of me* (Lewis, 2016), in which this activity is shown to take place outside the museum, highlighting the figure of the child-collector, and equating the value given to both types of collections.

The differences between the personal and institutional interpretations of collections influenced my interpretation of the container's inner distribution and structure. When approaching its design, I initially introduced internal divisions and compartments into the container, assigning each prototype to a designated space to suggest a sense of classification and order. This required the addition of two panels on either side of the box to accommodate three of the prototypes, which created a triptych when opened (figure 56). The inclusion of foldable elements to extend the architectural potential of the container drew an additional connection with Duchamp's portable interpretation of the museum, as did the box's internal compartments. These divisions were reminiscent of trays, drawers, or cases present in some museums, in which the allocation of an object in a specific space can be considered to create 'a vast network of meanings and correspondences' (Mauriès, 2011, p.25).



Figure 56. Initial prototype of the container.

The use of this layout enabled all books to be visible upon opening the box, favouring a flexible reading order of the content (figures E43–E44). However, the rigidity of the design imposed an immutable distribution of the elements. This, in turn, affected the shape and size of the prototypes, which needed to be negotiated in view of the space available for each. Arguments for and against the use of larger and smaller sizes in children’s books are found in the academic discourse, mostly to do with the implied reader and their presumed capacity to handle objects (Nikolajeva and Scott, 2006). However, by following this design, the size of each book would not have been determined by assumptions on user interaction, nor on written, visual or conceptual requirements, but rather on the limitations imposed by the assigned spaces where the books would be displayed.



Figure 57. Closed (left) and open (right) final version of the container.

Needing to adapt the outcomes to the requirements of the container resulted in prototypes of different proportions and sizes than originally intended. To avoid restrictions in the design of the books, I decided to remove the container’s fold-out panels and internal divisions, limiting the function of the box to containment, and not classification. This container design offered greater flexibility in the approach to each component, and enabled the project to be perceived as an open collection to which additional elements could be added, opening the possibility for the reader to assume the role of a co-creator. While the archival aesthetic was abandoned, the resulting freedom in terms of book design, and the potential for the active engagement of the reader, account for the use of this approach in the final version of *Communication* (figure 57).

Through this design, the container need not embody associations with the museum building, its iconography, or layout to establish a connection with it, as the focus is shifted towards the act of collecting, and the possibility to grant the reader a sense of agency (figures E45–E46).

While *Greenhouses* generated a conceptual space based on the physical features of museums, *Communication* placed the accent on the collecting urge by presenting a collection of books. Through each of the components of this project, I explored format in relation to content, with some of the outcomes incorporating materials that could be considered to contribute to the narrative, or to the perceived modality of the books. By presenting the books in a box, I sought to favour an autonomous, non-linear navigation of the content, which could be thought to offer a degree of autonomy and curatorial responsibilities to an implied reader. Through the realisation of this project, I was able to provide an interpretation of museums based not on their architectural features, but on the act of collecting as their defining activity. In doing so, the development of *Communication* contributed to demonstrating how museums and exhibition spaces can provide varied visual and material strategies in the conceptualisation, design and production of non-fiction picturebooks.

7 Conclusions

7.1 Research findings

This investigation aimed to contribute to the study of contemporary non-fiction picturebooks, and advance the understanding of the visual and material strategies employed by illustrators to structure and communicate information. The identification of a gap in knowledge in the study of the visuals resulted in the delimitation of a preliminary area of inquiry. Following an initial period of examination of literature and engagement with practice, the focus of the investigation was more clearly defined, leading to the formulation of the research questions. These aimed to identify creative strategies used in the delivery of information, explore resonances between picturebooks and informational publications and spaces, and examine visual modality in the context of children's non-fiction. In conjunction with a review of primary sources and the application of reflective processes, creative practice served as the main method through which to explore these questions, resulting in the making of four illustrated book projects.

The first of these was *Hats* (chapter 4), where I explored how the organisation of the pictorial space and the book's internal structure could be used as means to present the content and construct a specific message. Through its development, I considered the potential of introducing features from cabinets of curiosities, encyclopaedias and museums into my practice, and began to explore the materiality of the book. The investigation of these aspects would continue in *Dorothea* (chapter 5). In this project, I examined the dynamics of exhibition spaces through both a literal reproduction of a cabinet of curiosities, and an exploration of the narrative potential that images of objects can have as a storytelling device. Maintaining the focus on the book's format, in *Greenhouses* (chapter 5) I looked to reproduce architectural features of museums, showing how these spaces can be reframed and reinterpreted through the picturebook. Lastly, in *Communication* (chapter 6) I offered an interpretation of collections through the deconstruction of the book into components that demanded handling and a measure of interaction. These projects generated new understandings of the area of inquiry and the research questions defined at the outset, while also providing insight into the nature of practice-based research itself, and aspects beyond those I initially sought to investigate.

(i) The practitioner-researcher

My experience during the investigation suggests that the commercial nature of illustration may pose a challenge for illustrators transitioning from practitioner to practitioner-researcher. Although the conceptual approaches to practice differ between professional and investigative contexts, the making processes share significant similarities in both instances, increasing the likelihood of pre-learned professional habits interfering with the course of the research. In my case, the tendency to anticipate a final outcome, influenced by my professional activity, disrupted an open-ended development of the investigation at various points. My making was also affected by the necessity to actively engage with reflective processes throughout, as this resulted in an over-analytical approach that hindered progress beyond the initial stages of an idea. Finding alternative ways to initiate practice, such as privileging an exploration of the material, and occasionally separating reflective processes from the act of making itself, as done by other researchers (e.g. Manolessou, 2012; Palmer, 2016), enabled me to mitigate these limitations. In light of this, I reflected that practitioners involved in commercial practice must develop strategies to differentiate professional and research processes, thus ensuring that the inquiry is not negatively impacted by internalised professional habits.

(ii) The role of the illustrator

The examination of primary literature and the development of practice foregrounded the increased role authorial illustrators can have in devising and developing non-fiction picturebooks. Reflecting the current image-driven context, illustrators are increasingly able to go beyond the art-directed visualisation of a concept to assume responsibilities once held by art directors, designers, and writers. While this convergence of roles is not exclusive to my investigation nor my practice, having control over multiple facets of book making enabled an exploration of devices peripheral to the main verbo-visual narrative in the design and production of books. By engaging in the conception, design, writing, illustration and construction of prototypes, I investigated book making through the conceptual, visual, formal and material, guided by, but also transcending, my initial research objectives. Through this, it was evidenced that picturebooks as a form admit that makers take control over the totality of the design and production processes involved in their creation. It is therefore possible to make a comprehensive use of the book's multimodal nature in communicating the content by developing its visual, textual and material dimensions simultaneously.

(iii) Visual and material strategies

The creative strategies available to authorial illustrators in the making of non-fiction picturebooks were informed by the review of literature of chapter 2, and studied in greater depth through the making of four outcomes. Collected in Appendix F, these refer to the pictorial, the design, and the material aspects of book making, which involved the use of peritexts, layouts, visual conventions, alternative formats, movable elements, and novelty materials. While not all these strategies are exclusive to non-fiction, examining them in the context of informational picturebooks revealed their distinct roles and implications in the genre, particularly through their use in distributing information, organising the book's content, complementing the multimodal text, and influencing the narrative. Although the creative freedom experienced in this investigation may differ from the conditions of a commercial setting, understanding the function of the strategies explored can facilitate their incorporation or interpretation under the requirements of the publishing industry. This highlights not only the malleability of the picturebook as a medium, but also the space it offers for subjectivity and interpretation, thus emphasising the distinctiveness of non-fiction children's books in comparison to other informational forms.

(iv) Expressions of modality

In my review of primary literature, I examined visual expressions of modality in non-fiction picturebooks by expanding on Kress and van Leeuwen's theories (2006), and the interpretations Løvland (2016) and Teigland (2021) made of them. This analysis demonstrated that it was possible to convey reliability in non-fiction children's books through the use of modality markers corresponding to naturalistic, technological, and abstract coding orientations. In addition to this, I found that referencing elements from informational publications and spaces could be considered to further communicate a sense of reliability, given the associations these contexts evoke. While my review indicated that these references typically appeared visually, I was able to further explore how allusions to exhibition spaces could be expressed through the book's format in *Dorothea* and *Greenhouses*. During the development of *Communication*, I additionally found that the materials employed could reinforce the perceived reliability of the content, which I explored both literally and symbolically. Through the analysis of literature and the development of practice, I concluded that modality can be expressed in non-fiction picturebooks through pictorial, design and material features, which illustrators can use to influence and shape the perception of the content.

(v) Interdisciplinary perspectives

During the development of *Dorothea*, it emerged that the processes in which an authorial illustrator is involved are akin to those of a gallery curator, as both engage in the selection, organisation, interpretation, and presentation of information to convey a narrative suitable to a specific audience. In view of this, I found that considering curatorial practices in relation to the processes of book making could be a source of alternative approaches to practice. My understanding of illustration, design and writing was thus influenced by my research into the organisation of exhibition spaces, the presentation of artefacts, and the formulation of text in museum labels, which led me to arrive at solutions such as the object-led visual narrative presented in *Dorothea*. The conscious interpretation of curatorial practices into picturebook making emphasised the illustrator's active role in shaping the content and the message of a book, while underscoring the value of adopting practices from other disciplines to offer illustrators new strategies that can contribute to the communicative and expressive potential of their work.

(vi) The book as a conceptual space

Through the investigation, I explored the potential of the book's format to recreate physical spaces by depicting them in their entirety, or by focusing on their specific, representative features. Variations of the codex, and formats beyond it, were used to generate spatial and material interpretations of a cabinet, a museum building, and a collection. All three explored the relationship between the container and the content: *Dorothea* did so by connecting the cabinet and the depictions of artefacts, *Greenhouses* achieved this through the museum stances and the scenes contained within them, and *Communication* did this by presenting a box containing an assortment of items. The affordances of each approach were diverse, with the impact the container could have in the design of the content being greater in the first two instances. Explicitly presenting the container in these projects reinforced the connection to informational spaces, and to the dynamics of curation these entail. By materially reproducing a space through the book, I found it was possible to provide a sense of setting, generate alternative reading experiences, contribute to the modality of the content, and shape the communicated message. This highlighted the impact that the book's format can have not only as a material support, but also as a conceptual and thematic element.

(vii) The book's materiality

By using the book's materiality, relationships between form and content were explored to generate books which demanded, for their reading, various forms of handling and interaction. It could be construed that, by having access to an additional dimension of the book, the possibilities for making are greater and, therefore, benefit the illustrator. In my experience, I found this proved to be dependent on the approach to the form-content relationship. Adapting the content to the format could result in unwanted and avoidable restrictions that required readjustments during the development of the projects, as it surfaced in the handling of *Dorothea*. Devising form and content concurrently, however, opened greater possibilities for using the book's format to reinforce the narrative, enhance the content, and create experiences. The meaning-making potential of the book's materiality can be thus shaped by how its role is positioned in relation to the content during the creative process.

(viii) Publications and spaces of modernity

Incorporating conventions from publications and spaces of modernity into the book prompted ongoing reflection on how the authority and detachment typically associated with these could be questioned or mitigated. My review of literature had revealed that it was possible to resignify the connotations these contexts hold through visual and textual resources. Expanding on this notion, I used my creative practice to explore how this could be achieved through the book's materiality. By incorporating devices that required physical interaction, or which involved the discovery of information, I found it was possible to challenge the detachment these contexts can suggest. This enabled me to find similarities between the effect generated by resources used in textual narratives, such as hedges, and formats that invite handling and interaction. Based on the analysis of the practice developed, I propose that, although publications and spaces of modernity may have authoritarian implications, illustrators have the possibility to use textual, conceptual, visual and material approaches to challenge, reinterpret and reframe these contexts under contemporary views.

