

**The Development of Digital Forms of Illustration
and their Impact on Print Publishing from 1990 to the Present,
with Particular Reference to Children's Books**

Volume I

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Abstract

During the last quarter of the twentieth century, electronic and computer technology advanced at a staggering pace. The field of print publishing has been transformed by digital technology, and all illustrations are now digitised for printing purposes. This presents a challenge to illustrators: what combination of traditional skills and digital techniques can be used to best develop an individual style or should an illustration be wholly created on a computer?

This research aims to explore the impact of digital technology on illustration, especially with reference to children's books and their publishing practice since 1990. In order to fulfil the aims, the study was in two parts: an examination of the attitudes and experiences of practitioners using digital technology; and an evaluation of the visual appearance of digital forms of illustration. The research was conducted with a semi-structured interview approach, focusing mainly on illustrators and experts in the field of children's books from both the United Kingdom and Taiwan. Analysis of data from the interviews highlighted the emergence of many significant issues namely, the experiences of digital usage in children's book publishing, the working processes which have been commonly used in producing digital illustration, the rationale for adopting digital means, the visual appearance of digital illustration and its distinctive features from traditional illustration.

To distinguish between traditional and digital illustration, the research refers to traditional illustration as a process that does not include any form of digital technology. On the other hand, digital illustration refers to the creation of illustrations that includes digital means within its working processes, which could include either using digital methods entirely or an integration of traditional and digital methods. In this research, the working processes for digital illustration do not necessarily omit the use of traditional methods.

The contribution of the research is to offer insights into the concepts and thinking behind

digital forms used so far in children's book illustration. Taking examples from both countries, the thesis provides a broad understanding of digital influences on children's book publishing in both Taiwan and the United Kingdom. In addition, many students are now being taught how to employ hand drawing and digital technology as part of the drawing process; thus the study serves to provide a platform for considering how the computer can be integrated into an artist's drawing process.

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Finally, I would like to dedicate my thesis to the memory of my father-in-law, who died during this time. May he rest in peace in heaven.

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university, or other institution of learning.

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Introduction

During the last quarter of the twentieth century, electronic and computer technology advanced at a staggering pace, transforming many areas of human activity. In particular, it has revolutionised the way people communicate and how they produce media. Digital production has become the norm in the design industry. In the field of illustration, there has also been an irrevocable influence from digital-computer hardware and software. As stated by Meggs (1998), by the 1990s digital technology could enable one person operating a desktop computer to control most or even all computer applications in just one process. Under this digital revolution, many traditional illustrators were confronted by new challenges and a new practice of illustration needed to be developed.

To create an illustration, traditional methods were used to facilitate the intellectual processes. These were drawing, painting, sketching, model building and photography. From these disciplines, illustrators could visualise ideas and solutions. However, with the use of computers, digital methods allow illustrators to have a complete view of their final work and quickly reproduce illustrations. One of the most appealing characteristics of these digital methods for illustrators is that of creating multiple variations, which provides a kind of 'freedom' within the drawing process. In particular, such 'freedom' allows an illustrator to produce and select from a variety of visual effects simultaneously, which is very convenient in the drawing process. As a result, certain questions have been

raised about whether traditional drawing methods could be replaced, and if digital applications could achieve the same effect as an image drawn by traditional methods.

Nowadays, the majority of illustration courses are teaching students both traditional and digital methods. However, illustrators who worked for the print industry had dedicated considerable time developing their illustrations with traditional skills. They hesitated to adopt the computer as a tool and considered that it may dilute their visual presentation and the characteristics of their artworks. They also questioned whether creating an artwork may become less deliberate in its concept and drawing skill since digital illustration could simply be created at the touch of a finger. In addition, in the 1990s some illustrators argued that the generated illustration may present repetitious similarities, which were the attributes of the software rather than its user (Mason 2000). The negative perceptions of the impact of digital technology on illustration have been echoed by Poynor (1998a) who stated that

“... in an age of digital type, in a medium that is driven ... by fashion and fad, even the best illustrators’ work has suffered from the no doubt superficial but still unavoidable sense of looking less urgent, exciting or timely.” (p. 183)

Poynor implied that the advance of digital techniques did not contribute to creating more exciting works; rather it appeared to produce superficial and less dynamic works in the early 1990s. As the result of these negative perceptions, many illustrators insisted on using traditional means rather than digital applications.

