Chapter 1

Introduction

One hundred years ago, the Belle Époque had faded. During the *beautiful era*, which had started 30 years before, at the turn of the twentieth century, daily routines had been transformed by newly developed inventions and technologies. The industrial revolution, which occurred in the same period, paved the way for a number of inventions such as the telegraph, the telephone, automobiles, the first computing machine and even the first commercial airline. As automobiles affected city landscapes and geographies, telegraphs and phones allowed for instant communication never seen before. Time perceptions changed and social contexts shifted. Beyond these, the popularisation of two other mobile machines bringing the possibility of self-expression and customisation flourished in the streets in the form of clothes and letters: the sewing machine and the typewriter (Gleick, 2011).

Sewing machines inspired the creation of magazines featuring clothes with accompanying templates and patterns and created an entirely new market. Suddenly, there were sewing machine toys; children could now make dresses for their own dolls and create a vast range of objects from fabrics. By playing with smaller versions of the machine, children acquainted themselves with the modes and ways of the toy, which could later allow them to engage with the 'full-scale versions'. In order to sew well, one had to be acquainted with different types of materials and learn about measuring, fittings and cutting with scissors. So, parallel to the release of sewing machines, magazines and courses were launched teaching both the skills and also facilitating the learning through the use of templates and patterns, which could be used repeatedly. People also had to get to know these related products. There were contexts, an order and narratives all informing the process of creating a final product, whatever that may be. When sewing, the dressmaker would learn both the narratives and the machine, embodying the modes, speeds and quirkiness of the product-making. The child, while playing with the toy versions of the machine, sought to achieve the same while having fun.

The typewriter (also known as the calligraph) also shared some of the same learning processes as those associated with sewing machines. Typewriters allowed for the standardisation of professional writing, allowing anyone who was literate to engage in writing without needing to decode various handwritings. The calligraph allowed for uniform writing, for clear calligraphy[1]. There

[1]Calligraphy originates from Greek (*Kallos, Kalli* = good, beauty*; Graphein, Graphos* = write, person who writes)

were typing courses, and in order to type a document, the typist had to become familiar with the machine and acquire a sense of unity where the fingers knew where to go without conscious perception. Good typists are capable of acquiring a sense of unity with their typewriter, shaping the skill of typing into an embodied knowledge. And yes, there were also toy typewriters. The toy counterparts of these objects promoted the ideas of having fun and playing, while also engaging in learning skills associated with a tool.

In order to become a dressmaker and gain calligraphy skills, one had to engage in a type of penmanship, where the writing is equivalent to producing a neat result through acquiring the skill of engaging with the materials and the machines. Both machine-related skills required practice and training in order for the hand to produce a visually pleasing and clear product. There were several tools, and with each and every tool, the hand had to become *one with the tool* to deliver the desired outcome. Merleau-Ponty (2002), when discussing the phenomenon of habit as something that cannot be rationalised, exemplified a notion of an acquired skill through the act of typing on a typewriter as creating 'knowledge in the hands' (2002, p. 144).

This notion of penmanship continues to evolve, together with machines and their technologies. Looking back, I consider sewing machines as the equivalent of 3D printing from the turn of the twentieth century, and typewriters as *printers that print while you type*[2]. None have lost their charm, nor have they been forgotten. A century later, instead of calligraphs, we have digital tablets, which communicate, engage and can send commands to several outlets. Tablets work offline and online and have entered the twenty-first-century toy landscape. This device turned toy itself poses a number of possibilities – and questions.

In recent debates, discussion has focused on the positive and negative aspects of media use (Buckingham & Strandgaard Jensen, 2012). Tablets, as a nine-year-old technology, have joined this controversial field and have been the target of headlines in a number of newspaper and news sites in Denmark in recent years ('Guide: Sådan vænner du dit barn af med at spille iPad,' Thomsen, 2015a, 'Om iPadiskolen,' n.d., 'Spil på iPad kan bremse børns udvikling,' n.d., 'Tjek lige iPad'en,' Thomsen, 2015b)[3]. More recently, some research initiatives have emerged focusing on mapping when and how media and the Internet are used by families with young children, which includes tablets (Holloway, Green, & Livingstone, 2013; Ólafsson, Livingstone, & Haddon, 2013; Sefton-Green, Marsh, Erstad, & Flewitt, 2016).

[2]A Brazilian newspaper chronicle writer used this expression a few years ago to explain a typewriter to his young daughter. Unfortunately, I could not trace the article, but the writer was Luis Fernando Veríssimo for *O Globo* newspaper from Rio de Janeiro.

[3]'Guide: How to Get Your Child to Stop Playing on the iPad', 'About iPads in School', 'Playing on iPads Can Affect Children's Development', 'Just Check the iPad' (own translation of the article titles).

Thus far, scant attention has been given to tablets from a play perspective in order to map the types of activities that are taking place while young children engage with these devices. For example, whether playing with tablets promotes the development of several competences, such as learning a wide range of narratives and symbols or looking at the roles of the hands and how they shape and become an integrated part of digital play. From the angle of play and tablets, I set out on this study journey with the following scope: to assess digital literacies through young children's current play practices with tablets in two[4] distinct countries.