7.2 Contribution to knowledge

This practice-based investigation provided new understandings into a growing but relatively under-researched area of children's literature through my individual insights as a practitioner. My research findings expanded on existing literature and practice on non-fiction picturebooks, and generated new knowledge through the exploration of visual and material strategies, the study of visual modality, and the identification of connections between curatorial practices and book making.

The research conducted revealed that specific creative strategies employed in non-fiction picturebooks can have a role beyond the presentation, structuring and organisation of information, to also enhance the perceived reliability of the representations. Such reliability cannot be fully apprehended through the denotative qualities of the images alone, as it hinges on the recognition of signifiers of high modality that, literally or symbolically, reference specific conventions or understandings of truth. By incorporating pictorial, design, and material references to these conventions, some of which were adapted from informational publications and spaces, the illustrator can actively tailor the content through their representational choices, and the modality that these imply. Capturing a sense of reliability through conventions of modernity risks relaying authoritarian notions, incongruous with the contemporary societal and cultural values permeating the children's book industry. The flexibility of the picturebook can, however, offer a rich toolkit of strategies for the illustrator, who can challenge their implications through the conceptual approach adopted, the physical engagement encouraged, and the visual and narrative resources used in the book.

The research concludes that the picturebook constitutes a unique informational form for reimagining traits belonging to informational contexts. As an artistic and expressive medium, it provides the possibility of developing and reinventing such strategies under the expanding standards of this form, granting greater creative freedom for the illustrator. As a communicative product and reading experience, it can offer alternative ways of engaging and interacting with the content, shaping how information is presented, perceived and consumed.

7.3 Applicability and areas for further research

The results of this research derive from my personal and subjective practice as an illustrator. Rooted in a single practitioner's experience, the study is necessarily limited in content and scope, and affected by personal preferences, influences, and biases. Yet, the conclusions extracted from it have applicability for both practitioners and researchers, and have opened further areas for investigation.

The approaches to making described in this study can offer new strategies for illustrators to consider in the development of non-fiction picturebooks. The study of material devices in the genre, relatively unexplored in previous literature and practice, can be applied and adapted in contemporary picturebooks as a source of meaning, structure and modality. On its part, the integration of curatorial perspectives suggested in my research may be able to inform the design, writing and presentation of information in non-fiction. In doing so, my research can provide resources for illustrators to rethink and renovate established communicative conventions. In a context that demands a more critical relationship with information, this would enable makers to connect the use and connotations of the strategies used with the values they wish to convey. Besides this, my findings can provide practice-informed insights for researchers focused exclusively on the theoretical study of children's books. More specifically, the analysis presented in chapter 2 can contribute to advancing the interpretation of the social semiotic concept of visual modality through the examination of its particularities in children's literature. Exploring how reliability is expressed, reinforced or challenged in picturebooks reveals underlying assumptions about our understanding of how information should be perceived and consumed by children. My investigation can therefore inform studies addressing the epistemological nature of non-fiction picturebooks, the relationship between children's literature and standards of truth, and the impact of educational trends and socio-cultural shifts on the genre.

This research has additionally signalled areas that could benefit from further exploration. In the first instance, the analysis of the book's materiality could be examined on the basis of its potential to generate interactive experiences for a reader in the context of non-fiction picturebooks. Synergies with graphic design have also highlighted the potential of studying the role this discipline has, in combination with illustration, in the construction of meaning. On a conceptual level, explorations that reject conventional informational strategies could yield further insight into contemporary approaches to the genre.

Considering the changing nature of non-fiction picturebooks, as well as their increasing subjectivity, obtaining perspectives from various professionals and contexts could also result in valuable additions to the understanding of non-fiction. To this end, interviewing publishers and makers, or conducting extensive surveys of literature in different markets and countries, could provide a more nuanced perspective on the trends in non-fiction, the approaches illustrators have to information visualisation, emerging patterns in the publishing industry, and insight into what an information book for children is considered to be. Studies on these areas could contribute to more accurately describing the state of the genre, as well as its future projection.

The investigation conducted, and the suggested avenues for research, can help define what our current relationship with knowledge is, how it manifests in non-fiction picturebooks, and how children are expected to engage with information. Furthering the discussion of how the non-fiction picturebook can be understood as an informational product, as a piece of creative artistic expression, and a means to communicate values and ideals can contribute to the shaping of non-fiction as a genre, and to expanding the understanding of the creative and informational potential of the picturebook.

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Appendix A Review of primary sources

This appendix contains a list of the books reviewed in **chapter 2**. These are divided into different tables, in function of the specific characteristic examined. Where available, the English translations of the titles correspond to the English-language co-editions of the books; in all other cases, they are my own.

Photographs and photorealistic representations

Title	Author/illustrator	Publisher	Year	Country
<i>Eyewitness</i> (series)	Various authors and illustrators	Dorling Kindersley	1988–present	United Kingdom
<i>Mes premières découvertes</i> (My first discoveries) (series)	Various authors and illustrators	Gallimard	1989–2007	France
<i>Eyewonder</i> (series)	Various authors and illustrators	Dorling Kindersley	2001–present	United Kingdom
<i>Axinamu</i> (Out of sight)	Bernadette Gervais, Francesco Pittau	Éditions du Panama	2008	France
<i>Bocas</i> (Mouths)	Nicolás Fernández, Xulio Gutiérrez	Kalandraka	2008	Spain
<i>Un libro en tamaño real</i> (Curious comparisons: a life-size look at the world around you)	Jorge Doneiger, Guido Chouela, David Sisso, Marcelo Setton, Cristina Reche	Océano Travesía	2008	Spain
<i>Oxiseau</i> (Birds of a feather)	Bernadette Gervais, Francesco Pittau	Grandes Personn	2010	France
<i>Seis niños en Marte</i> (Six children in Mars)	Luis Ruíz de Gopegui, Juan Miguel Aguilera	Media Vaca	2011	Spain
<i>Nacéo</i> (The open ocean)	Bernadette Gervais, Francesco Pittau	Grandes Personn	2012	France
<i>Zooptique. Imagine ce que les animaux voient</i> (Eye spy: wild ways animals see the world)	Guillaume Duprat	Seuil Jeunesse	2013	France

Table A1. List of titles analysed for their use of photographs and photorealistic representations.

Symbols and pictograms

Title	Author/illustrator	Publisher	Year	Country
<i>Visual science (series)</i>	Marie Neurath, Joseph Lauwerys	Max Parrish	1950–1952	United Kingdom
<i>The wonder world of land and water</i>	Marie Neurath	Max Parrish	1957	United Kingdom
<i>Paradis (Paradise)</i>	Bruno Gibert	Autrement	2008	France
<i>Code de la route (Highway code)</i>	Tibor Karpati	Éditions MeMo	2011	France
<i>A world of information</i>	James Brown, Richard Platt	Candlewick studio	2016	United Kingdom
<i>Cuéntame del 1 al 10 (Count with me: 1 to 10)</i>	Ana Palmero Cáceres	Ekaré	2017	Spain
<i>Sinfronteras (Without borders)</i>	Imapla	Libros del Zorro Rojo	2017	Spain
<i>Malala Yousafzai: mi historia es la historia de muchas chicas (Malala Yousafzai: my story is the story of many girls)</i>	Clara Fons Duocastella, Yael Frankel	Akiara Books	2019	Spain

Table A2. List of titles analysed for their use of symbols and pictograms.

Charts, graphs and diagrams

Title	Author/illustrator	Publisher	Year	Country
<i>Monumental: records et merveilles de l'architecture</i> (Monumental. Records and wonders of architecture)	Sarah Tavernier, Alexandre Verhille	Éditions Milan	2015	France
<i>Atlas. Comment va le monde?</i> (Atlas. How does the world work?)	Laure Flavigny, Jessie Magana, Séverine Assoues, Aurélie Boissière	Actes Sud	2016	France
<i>Timeline</i>	Peter Goes	Gecko Press	2016	United Kingdom
<i>Professor Astrocat. Solar system</i>	Ben Newman, Dominic Walliman	Nobrow press	2017	United Kingdom
<i>The great New York subway map</i>	Emiliano Ponzi	The Museum of Modern Art	2017	U.S.
<i>Голосно, тихо, пошепки</i> (Loudly, softly, in a whisper)	Andriy Lesiv, Romana Romanyshyn	Видавництво Старого Лева (The Old Lion Publishing House)	2017	Ukraine
<i>Я так бачу</i> (I see that)	Andriy Lesiv, Romana Romanyshyn	Видавництво Старого Лева (The Old Lion Publishing House)	2017	Ukraine
<i>On n'arrête pas le progrès</i> (You can't hold back progress)	Félix Rousseau, Pascale Hédelin	Saltimbanque éditions	2018	France
<i>Yo y el mundo</i> (Me and the world)	Mireia Trius, Joana Casals	Zahorí Books	2019	Spain
<i>Cinematográfico</i> (Cinematographic)	Gema Sirvent, Ana Pez	Libre Albedrío	2020	Spain
<i>Geo-gráficos</i> (Geo-graphics)	Regina Giménez	Zahorí Books	2021	Spain

Table A3. List of titles analysed for their use of charts, graphs and diagrams.

Revealing the inner workings

Title	Author/illustrator	Publisher	Year	Country
<i>Look inside your body!</i>	Louie Stowell, Kate Leake	Usborne	2012	United Kingdom
<i>What's inside?</i>	OKIDO	Thames & Hudson	2013	United Kingdom
<i>¿Qué se esconde dentro del mar? (What's hidden in the sea?)</i>	Aina Bestard Vilà	Lectio	2016	Spain
<i>Anatomie (Anatomy)</i>	Hélène Druvret, Jean-Claude Druvert	La Martiniere Jeunesse	2016	France
<i>¿Qué se esconde dentro del cuerpo humano? (What's hidden in the body?)</i>	Aina Bestard Vilà	Lectio	2017	Spain
<i>Cá dentro. Guía para descubrir o cerebro (Inside. A guide to discovering the brain)</i>	Isabel Minhós Martins, Madalena Matoso, Maria Manuel Pedrosa	Planeta Tangerina	2017	Portugal
<i>Illumanatomy</i>	Kate Davies, Carnovsky	Wide Eyed Editions	2017	United Kingdom
<i>Descubre la arquitectura (Discovering architecture)</i>	Berta Bardí y Milà, Eduard Altarriba	Juventud	2020	Spain
<i>Ciudades arriba y abajo (Hidden cities: explore beneath your feet and above your head)</i>	Irene Noguera, Susana Esteban, Laura Fernández	Mosquito Books	2021	Spain
<i>Magic magnifying glass: my amazing body</i>	Nancy Dickmann, Adam Howling	Wide Eyed Editions	2021	United Kingdom
<i>What's inside a flower?</i>	Rachel Ignatofsky	Crown Books	2021	United Kingdom
<i>Inside the body: an extraordinary layer-by-layer guide to human anatomy</i>	Joëlle Jolivet	Thames & Hudson	2022	United Kingdom

Table A4. List of titles analysed for their use of visualisations that reveal inner workings.