However, the debate on digital usage has been gradually changing. Illustrators no longer consider the impact of computers a problem, reflecting the fact that computers have become increasingly popular and easier to learn as drawing software has improved. As a result illustrators are now more familiar with drawing software than they were in the early 1990s. Currently, the use of digital technology in illustration is as a 'tool'. Hyland and Bell (2001, p. 11) point out in the introduction of *Pen and Mouse*, "...most comment and discuss traditional techniques as the basis of work and merely mention 'the computer' as one of the tools they use." The book described many contemporary British illustrators involved in the digital process; their approach has been to use traditional skills incorporating digital applications. Digital technology is widely used by illustrators although it is not an all-or-nothing choice. For contemporary illustrators, a certain degree of intellectual awareness of computer usage is now embedded in their consideration.

Today's children inhabit a world in which imagery bombards them from all directions: TV, 2D, 3D animation, moving image and the Internet. This contemporary 'visual bombardment' stimulates children into having a variety of visual tastes. It is reflected in the industry of print publishing, and therefore, illustrators who work for children's books have to adapt to the mainstream of children's book marketing. For the age group of 0-8, children's books seem to be predominately created by hand drawn illustrations, with particular reference to picture book illustrations. For the age group 8-12, children's books have been increasingly created by digital technology; in particular the fiction book cover can apply a lot of photo retouching and collage. As mentioned previously, a new

generation of illustrators has grown up and been trained to utilise the computer, and computer usage now seems popular in various fields of illustrations such as Manga and animation. However, its impact on picture book illustrations is still peripheral; the appearance of picture books has remained mainly as a hand-crafted genre. Some main concerns are: what are the drawing processes of illustrators in the contemporary context? And why have the illustrators who work in picture book publishing been less influenced than those working in other fields of illustration?

Looking at contemporary picture book illustrations, there are relatively few examples of images created-digitally. Yet, there have been a number of examples of artists who use the computer as a tool to produce images for young readers. In America, Lane Smith and J. Otto Seibold use computers to create their unique experimental form of illustration in children's books. They were innovative, imaginative and influential in the early 1990s (Selby 2003). In Britain, Dave McKean drew his children's book called *The Wolves in the Wall* using both traditional and digital means (Gibson 2004b). Robin Harris usually uses Adobe Photoshop and Corel Painter to draw his vivid children's books, working entirely on a computer. Lauren Child uses a computer to resize and montage her hand drawn features and collected textures to create a child-like image (Carey 2003). Similarly, the productive illustrator, Nick Sharratt scans the charcoal line of his drawing into the computer to add colours and patterns. He also created his own typeface for his children's books using the computer (Coates-Smith and Salisbury 2001). In Taiwan, the illustrators, Kaixin Yan and Chuanzong Lin, who work in children's book illustration are adopting digital technologies in their current works. Yan uses Photoshop to mimic watercolour

drawing and is gradually moving to entirely working on a computer. Lin employs the computer in his various works, currently as a simple feature within flat coloured images. These illustrators either entirely or partially employ digital tools, integrating hand drawing and digital processes to create images that appear as a new aesthetic or as a simulation of traditional styles. The illustrations created by Harris and Yan, their characteristics of digital drawing still resemble their hand drawings even though they are produced entirely with digital processes. The phenomenon of using digital tools to simulate traditional drawing exists in the children's book market, but it maybe that only the people whose work relates to this area can notice.

These days, most drawing processes co-exist, using both traditional and digital means, and their illustrations appear digital. However, the illustration in children's books appears mainly as hand drawn images. Through this study, I would argue that children's book illustration is deeply influenced by digital technologies despite its appearance as being drawn with traditional means. The illustrators whose working process incorporates the computer tend to disguise the effect of the digital process upon their artworks. The reader therefore cannot easily distinguish whether they are using traditional or digital methods. The differences between these techniques have been getting less defined; computer generated images can be now be mistaken for hand drawn images and vice versa. In an interview with Lane Smith (Gibson 2005), he described people's reactions to his drawing.