More specifically, during my research, I focused on studying how tablet play among 84 preschoolers helps redefine recent concepts of digital literacy practices (Sefton-Green et al., 2016) in Denmark and Japan. Members of the young generation in both countries understand and conceptualise the physical world based on a range of skills, including those learned through their interaction with technology. Play is culturally shaped (Fleer, 2014; Sicart, 2014), and in the age group of 4–6 years (hereafter referred to as young children), play is the main mode of engagement with tablets, thus my overarching lens. As contemporary digital devices carry almost identical visual interfaces, investigating how play practices are manifested across countries with distinct cultures sheds light on transnational aspects of children's engagement with media (Drotner & Livingstone, 2008; Jackie Marsh, 2010).

Play can be a tangible or an abstract experience, a mode of being (Sicart, 2014). It is witnessed as the visible interaction and participation when playing with objects and peers as well as in the make-believe and thinking that goes on in children's (and adults') minds, which is impossible to access visually. Play could be seen as the central element in the development of human culture, or 'how far culture itself bears the character of play' (Huizinga, 1949, preface, unnumbered page).

The role of play in children's interactions with and approaches to technology is undeniable and affords new digital literacies, as children play across media (Gilster, 1997; Lankshear & Knobel, 2008; Leu, Kinzer, Coiro, & Cammack, 2004; Spencer, 1986). Tablets, as an example of the current pervasive media, are the artefacts many children, parents and educators are turning to when investigating and debating young children's digital practices (Arita, Seo, & Aldriedge, 2014; Chaudron, 2015; Couse & Chen, 2010; Merchant, 2015b; Neumann, 2015).

In addition, if children are to use digital tablets or similar tools at school ('Tablet and e-Learning Initiatives around the World | Tablets for Schools,' n. d.), preschools should prepare their pupils for the expected future interactions to avoid a gap or a wide discrepancy between 'master' users and 'novice' users.

[4]I initially wished to study three countries. However, due to the extensive data and limited time to finish the thesis, I streamlined the process to include only two countries. These countries proved to be diverse yet sufficiently similar to set a base of valuable and valid data.

Just as young children learn to recognise letters and numbers and practise motor and dexterity skills, learning and practising tablet-related (or digital-related) skills should be as integrated as all the other skills. Throughout my observations, there was a perceptive degree of discrepancy among the children's use and knowledge of tablets. Tablets, like pencils, require practice. This discrepancy indicates a form of 'digital divide' (Buckingham, 2005; Chinn & Fairlie, 2006; Scardamalia, 2003). In this context, the 'digital divide' does not necessarily fit its earlier definition as the gap between the technology rich and technology poor. Instead, it can be reconceptualised and expanded to cover the gap between the 'technology enthusiastic' families and 'technology apprehensive' families, which does not necessarily match economic patterns in the context of the observed target groups. Even though the learning curve associated with tablets might be steep and happen in a short period of time, the ways families perceive technology may also affect how a child relates to and uses a digital object.

I chose a grounded theory approach (Charmaz, 2014) in order to avoid blurring my research with pre-formed perceptions regarding children and technology. In grounded theory, the study starts with the empirical data collection instead of with the formation of hypotheses. The coding and data analysis provide the initial material to be matched with existing theories. I find this method more in tune with the field of my research, as I wished to avoid setting out on an investigation with one set of perspectives. Instead, as the method suggests, I wanted the data to guide which perspective should be used when studying children and technologies. This choice, together with the richness of the data, led me to expand the theoretical scope, bringing together theories from diverse scholarly fields.

Consequently, following the Introduction, I contextualise my research focus in two chapters. The chapter 'Play, *Lege* and *Asobu*' presents cultural aspects from the countries where the research took place, and the chapter 'Play, Literacies and Experience' contextualises my research focus through existing literature. I also acknowledge that my background and previous experiences coloured my coding and analysis process that led to my theoretical choices.

To cover these grounds, this book is structured in the following order:

The Chapter 1 composes the introduction of this book and sets the scene for my research process. The second chapter covers contextual aspects of play together with descriptions of preschool institutions in Denmark and Japan. A short glossary of terms follows the contextual aspects to facilitate reading the following chapters. The third chapter presents and discusses the topics of play, literacies and experience to substantiate my discussion. The literature is distributed throughout all the chapters, where I repeatedly reverted to relevant theories in order to leverage my analysis and discussion. The fourth chapter introduces my methodological approach and my research design. I explain my choice of grounded theory and how my research process followed this approach. In addition, I use excerpts of data to illustrate how the empirical data were collected and coded. I also introduce a hand movement typology. The findings and final coding follow the examples framing the subsequent analysis and discussion. The fifth chapter presents my analysis and discussion intertwined with my proposed

tablet play taxonomy. I explain how I clustered the theoretical codes that emerged in my analytical process into five final categories. The analysis and discussion of my empirical data expose the thinking behind my process leading to my theoretical contribution. The sixth chapter draws on the analysis and discussion, where I summarise some of their aspects, shaping my theoretical contribution to the field of childhood and play studies.

The seventh and final chapter is my conclusion. Instead of restating what has been presented throughout the book, I conclude by offering an all-round perspective of my theoretical contribution intertwined with a short overview of the existing play practices in society and how children are setting the stage for our playful world.