Geographical projections and representations of space

Title	Author/illustrator	Publisher	Year	Country
<i>Anno's Britain</i>	Mitsumasa Anno	Philomel Books	1982	United Kingdom
<i>D.O.M.E.K. (H.O.U.S.E.)</i>	Aleksandra Mizieliński, Daniel Mizieliński	Wydawnictwo Dwie Siostry	2009	Poland
<i>Mapy (Maps)</i>	Aleksandra Mizieliński, Daniel Mizieliński	Wydawnictwo Dwie Siostry	2012	Poland
<i>Toutes les maisons sont dans la nature (Who built that? Modern houses)</i>	Didier Cornille	Hélium	2012	France
<i>City atlas: travel the world with 30 city maps</i>	Georgia Cherry, Martin Haake	Wide Eyed Editions	2015	United Kingdom
<i>Nepal. 300 km a pie alrededor del Annapurna (Nepal: 300 km on foot around Annapurna)</i>	Enrique Flores	A buen paso	2015	Spain
哲学用語図鑑 <i>Tetsugaku Yogo Zukan (The visual dictionary of philosophy)</i>	Masato Tanaka, Tetsuya Saito, Mayuko Watanabe	プレジデント社 (President Inc.)	2015	Japan
<i>A minha cidade (My city) (series)</i>	Various authors and illustrators	Pato Lógico	2016–2019	Portugal
<i>En construcción (Under construction)</i>	Silvana Andrés, Sonia Rayos, Juan Berrio	Litera Libros	2018	Spain

Table A5. List of titles analysed for their use of geographical projections and representations of space

Newspapers

Title	Author/illustrator	Publisher	Year	Country
<i>Ale patent! (Impossible Inventions)</i>	Aleksandra Mizieliński, Daniel Mizieliński	Wydawnictwo Dwie Siostry	2014	Poland
<i>Mensonges... ou vérités dans l'histoire? (Lies... or truths in history?)</i>	Isabelle Louviot, Sylvain Dorange, Arnaud Clermon, Johan Papin	Fleurus	2018	France
<i>Robos de leyenda (Legendary robberies that made history)</i>	Soledad Romero Mariño, Julio Antonio Blasco	Zahorí Books	2020	Spain
<i>Grandes fugas de la historia (Legendary escapes and jailbreaks)</i>	Soledad Romero Mariño, Julio Antonio Blasco	Zahorí Books	2021	Spain
<i>Espías míticos (Top secret: the book of spies and agents)</i>	Soledad Romero Mariño, Julio Antonio Blasco	Zahorí Books	2023	Spain

Table A6. List of titles analysed for their use of features of newspapers.

Dictionaries

Title	Author/illustrator	Publisher	Year	Country
<i>Mis primeras 80.000 palabras (My first 80,000 words)</i>	Various authors and illustrators	Media Vaca	2011	Spain
<i>Mar (Ocean)</i>	Ricardo Henriques, André Letria	Pato Lógico	2012	Portugal
<i>Teatro (Theatre)</i>	Ricardo Henriques, André Letria	Pato Lógico	2015	Portugal
<i>Jeden dzień (One day)</i>	Aleksandra Mizieliński, Daniel Mizieliński	Wydawnictwo Dwie Siostry	2016	Poland
<i>The dictionary of difficult words</i>	Louise Lockhart, Jane Solomon	Frances Lincoln	2019	United Kingdom
<i>Dança (Dancing)</i>	Ricardo Henriques, André Letria	Pato Lógico	2022	Portugal

Table A7. List of titles analysed for their use of features of dictionaries.

Encyclopaedias

Title	Author/illustrator	Publisher	Year	Country
<i>Zoo logique (Zoo ology)</i>	Joëlle Jolivet	Seuil Jeunesse	2002	France
<i>Inventaire illustré (Illustrated Compendia) (series)</i>	Virginie Aladjidi, Emmanuelle Tchoukriel	Albin Michel	2009–2024	France
<i>Het raadsel van alles wat leeft (The mystery of life)</i>	Jan Paul Schutten, Floor Rieder	Gottmer	2013	Holland
<i>Lá fora. Guia para descobrir a natureza (Outside. A guide to discovering nature)</i>	Maria Ana Peixe, Inês Teixeira	Planeta Tangerina	2014	Portugal
<i>Shackelton's Journey</i>	William Grill	Flying Eye Books	2014	United Kingdom
<i>Creaturepedia</i>	Adrienne Barman	Wide Eyed Editions	2015	United Kingdom
<i>Pszczoly (The book of bees)</i>	Piotr Socha	Dwie Siostry	2015	Poland
<i>Colorama</i>	Cruschiform	Gallimard	2017	France
<i>Das Liebesleben der Tiere (Do animals fall in love?)</i>	Katharina van der Gathen, Anke Kuhl	Klett Kinderbuch	2017	Germany
<i>Océan (Ocean)</i>	Hélène Duvret	Éditions de La Martinière	2018	France
<i>Plantopedia</i>	Adrienne Barman	Wide Eyed Editions	2018	United Kingdom
<i>Everest</i>	Sangma Francis, Lisk Fenk	Flying Eye Books	2018	United Kingdom
<i>Marie Curie. Nel paese della scienza (Marie Curie)</i>	Irène Cohen-Janca, Claudia Palmarucci	Orecchio Acerbo Editore	2019	Italy
<i>Atlas. El gran viaje ilustrado (Atlas. The great illustrated journey)</i>	Pascale Hédelin, Pati Aguilera	Zahorí Books	2020	Spain
<i>Paisajes perdidos de la Tierra (How life on Earth began)</i>	Aina Bestard Vilà	Zahorí Books	2020	Spain
<i>Charles Darwin's on the origin of species</i>	Anna Brett, Nick Hayes	Laurence King	2021	United Kingdom
<i>Women in science: fearless pioneers who changed the world</i>	Rachel Ignatofsky	Crown Books	2021	United Kingdom

Table A8. List of titles analysed for their use of features of encyclopaedias.

Museums and cabinets of curiosities

Title	Author/illustrator	Publisher	Year	Country
<i>Le livre des terres imaginées</i> (The book of imagined lands)	Guillaume Duprat	Seuil Jeunesse	2008	France
<i>Animalium</i>	Katie Scott, Jenny Broom	Big Picture Press	2014	United Kingdom
<i>Historium</i>	Jo Nelson, Richard Wilkinson	Big Picture Press	2015	United Kingdom
<i>Botanicum</i>	Katie Scott, Kathy Willis	Big Picture Press	2016	United Kingdom
<i>Univers: des mondes grecs aux multivers</i> (Universe. From the Greek cosmos to the multiverse)	Guillaume Duprat	Saltimbanque éditions	2018	France
<i>The incredible ecosystems of planet Earth</i>	Rachel Ignatofsky	Wren & Rook	2019	United Kingdom
<i>Animo museum</i> (Animal museum)	Nadja Belhadj, Julia Spiers	Saltimbanque éditions	2021	France

Table A9. List of titles analysed for their use of features of museums and cabinets of curiosities.

Instructional books

Title	Author/illustrator	Publisher	Year	Country
<i>Fifty dangerous things (you should let your children do)</i>	Gever Tulley, Julie Spiegler	Tinkering Unlimited	2009	U.S.
<i>How to be an explorer of the world</i>	Keri Smith	Penguin	2011	United Kingdom
<i>A juego lento. Taller de poesía</i> (Poetry workshop)	Mar Benegas, Carlos Rubio	Litera Libros	2016	Spain
<i>Enciclopedia visual de los sonidos</i> (Visual encyclopedia of sounds)	Isidro Ferrer Soria	A buen paso	2021	Spain
<i>The handbook of forgotten skills</i>	Nataia Crowley, Elaine Batiste, Chris Duriez	Magic Cat Publishing	2023	United Kingdom

Table A10. List of titles analysed for their use of features of instructional books.

Appendix B Initial explorations

This appendix contains a selection of the practice developed during the first months of the investigation (November 2019–June 2020), discussed in **section 4.1**. During this time, I explored various themes and visual approaches that contributed to the redefinition of the research question, and which featured in later projects. The images included in this appendix comprise sketches, screenprints, collagraphs, monoprints, collages, and digitally assembled illustrations.



Figure B1. Preliminary concept for a card game designed to pair historical figures with the territories associated with them.

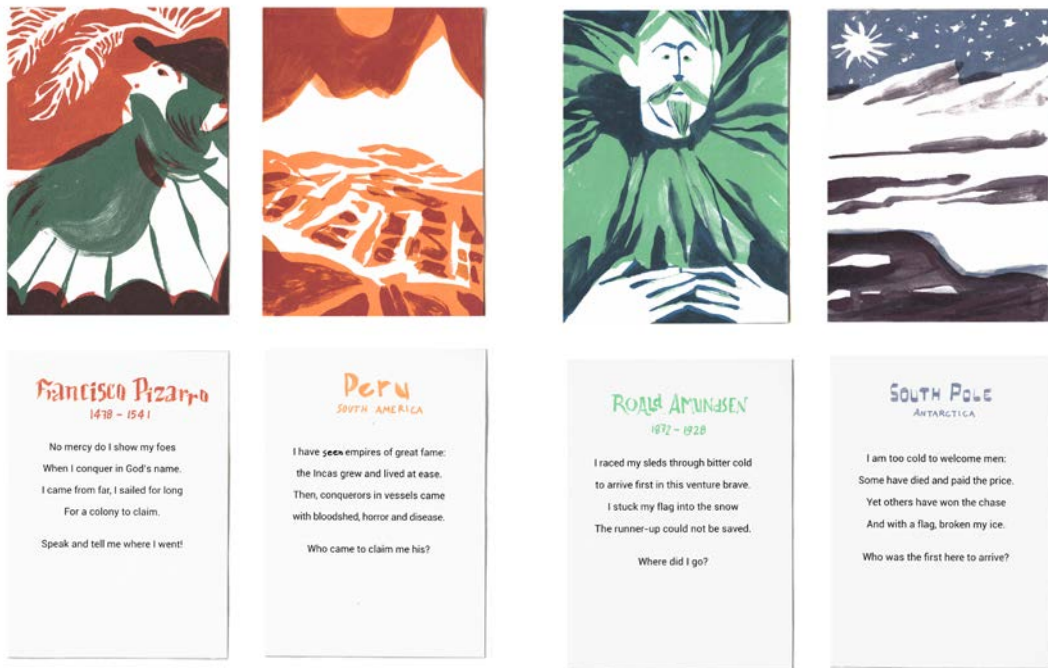


Figure B2. Prototypes of the front and back of two pairs of cards. The riddles contributed to matching the cards, and intended to represent two opposing views, contrasting an individual's motivations with the perspective of the land and its community.



Figure B3. Preparatory sketches for the front and back of each card.



Figure B4. Preparatory sketches intended to challenge the naturalistic modality of the depictions by introducing fanciful elements (e.g. anthropomorphic face on the Moon).



Figure B5. Reworked sets of matching cards. Each pair shared visual elements that connected the portrait and the corresponding landscape.



Figure B6. Two-colour screenprint exploring the role of colour in non-fiction. The landscape, fauna, flora and clothing situate this image into a broad time period, despite the palette compromising the illustration's naturalistic modality.



Figure B7. Preparatory sketches for figure B8.

Figure B8. Three-colour screenprint examining alterations of naturalistic colours, texture, scale and shape in human depictions.



Figure B9. Four-colour screenprint depicting Babylonians observing the night sky. The background and clothing are used to provide contextual information.



Figure B10. Preparatory sketches of the composition and setting for figure B9.



Figure B11. Commissions enabled me to develop speculative practice in a commercial setting. This illustration was made for an article in a children's magazine about the position of Yugoslavia during the Cold War, and its relationship with the two blocs.



Figure B12. Printed illustration. The limited palette facilitated the depiction of Yugoslavia and the blocs, while the non-naturalistic use of scale contributed to the dynamism of the image and its narrative.