"You can show them a page from the book and they'll say 'That was

hand painted.' And I'll say, 'Actually, I did all this on the computer.'
And the next page they'll say 'Oh, that was done on the computer,' and
I'll say 'Actually, I did this by hand.'"

The blurring line between hand crafted and digital drawing makes it hard for people to distinguish which is which. Moreover, the digital process now has been integrated with the hand drawn process, and the traditional and digital methods are no longer separable.

Research Motivation

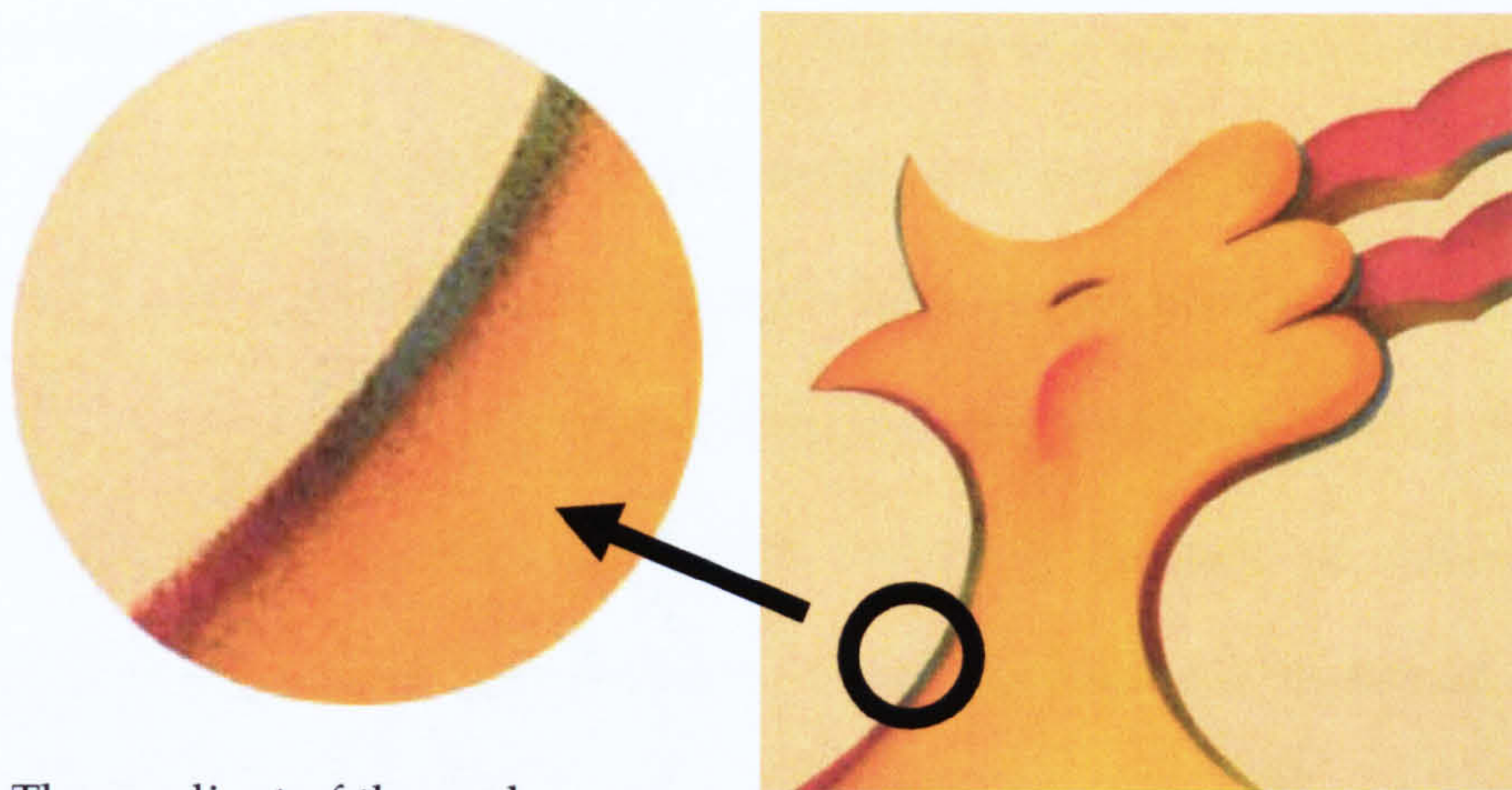
From 1991 to 1993, I was studying in Belgium, which was the first time I had used a computer for creative purposes. Whilst using the computer, I was surprised and fascinated by the capabilities of digital technologies and considered the computer as a possible substitute tool for traditional hand drawing. Thus, I had moved the drawing process from simply using traditional methods e.g. hand drawing and painting, to incorporate digital methods using the computer. As the capability of computer applications at that time was not good enough to entirely replace traditional methods, I was taught to utilise traditional methods alongside the early versions of graphic software such as Freehand, Illustrator and Photoshop as a starting point.