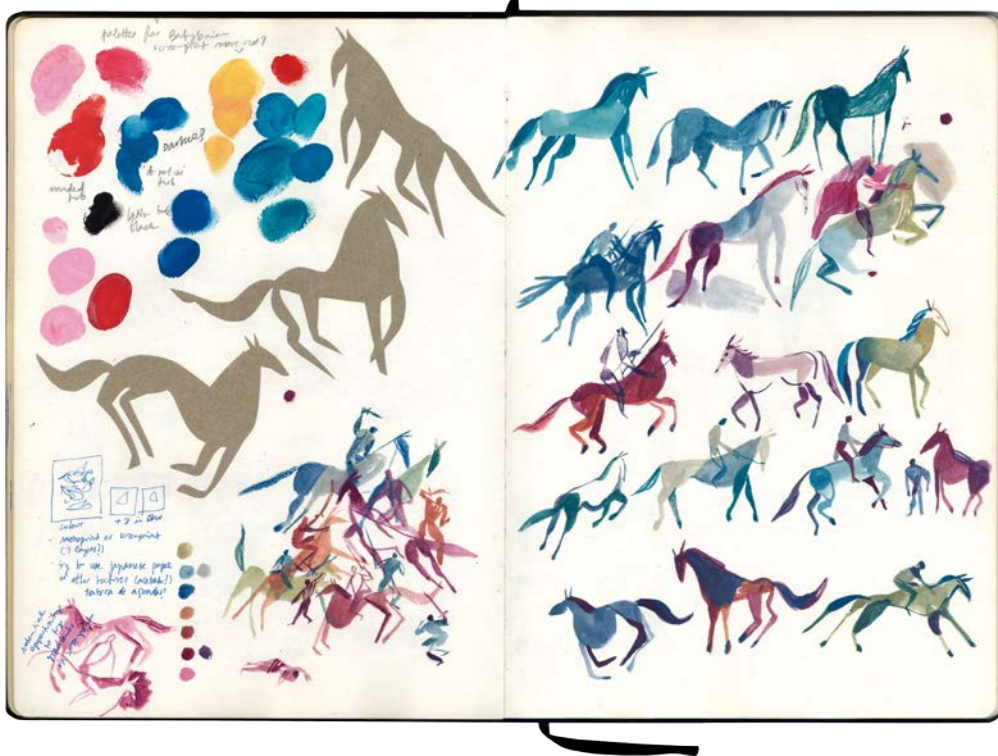


Figure B13. Studies of a battle scene, exploring the morphological simplification of figures.



Figure B14. Exploration of a battle scene, placing the focus on the action by removing contextual details, and identifiable armour or weaponry.

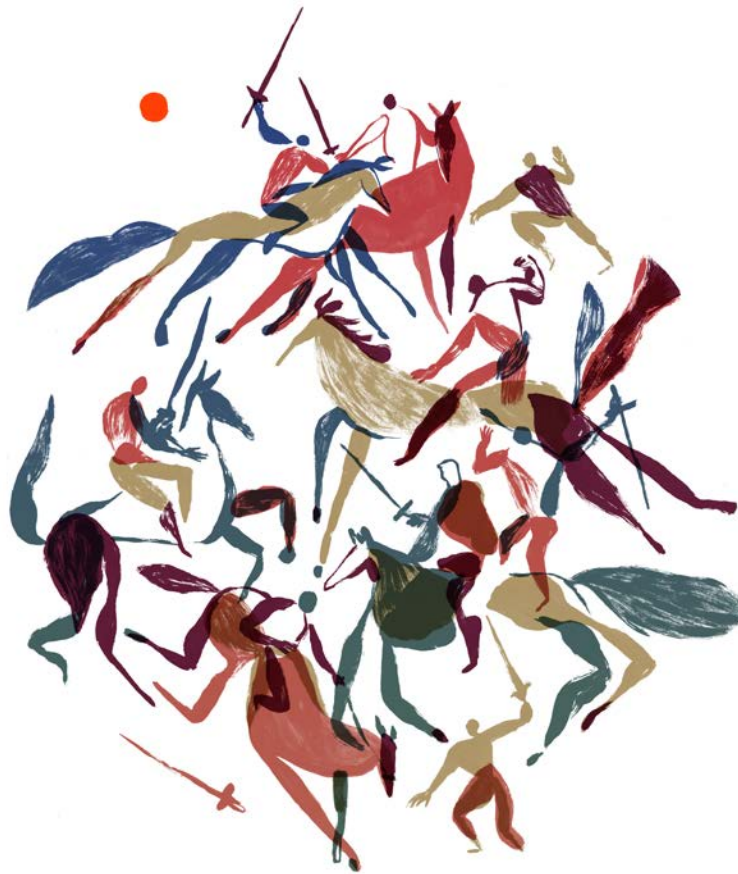


Figure B15. Final version of the sketch in figure B14.



Figure B16. Sequence of actions looking to achieve simplification in the rendering of the figures.



Figure B18. Sketch exploring the integration of figures into a setting.



Figure B19. Sketches for figures B17 and B18.



Figure B20. Two-colour collagraphs depicting British monarchs. The tools employed influenced the approach to image-making and the tone of the illustrations, with use of the scalpel yielding sharp, angular shapes.



Figure B21. Preparatory sketches for the collagraphs in figure B20. The shapes in these sketches are softer than in the final prints, which prompted reflection on how the chosen media or technique could affect the communicated message.



Figure B24. Collagraphs about natural themes, in which colour and typography were introduced in an attempt to integrate words into the images.



Figure B25. Preparatory sketches for the collagraphs in figure B24.



Figure B26. Collagraph over monoprint, exploring the expressive possibilities of combining these techniques.



Figure B27. Preparatory sketches for figure B26.



Figure B28. Collagraph over monoprint through which I explored naturalistic colour in relation to simplified shapes.



Figure B29. Process behind the print in figure B28.



Figure B30. Collagraph over monprint through which I explored the use of non-naturalistic colour in relation to simplified shapes.



Figure B31. Process of a monprint exploring the limits between abstraction and readability.

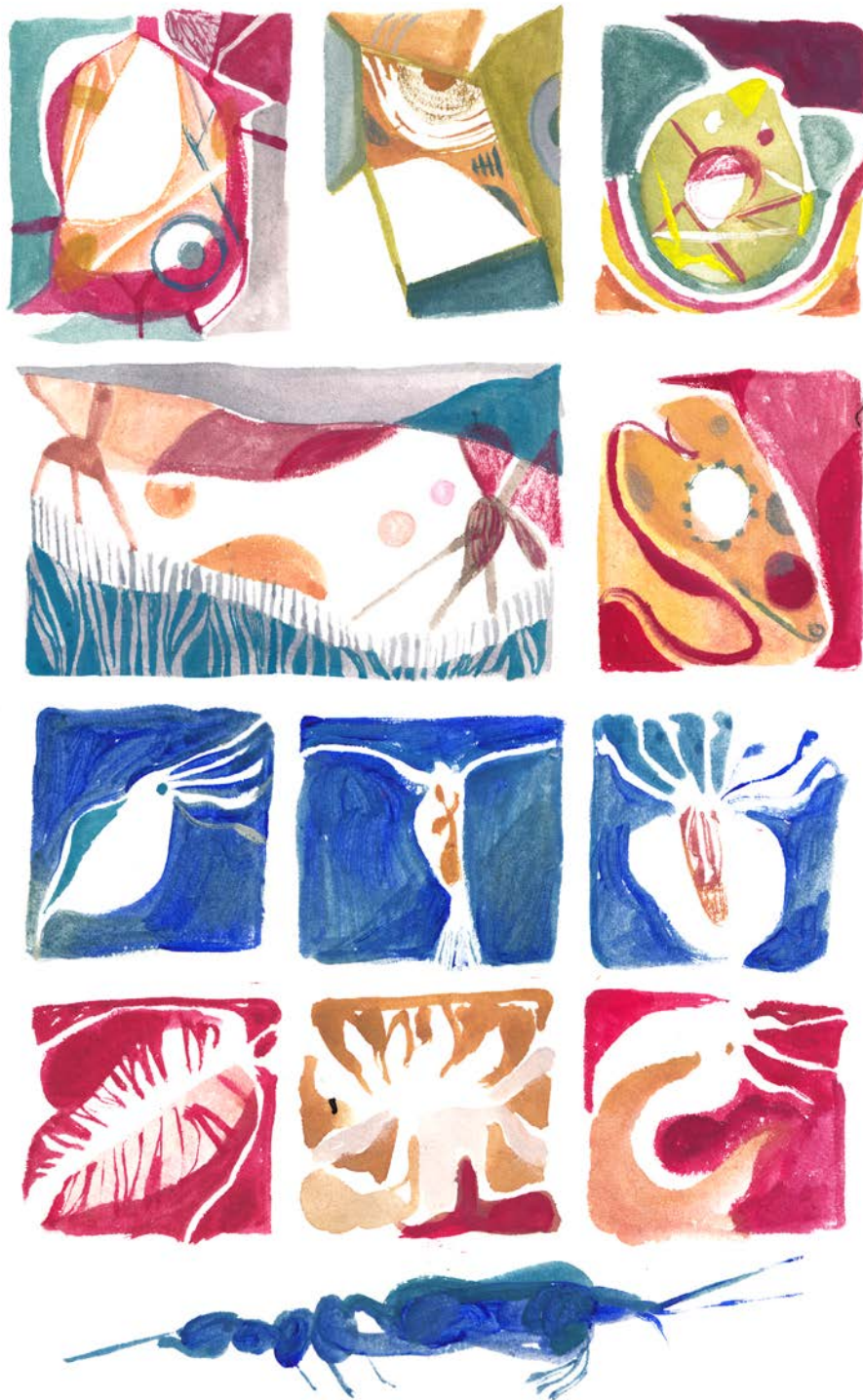


Figure B32. Initial sketches of animal and plant cells, as well as plankton. The focus on microscopic beings responded to an intention to more freely explore shape and colour, and find resonances with abstract art.



Figure B33. Illustrations based on the sketches in figure B32.



Figure B34. Sketches introducing a humanoid figure investigating the microscopic world. The image intended to explore the communication of this concept, rather than accurately depict it.



Figure B35. Original prints (left) and digitally edited collagraphs (right) exploring the introduction of typography to depict sound, or name the represented elements.



Figure B36. Exploratory sketches for the cross-section in figure B37.



Figure B37. Cross-section depicting the organs involved in hearing, unnaturally enlarged to facilitate their identification.



Figure B38. Initial explorations of themes related to invisible concepts, such as music and voice. The attempt to simplify shapes challenged the readability of images in excess, which would affect the visual approach to subsequent illustrations.



Figure B39. Commissioned illustration for a children's magazine depicting a journalist researching the working conditions of miners in Bolivia. The speech bubbles describe the themes the miners shared with the journalist, serving as a resource to visually represent the conversation.



Figure B40. Sketches for figure B39.



Figure B41. Visual representation of the intensity of sound through the approximate decibels associated to an action. Colours, shapes, and typography were explored as a device to convey the intensity of the sounds.



Figure B42. Sketches for figure B41.



Figure B43. Mixed media. Three illustrations representing wind instruments. The use of shapes and typography aimed to represent the qualities of the sounds produced by the flute, clarinet and bassoon.

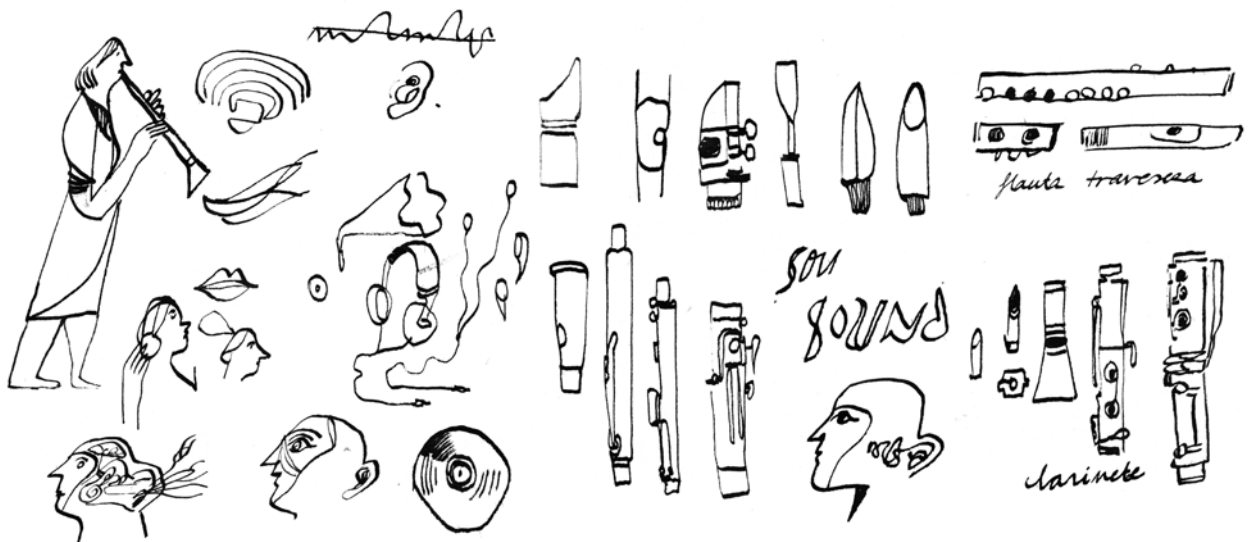


Figure B44. Sketches for figure B43.



Figure B45. Illustration of the classification of voice types, visually representing each sound through the characteristics of the typography used.



Figure B46. Study of typography for figure B45.



Figure B47. Representation of the temperaments associated to the four humours in Hippocratic medicine, in which I sought to integrate typography and design elements in the image.



Figure B48. Illustration depicting dentistry in Ancient Egypt. I attempted to include tools in the frame to explore the informational potential of a decorative element.



Figure B49. Preparatory sketches for figure B48.



Figure B50. Illustration representing surgery in the Ottoman empire. The use of colour and typography was meant to be reminiscent of said civilisation and era.



Figure B51. Sketch for figure B50.



Figure B52. Illustration representing the investigation and synthesis of the aspirin. The abstraction of shapes challenged the communication of the concept.



Figure B53. Representation of the discovery of penicillin. The alteration of scale aimed to focus the attention on the culture plate. The addition of text revealed the need to incorporate a verbal narrative in my practice.



Figure B54. Chronological representation of the seven Roman kings. This image originated from sketches produced at earlier stages of the research (figure B55), later developed into an illustration when I began to explore timelines.



Figure B55. Early sketches for figure B54.



Figure B56. Timeline representing a chronology of nursing. The readability of the images is challenged by the simplicity of the shapes and the merging backgrounds, with the text underneath serving as the explanation of the succession of advancements.

Appendix C Hats

The work included in this appendix constitutes a visual record of the development of *Hats* (May 2020–July 2022), discussed in **chapter 4**. This project featured themes addressed during the initial explorations of practice, brought together through a narrative. Its development involved creating storyboards and dummy books, conducting visual research, devising various approaches to the content of each spread, and exploring the book's materiality.

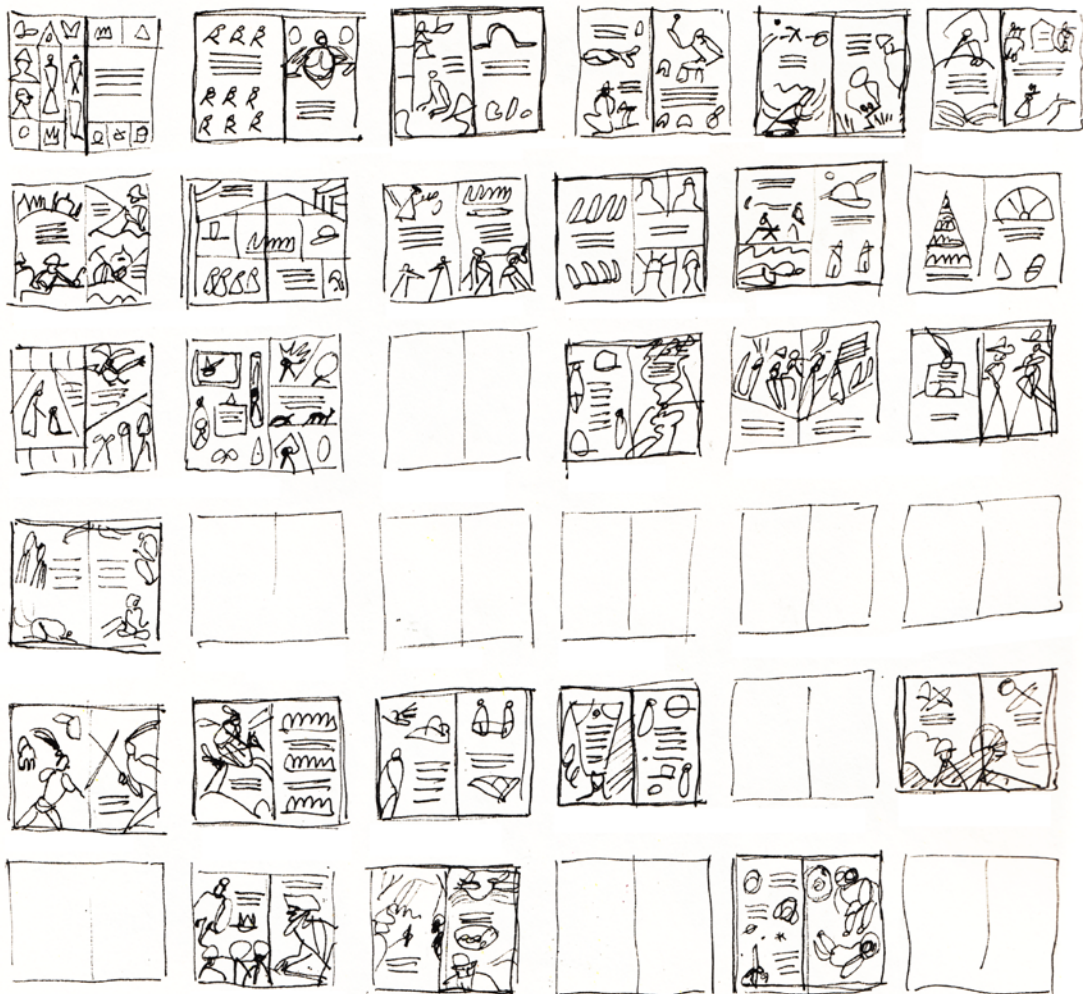


Figure C1. Initial storyboard of *Hats*.

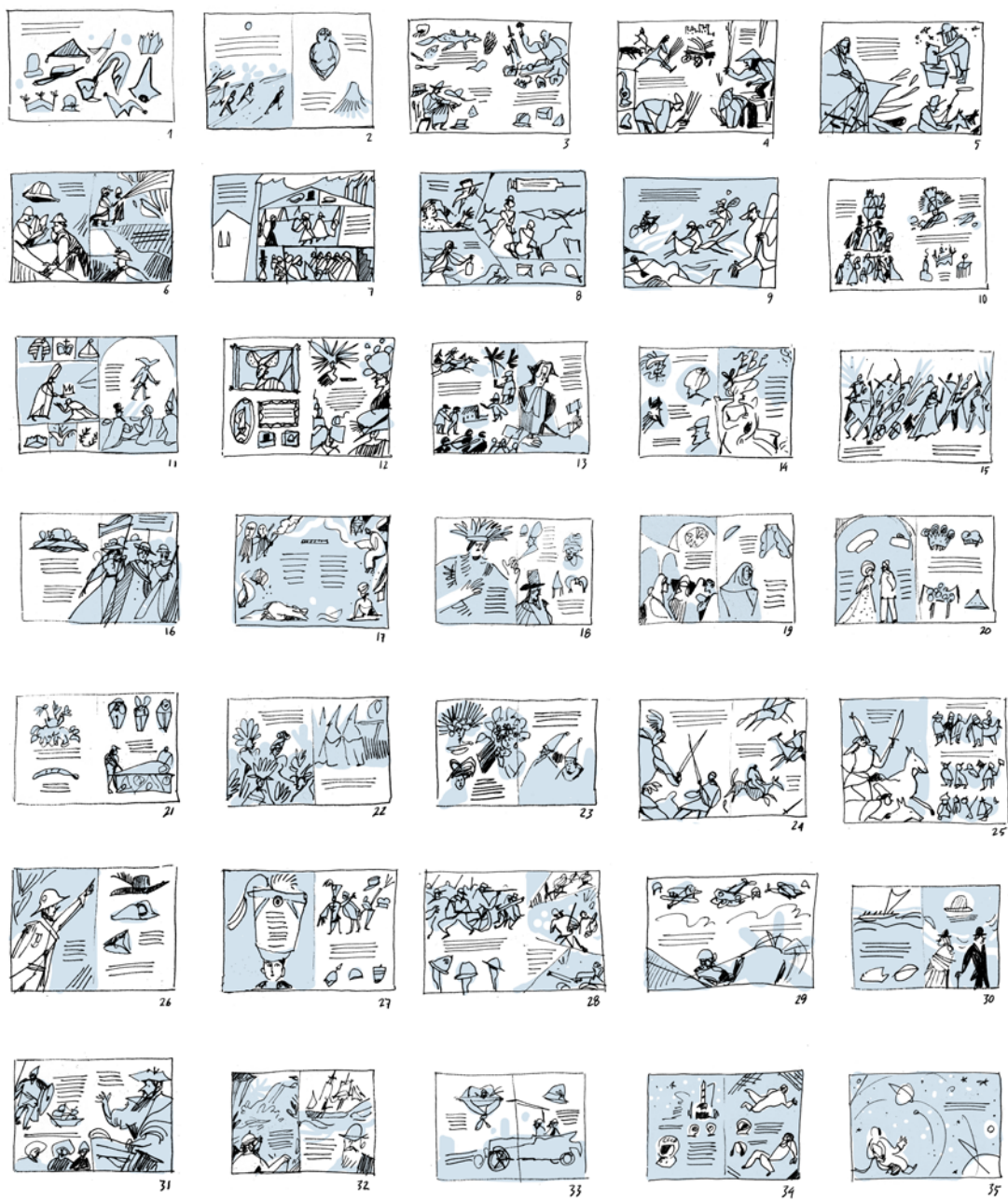


Figure C2. Storyboard for the first dummy book I produced, pictured in figure C5.

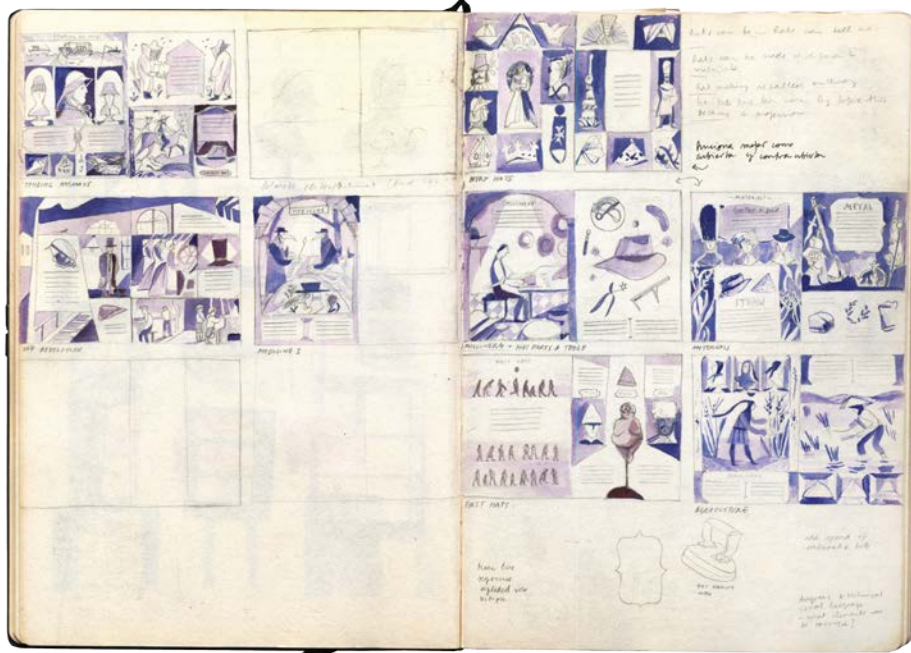


Figure C4. Storyboard produced at a later stage of the development of *Hats*, when I had started to establish connections with informational spaces in my practice. The design of the layouts reflected these influences in the visual organisation of the content.



Figure C5. Initial dummy book. This version did not include text, as it was focused on exploring the visual rhythm and pace of the sequence through the turning of the page.