When I went back to Taiwan in 1993, the atmosphere in the design field was of delight to adopt digital usage. By developing the potential capabilities of the computer, people

were enthusiastically engaging in a discourse and practising the possibilities of its use. Whilst the government and private sectors joined in this digital revolution, the design industry also made a large investment in digital equipment. Advertising companies had started to make those who worked only in design finishing redundant by substituting the computer. Some assistant designers became anxious about losing their careers. Therefore, having knowledge of applied graphic software such as Illustrator and Photoshop could be a way of saving their careers. Whilst the graphic design companies were fully driven by computers, I began to worry about my own ability to employ graphic software. Ironically, having a good drawing skill seemed less important than having knowledge of using a computer.

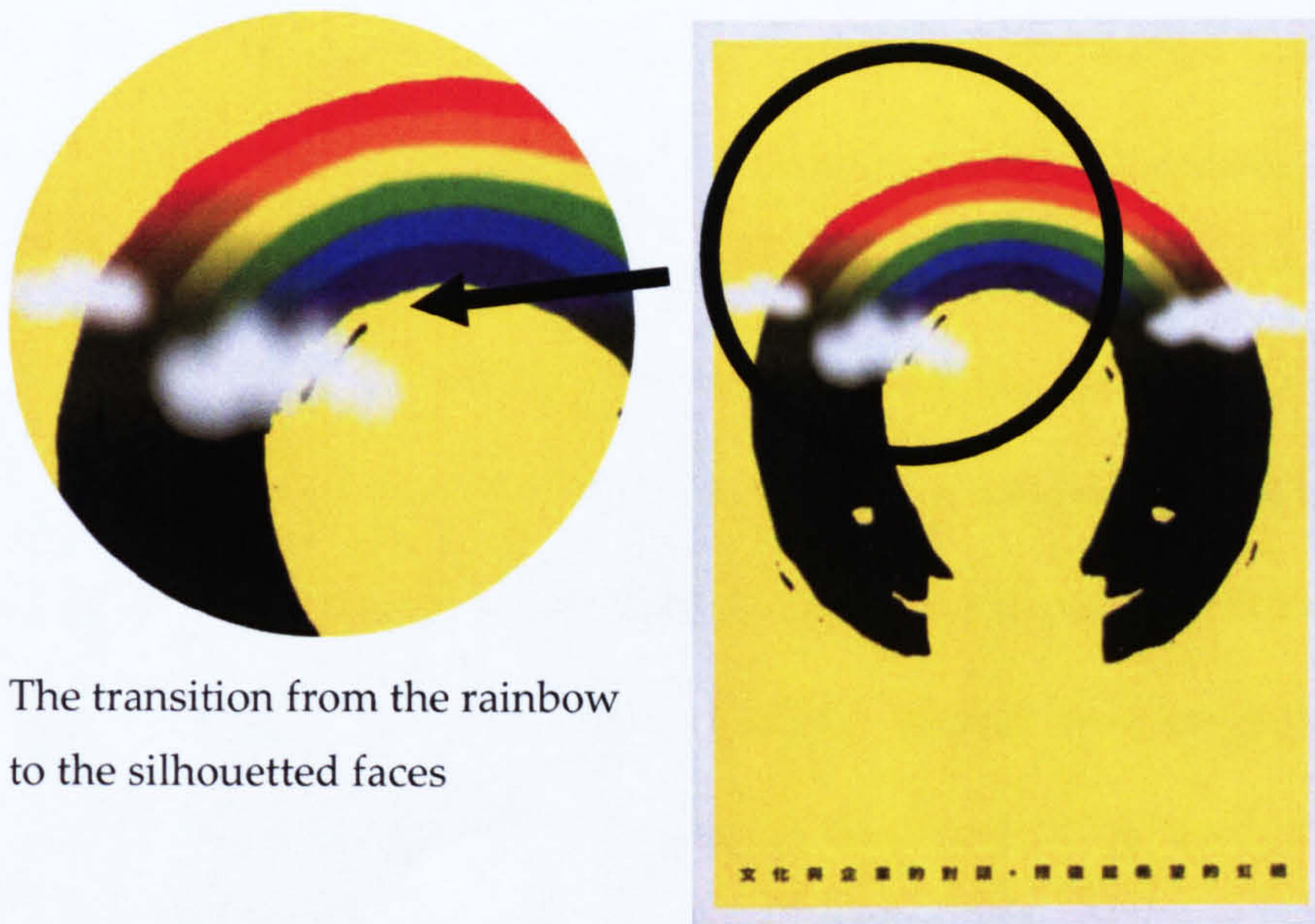
As a result of this phenomenon, many designers who had trained before the advent of computers, started to reflect on the issue of the impact of digital technologies on the education sector. These designers, who had married traditional methods and digital programmes, were worried that a young generation was increasingly incapable of hand drawing and were losing the option of the accidental mark in their works. I was one of these designers who appreciated traditional methods had relatively subtle textures and colours, but I also appreciated the convenience of the computer. Whilst I worked in graphic design, I also began teaching at university as a part time lecturer, teaching students by employing both traditional and digital means. The concerns of many students were that when they scanned their hand drawn images into a computer, how was the quality of their original hand drawn image compromised and how could they manipulate their drawing with the available software.