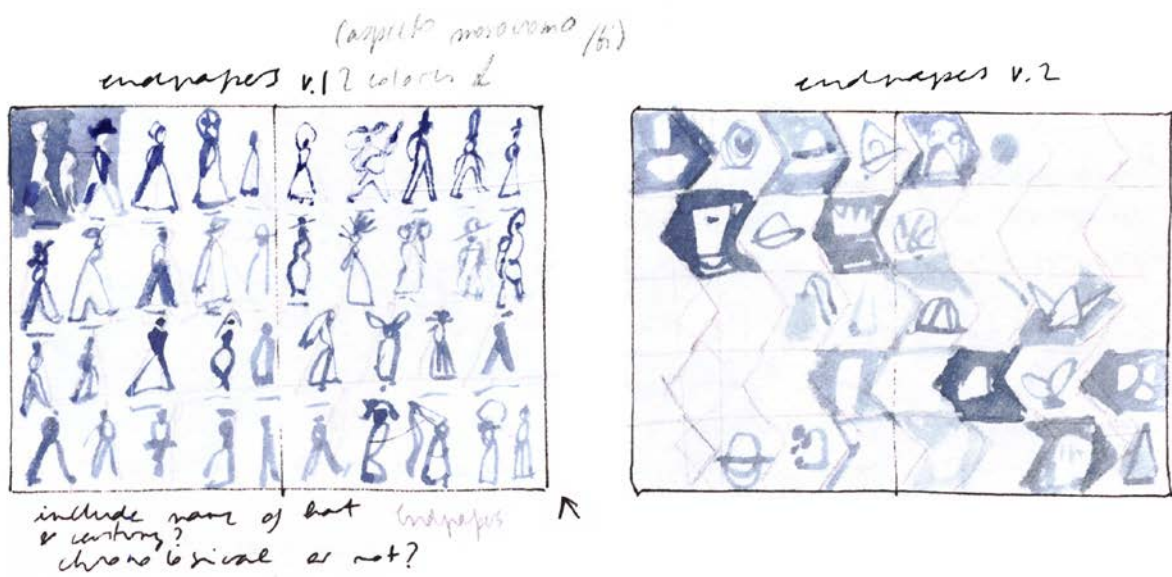


Figure C11. Two sketches of possible approaches to the endpapers, showing hatted figures (left), and a visual timeline of hats (right).



Figure C12. Early sketch of a possible design for the front and back covers of *Hats*.



Figure C13. Studies for a screenprint of Marie Antoinette (figure C15).



Figure C14. Colour studies for a screenprint of Marie Antoinette (figure C15).

Figure C15. Four-colour screenprint depicting Marie Antoinette and incorporating typographical elements, in the manner of the images produced during the initial explorations of practice.



Figure C16. Studies for a screenprint on the French Revolution (figure C17).



Figure C17. Four-colour screenprint of the French Revolution in which I aimed to achieve a consistent visual language with that of figure C15.



Figure C18. Four-colour screenprint of a medieval scene in which I intended to depict various types of headwear in a single image.



Figure C19. Sketches showing various attempts to integrate typography in the image to name the parts of a hat.

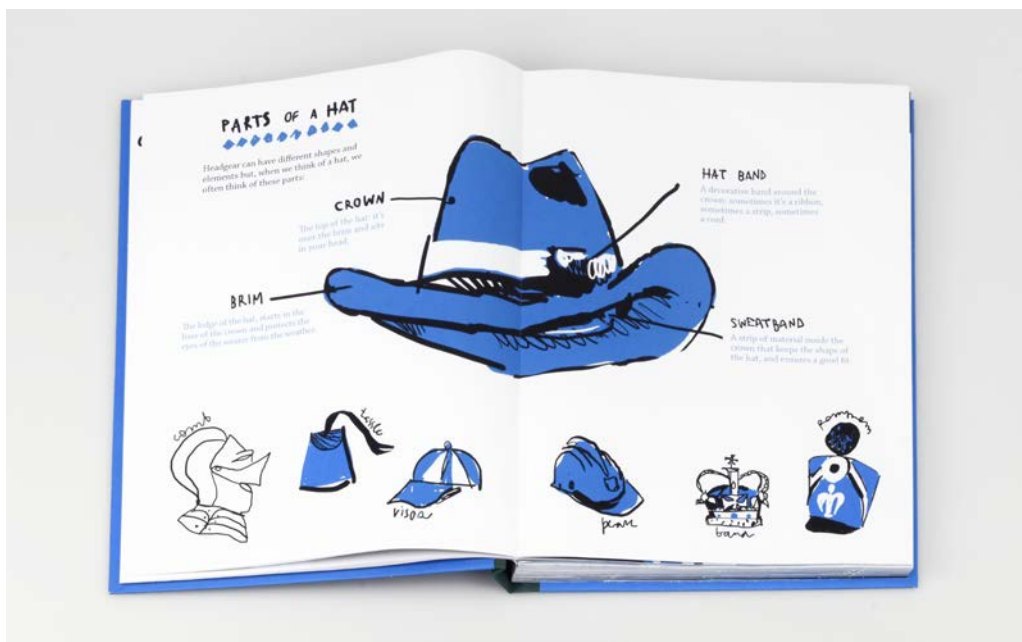


Figure C20. Spread of the latest dummy book, showing the parts of a hat.



Figure C21. Study of hat-making tools.



Figure C22. Spread from the dummy book in which I attempted to integrate hat-making tools into the image.



Figure C25. Selection of spreads from the final dummy of *Hats*, showing sketches of various layouts.



Figure C26. Test developed in the sketchbook in which flaps are used as doors.

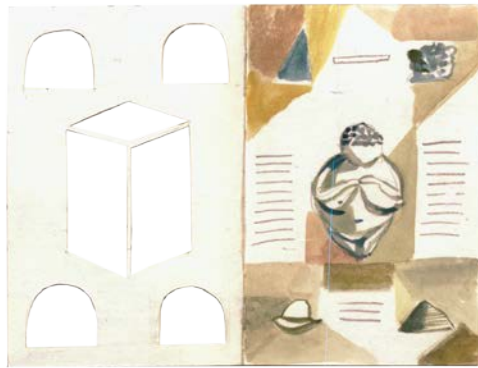


Figure C27. Test developed in the sketchbook in which cut-outs imitating display cases frame the images.



Figure C28. Test developed in the sketchbook in which flaps double the space available, and reveal further information when lifted.



Figure C29. Test developed in the sketchbook using a rectangular flap to reveal a cross-section of a hat.



Figure C30. Test developed in the sketchbook using a hat-shaped flap to reveal a cross-section of a hat.

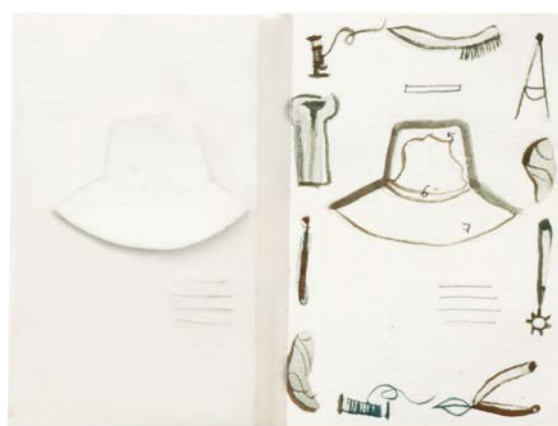


Figure C31. Test developed in the sketchbook using tracing paper to reveal a cross-section of a hat.

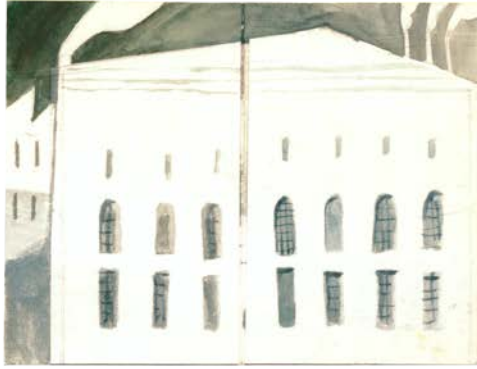


Figure C32. Test developed in the sketchbook exploring the representation of a factory during the Industrial Revolution. Flaps act as doors that can be opened to see the inside of the building.



Figure C33. Test developed in the sketchbook exploring the representation of a factory during the Industrial Revolution. Flaps can be lifted to reveal further information about specific hats, combining narrative and conceptual representations.



Figure C34. Test developed in the sketchbook, using tracing paper to reveal a snoopy cap under the astronaut's helmet.



Figure C35. Test developed in the sketchbook, making use of elements that slide.



Figure C36. Various tests conducted in the sketchbook, examining the potential of introducing three-dimensional elements into the book.



Figure C37. Final dummy book, with a provisional front cover (left) and back cover (right).

Appendix D *Dorothea and Greenhouses*

This appendix includes the developmental work for *Dorothea* (March 2022–October 2022) and *Greenhouses* (June 2022–March 2023), both discussed in **chapter 5**. The exploration of the book’s materiality through these projects required an approach not solely focused on the visuals, but also on the making of physical prototypes. This appendix includes format explorations, sketchbook work, images of process, and various approaches to the visual development of these projects.

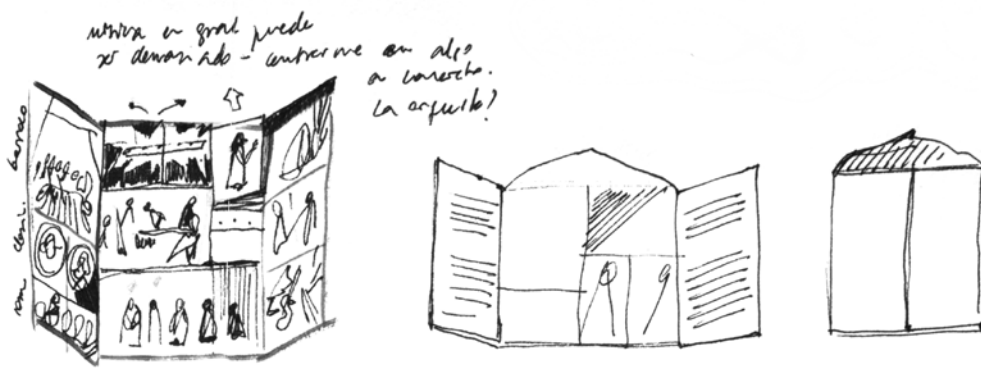


Figure D1. Initial sketches attempting to translate features from cabinets of curiosities into the book’s format.



Figure D2. Thematic exploration for the first cabinet-inspired prototype.



Figure D5. First sketches of the format that would be used in *Dorothea*, and initial attempts to visually distribute the content.



Figure D6. Initial prototypes exploring variations of format for *Dorothea*.



Figure D7. Final prototype of *Dorothea*, with the doors closed.



Figure D8. Final prototype of *Dorothea*, with the doors open.



Figure D9. Preliminary sketch for a prototype exploring a French doors format.



Figure D10. Prototype based on the sketch in figure D9.



Figure D13. Digital illustrations for the backgrounds of *Greenhouses*. I found the rendering to be unfit for the project, as I considered that the material complexity of the carousel format required a more simplified approach to the visuals.

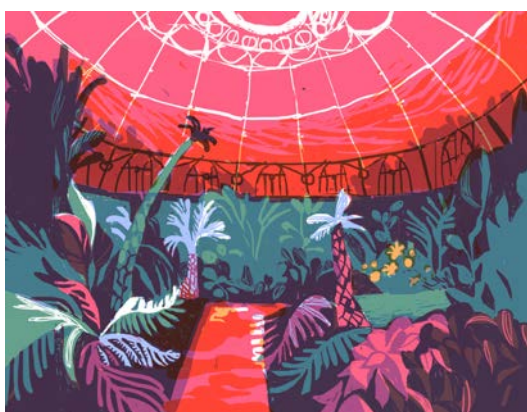


Figure D14. Original design for the background of the fifth scene of the book (left) and digital sketch based on the same scene once the necessity to simplify the image had been identified (right).



Figure D15. Development of the five scenes of *Greenhouses*.



Figure D16. Digital sketch exploring the layers of each scene.



Figure D17. Initial prototype of *Greenhouses*.



Figure D18. Dummy book of *Greenhouses*, built to adjust the scale, perspective and design of the book's components, and ensure their effective layering once assembled.



Figure D19. Planification of the construction of Greenhouses.



Figure D20. Development of the final artwork. Each component was laser-cut, and then screenprinted using three inks.



Figure D21. Front cover of the final outcome.



Figure D22. Back cover of the final outcome.



Figure D23. First scene of *Greenhouses*.



Figure D24. Second scene of *Greenhouses*.



Figure D25. Third scene of *Greenhouses*.



Figure D26. Fourth scene of *Greenhouses*.



Figure D27. Fifth scene of *Greenhouses*.

Appendix E Communication

The work presented in this appendix corresponds to the development of *Communication* (February 2023–July 2024), discussed in **chapter 6**. This project deconstructed the thematic sections of a book into multiple components. The images in this appendix show exploratory sketchbook work, initial versions of the various prototypes, the final approach to each book, and the development of the box in which these are contained.



Figure E1. Sketches made for the development of the initial prototype of *Communication*.



Figure E2. Initial prototype. Spread on bell-ringing.



Figure E3. Initial prototype. Spread on homing pigeons, which would later become the section on the postal system.



Figure E4. Initial prototype. Spread on whistled communication.

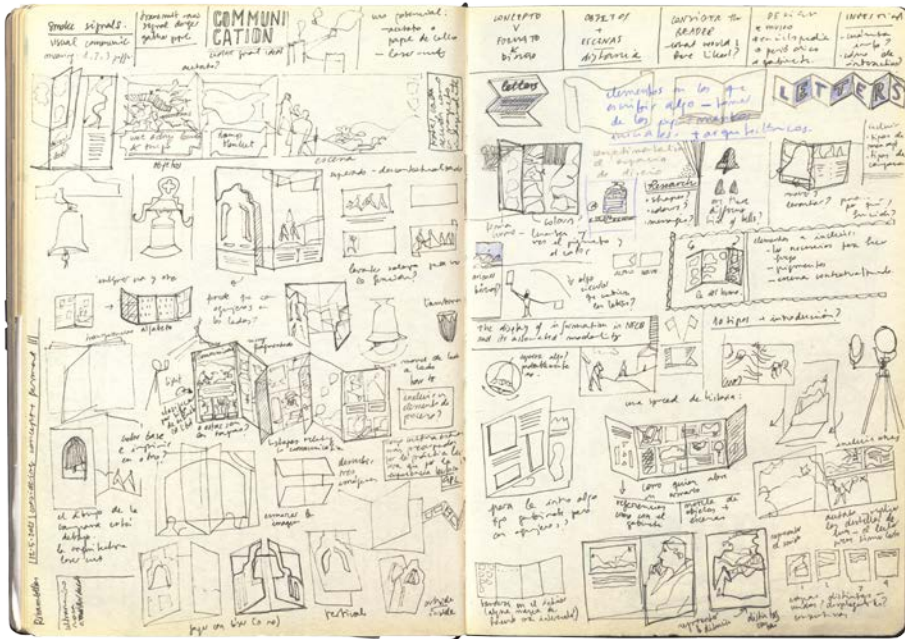


Figure E5. Early explorations of format in relation to the content.

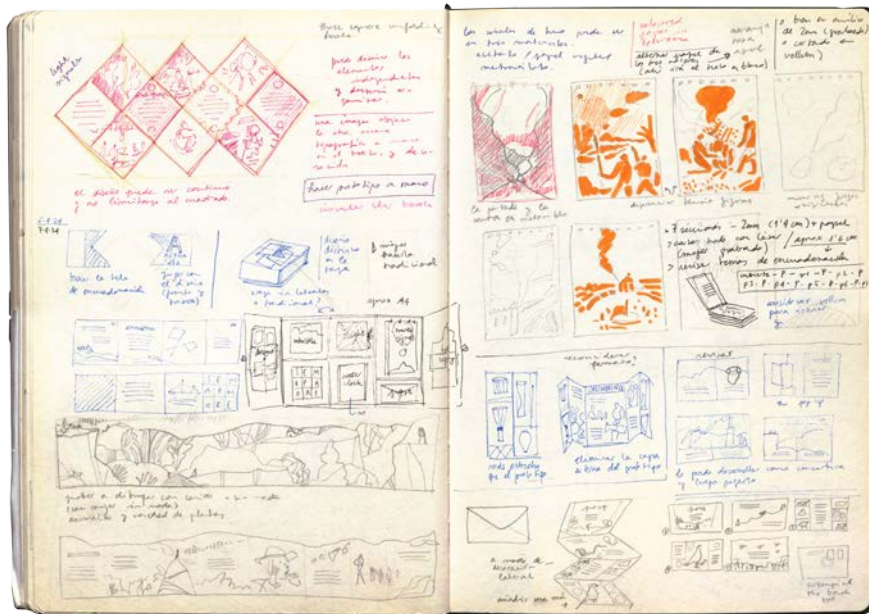


Figure E6. Explorations of format at later stages of the research.



Figure E7. First approach to the prototype on the postal system.



Figure E8. Final version of the concertina and envelope on the postal system.

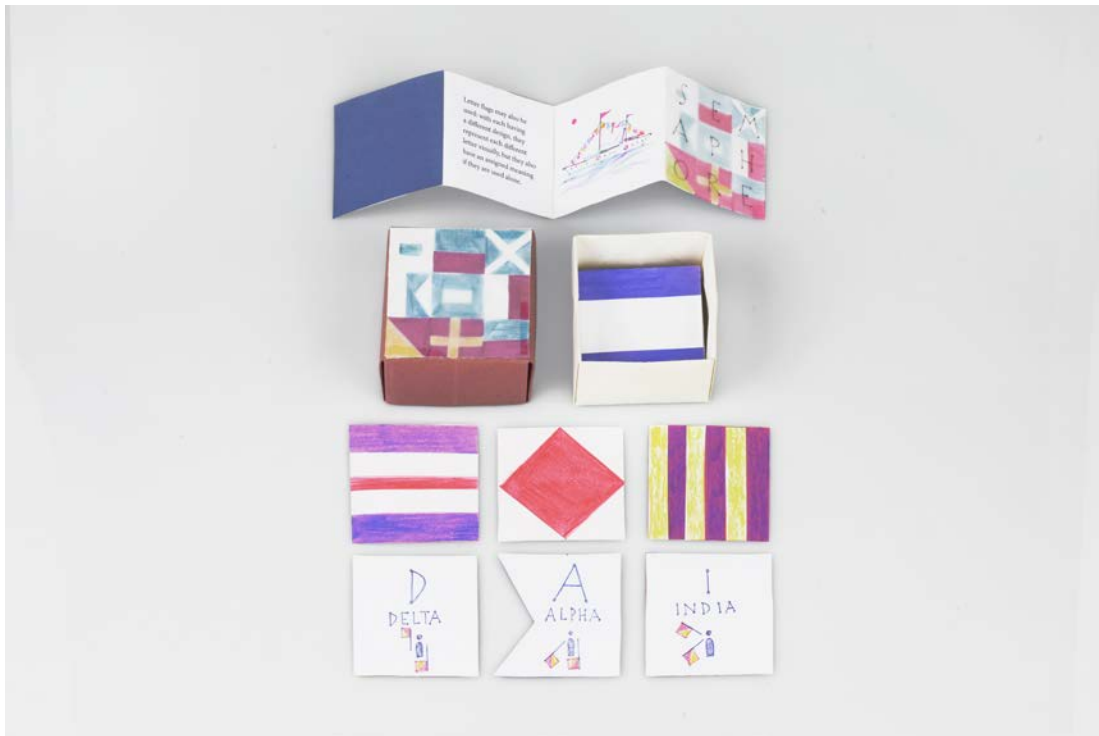


Figure E9. First prototype on signal flags.



Figure E10. First prototype on signal flags.



Figure E11. Final version of the box, cards and concertina book on signal flags.



Figure E12. Final version of the box, cards and concertina book on signal flags.



Figure E13. First prototype on drumming.



Figure E14. First prototype on drumming, unfolded.



Figure E15. Cover of the final version of the book on drumming.



Figure E16. Final version of the book on drumming, unfolded.

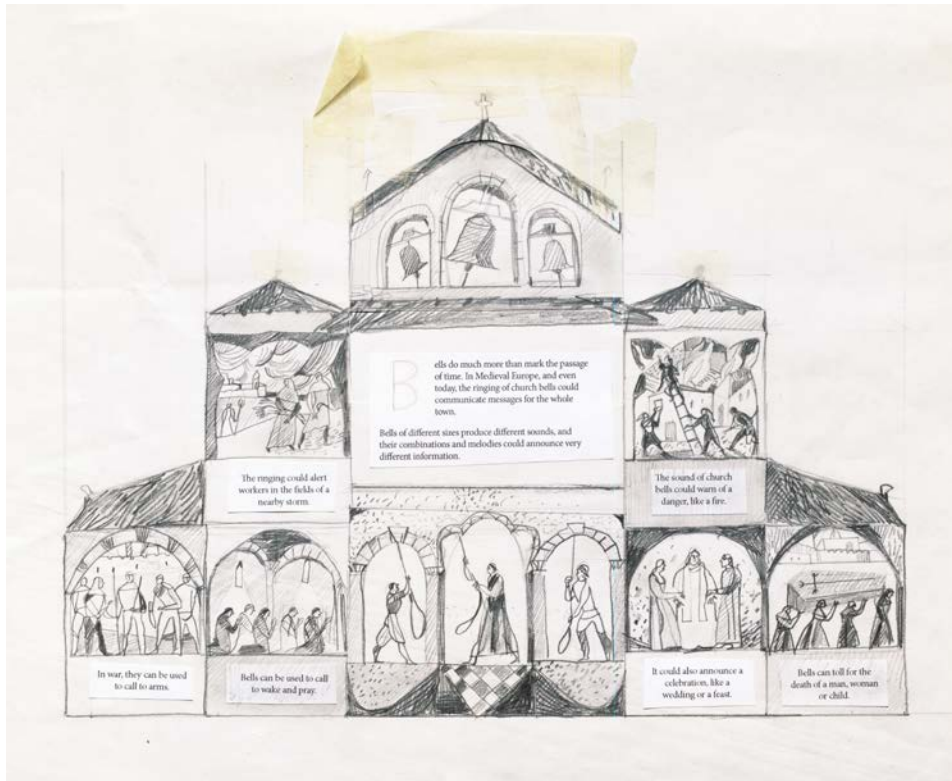


Figure E17. Sketches for the first prototype on bell-ringing.



Figure E18. Sketches for the first prototype on bell-ringing.



Figure E19. First prototype on bell-ringing (front).



Figure E20. First prototype on bell-ringing (back).

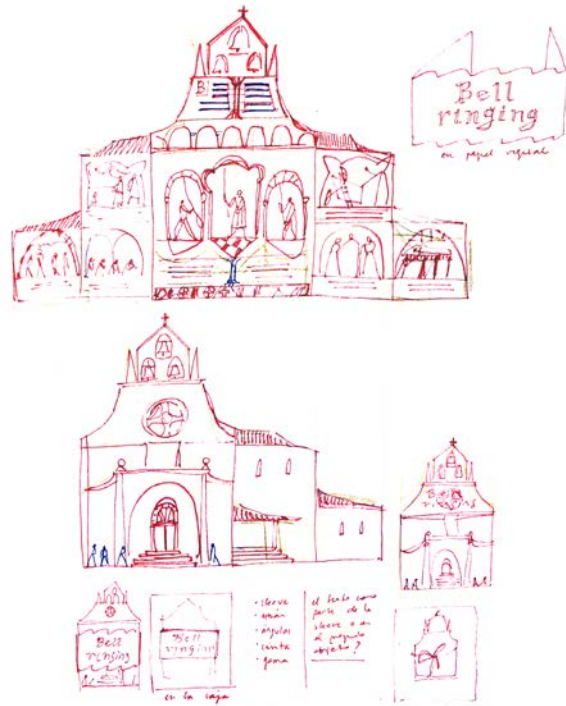


Figure E18. Plan for the redesign of the book on bell-ringing.