The students' concerns led me to deliberate on the issues surrounding digital usage "Does the digital process vary the visual appearance of work when the image is scanned into the computer?" "Could a computer substitute for hand drawing entirely but still contain the nature of handmade textures?" I looked back to images which I had made using entirely traditional methods as shown in Figure I, and those with part traditional methods as shown in Figure II. With both the images, I wished to achieve a gradient effect which was similar to the gradient of the cock (Figure I) and the transition from the rainbow to the silhouetted faces (Figure II). The intention of Figure II was to achieve a similar appearance as in Figure I. For convenience, I employed a partial digital process after the hand drawn process, hoping that they could achieve a similar appearance. However, the result seemed slightly different, the image of Figure I emerges more tonal and loses its crispness, the colours are slightly muted and textured, and not perfectly graduated as in Figure II.



The gradient of the cock

Figure I L'Astrologie Chinoise, invitation card, pastel, 1993



The transition from the rainbow to the silhouetted faces

Figure II Ceremony of Wenhxin Award for building up the communication between culture and enterprise, invitation card, 1998

These differences motivated me to further investigate how digital technologies have influenced drawing processes and the final appearance. During this period, I changed

career from practitioner to full time lecturer. Teaching in a university, one of the most enjoyable courses was Illustration that was designed to develop the students' drawing abilities. The course curriculum included producing a picture book for children and the students could utilise whichever drawing materials they preferred. During this time, I invited several illustrators and experts, who worked in the field of children's book publishing, to interact with the students. These practitioners explained that the publishing market, in particular picture books for aged 8 and under, used less illustration which obviously appeared as digitally generated and the market seemingly did not appreciate a digital effect upon the picture books. Their perspective of digital technology used in children's books was less exciting and the market was arguably dominated by illustrations which appeared to be using traditional drawing methods. However, the practitioners also recognised the convenience of computers in terms of composing a book's layout as well as reproducing the images even though they were employing traditional methods. As I had the experience of adopting digital means and the younger generation of students knew how to apply traditional and digital methods at same time, I started to question whether digital means were employed less in children's book illustration or whether digital means were being used to simulate traditional media and therefore not initially recognisable.