Figure E22. Final version of the book on bell-ringing, including a paper band with the title.



Figure E23. Final version of the book on bell-ringing (front).



Figure E24. Final version of the book on bell-ringing (back).



Figure E25. First prototype on whistled communication (front).



Figure E26. First prototype on whistled communication (back).



Figure E27. Final version of the book on whistled communication, including a paper band with the title.



Figure E28. Final version of the book on whistled communication (front).



Figure E29. Final version of the book on whistled communication (back).



Figure E30. First prototype on smoke signals, in a landscape format.



Figure E31. First prototype on smoke signals, incorporating tracing paper.

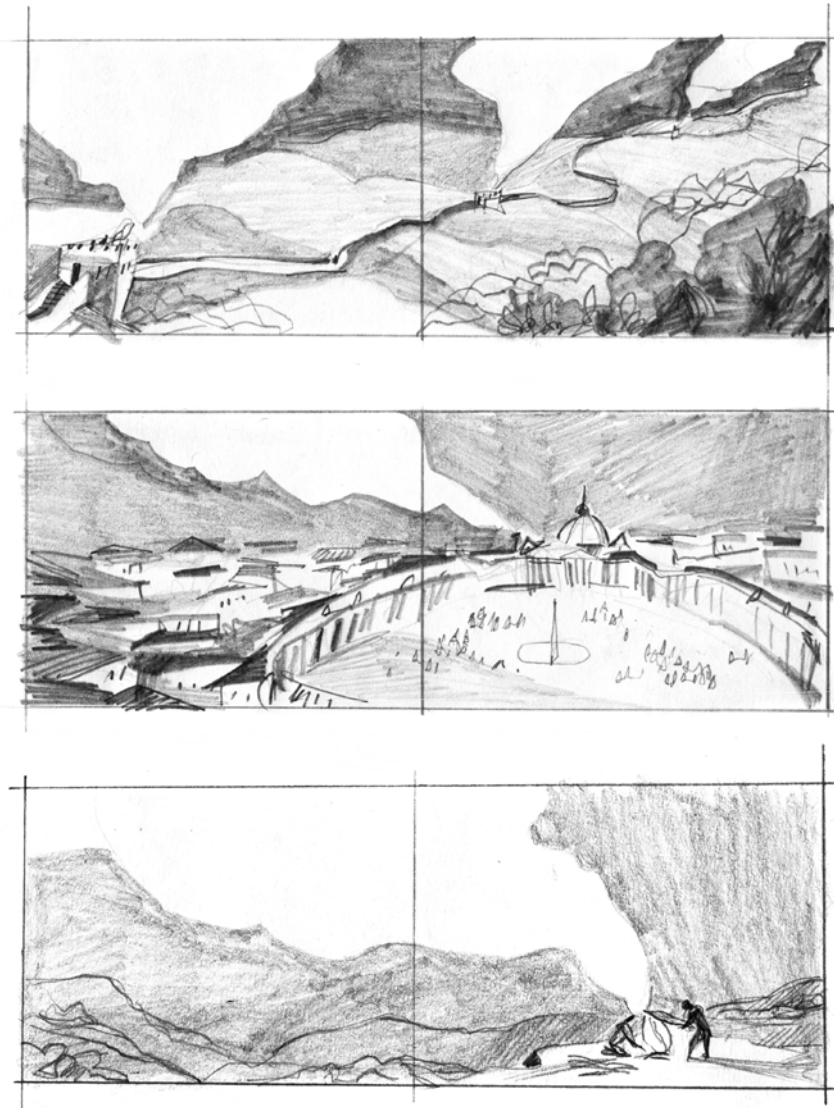


Figure E32. Initial sketches for the book on smoke signals.



Figure E33. Front cover of the final version of the book on smoke signals.



Figure E34. Various pages of the smoke signals book, showing the use of tracing paper.

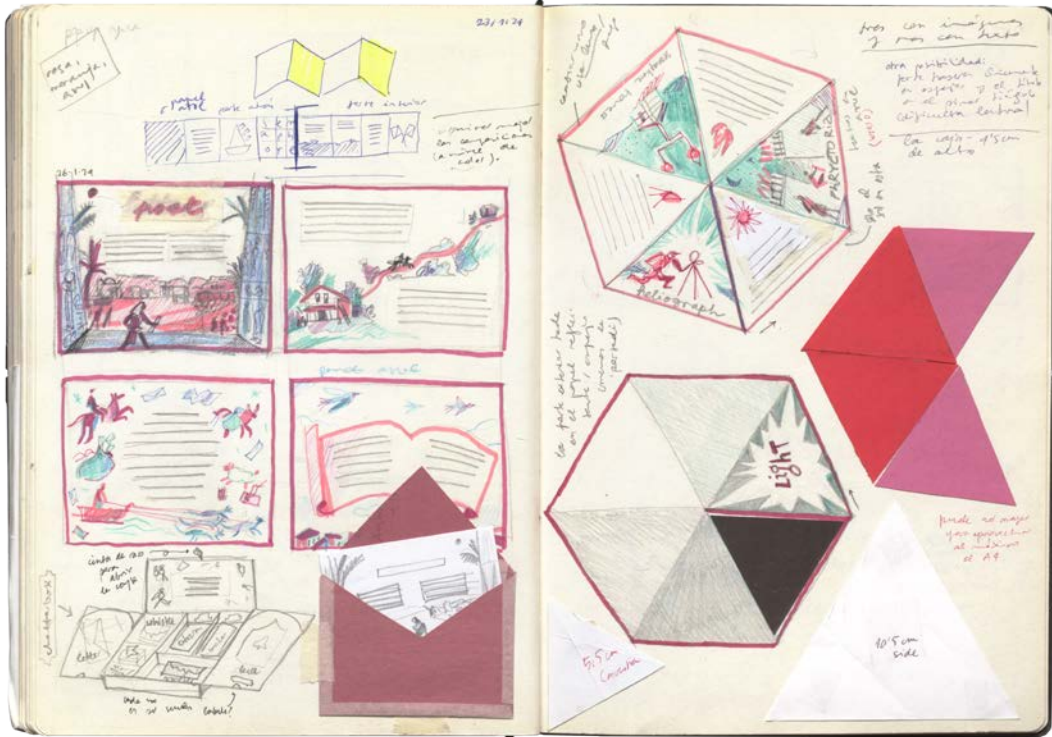


Figure E35. Sketches for the development of the prototypes on light signals and the postal system.

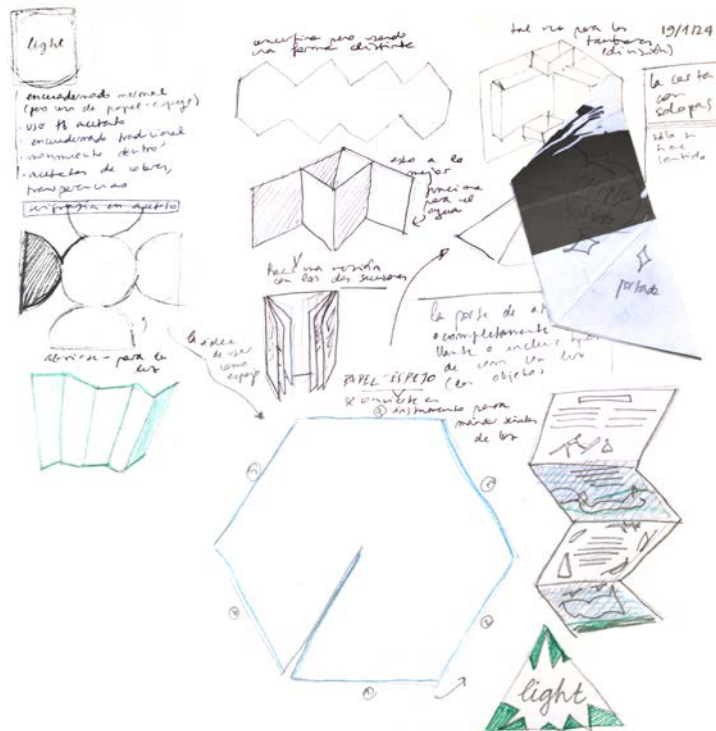


Figure E36. Visual explorations of format for the book on light signals.



Figure E37. First prototype on light signals, using mirrored card on the outside.



Figure E38. Inside of the first prototype on light signals.



Figure E39. Cover for the final version of the book on light signals.



Figure E40. Final version of the book on light signals.



Figure E41. Initial prototypes for *Communication*.



Figure E42. Final versions of the books for *Communication*.

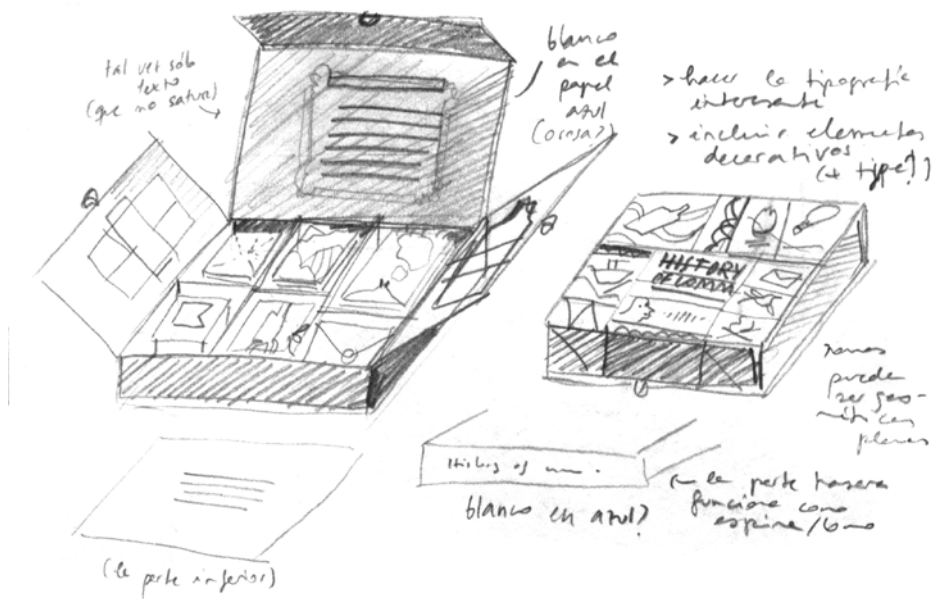


Figure E43. Initial design of the box.



Figure E44. First version of the box, including internal divisions.



Figure E45. Final version of the box.



Figure E46. Final version of the components and box.

Appendix F Visual and material strategies

The table in this appendix collects the visual and material strategies explored throughout the research, indicating the projects in which they were used.

	<i>Hats</i>	<i>Dorothea</i>	<i>Greenhouses</i>	<i>Communication</i>
Informational use of the endpapers	●			
Informational use of the title and/or end page	●			
Narrative use of the cover and/or back cover			●	●
Section dividers	●			
Visual zapping	●	●		
Conceptual representations	●	●		●
Narrative representations	●		●	●
Combination of coding orientations	●			●
References to display methods in layout design	●	●		
References to museum labels in the incorporation of text	●	●	●	
Visual integration of visual and verbal modes	●			●
Visual separation of visual and verbal modes		●	●	●
Flaps	●	●		
Visual or material frames	●		●	
Visual and/or material representation of the container		●	●	●
Deconstruction of the book				●
Format used to represent the content				●
Format used to represent a space		●	●	●
Format used to describe an aspect of the content				●
Use of alternative materials				●

Table F1. List of visual and material strategies employed in the research.