All these aforementioned experiences and questions awakened my eagerness and motivation to further develop this study. The intention of the study was to investigate children's book illustration, involving enquiries into the experiences and attitudes of practitioners confronting digital usage, the working processes which illustrators

commonly employed and the examination of the visual appearance of digital illustration.

The study takes examples from the United Kingdom and Taiwan to have a broad spectrum of digital influence on children's book publishing in both the west and the east.

The principal aims of the study are set out as follows:

- *To investigate the impact of digital technology on illustration for young children (under 12), children's books in the United Kingdom and Taiwan*
- *To investigate and analyse the works of selected illustrators involved in digital illustration*
- *To evaluate the visual quality and appearance of illustrations created and processed digitally*

Before I conduct this research, I should emphasise how the terms traditional and digital illustration will be used throughout the thesis. Traditional illustration refers to an illustration produced entirely without employing digital technology. Digital illustration refers to the creation of illustrations that includes digital means within its working processes. In other words, traditional illustration refers to an illustration that has not been generated with a computer, except towards the end of a design process, when images are scanned for mass production. Digital illustration, on the other hand, refers to the use of digital tools to produce images, usually through a point device such as a drawing tablet or a mouse. It is important to emphasise that digital illustration does not

necessarily omit the use of traditional methods, as demonstrated in the shaded area of Figure III. As I will show in later chapters the distinction between digital and traditional illustration is not fixed and continues to shift over time. And indeed some of the most interesting work is created in the overlapping space between digital and traditional practices.

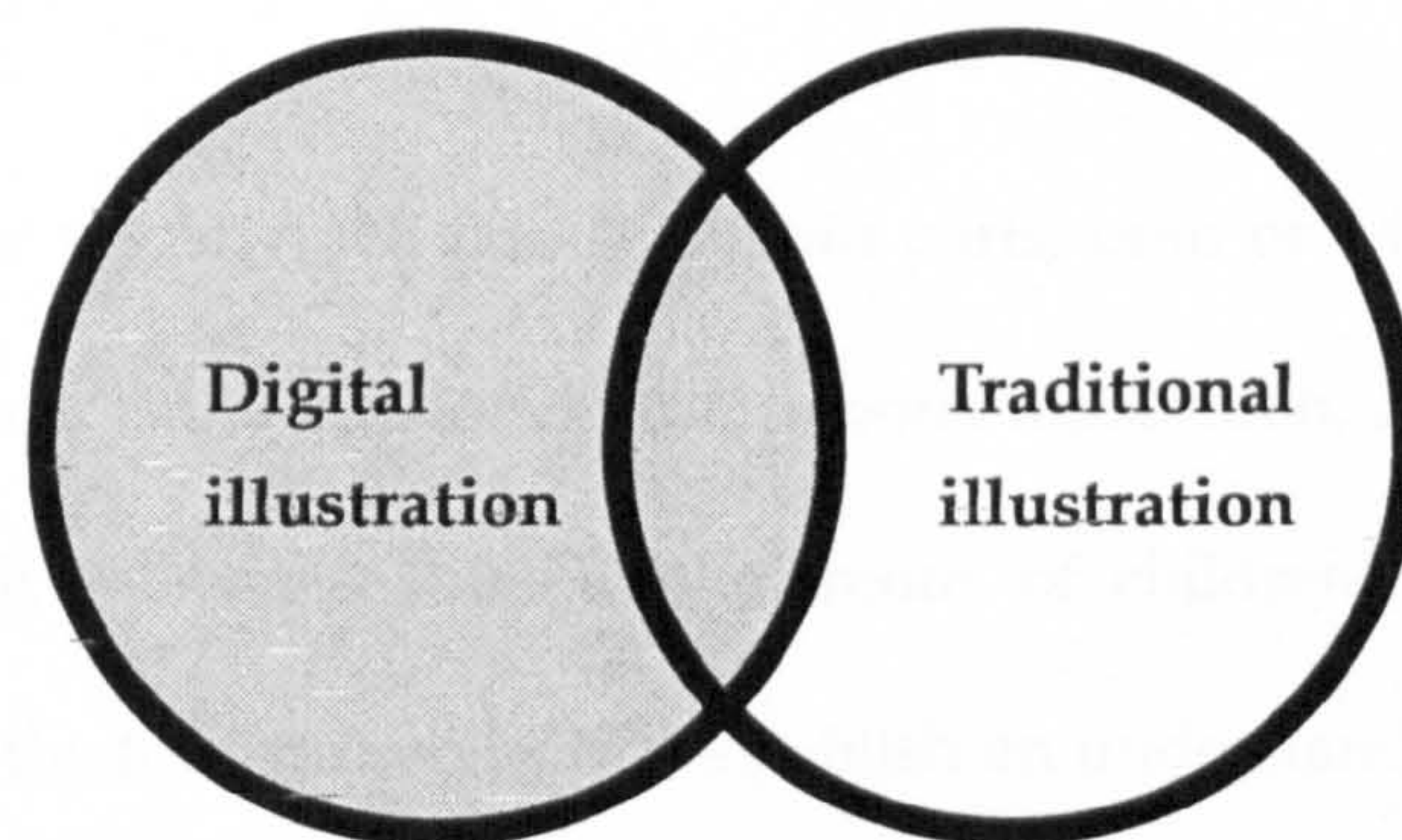


Figure III Distinguishing digital illustration and traditional illustration

The creation of a digital illustration can involve either the application of both traditional and digital methods or only digital ones. In addition, there are no obvious differences between 'general' illustrators and 'children's book' illustrators in term of using digital methods. The only possible difference could be the preference for illustrations in the children's book market, especially for ages 8 and younger, to appear as a hand drawing, as if drawn by traditional media. Technically, children's book illustrators would use the computer to create imagery as if drawn by traditional means. Therefore, certain styles of digital illustration have prevailed in children's books.

Research Strategy and Context

To fulfil the aims of this study, a qualitative approach was adopted to investigate the impact of digital technology on children's book illustration in depth. A literature review and qualitative interviews with semi-structured questions were employed.

Literature review

The literature review was divided into two main parts, both of which were considered essential for this study: the trends of children's book illustration; and illustration in the digital age. Through an examination of the trends of children's book illustration in Britain and Taiwan, the first part sought to establish an understanding of developments in children's book illustration in both countries. It mainly considered picture book publishing in a contemporary context and the role of its illustrators since the mid-twentieth century. The evolution of children's book illustration in these two countries has been linked with many factors. Before the 1960s, children's book publishing was largely related to printing technologies, with economic prosperity and the political situation also playing crucial roles in the evolution of children's books. It was not until the early 1960s in Britain that children's picture books began to be produced as the type of picture book available today because the printing methods incorporated offset lithography, which meant that the limitations of reproducing an original drawing were reduced. Illustrators therefore were freed from the need for the 'middle man' such as wood engravers for mass production. Since the full possibilities of how this technology might serve in the

development of picture books with more 'painterly' qualities were realised, artists aided by the printing technology became unconstrained and were able to develop a wide range of colours and incorporate a variety of artistic styles. Since this unconstrained printing technique has largely been employed for mass production, this raises the issues of the impact on children's book publishing in both Western and Eastern countries? Those discussions are presented in Chapter 1.

The second part of the literature review looked at illustrations in the digital era particularly from two perspectives: the controversy of the transition from traditional to digital illustration and children's book illustration in the digital realm. As children's book illustration is only one type of illustration, related literature has commonly been discussed in a more general framework of 'general illustration' and has not focused simply on children's book illustration. Therefore, the literature review of the period of transition was discussed from a general illustration aspect, to look at the controversy surrounding the impact of digital technology on illustration and its education in Britain and Taiwan. This has offered insight into the challenge of digital technology on illustration practice in general. Despite the controversy, print publishing has been considerably influenced by digital technology in editorial practice. Vast numbers of illustrations have been created digitally, but in comparison with the illustration used in other areas of publishing, there seems to be less evidence of digital effects on the appearance of children's book illustration. Therefore, the second part of the literature review also reviewed the phenomena of digital means utilised in particular in children's book illustration and the appearances of digital illustration published in the market, in

order to examine how digital means are currently being used in children's book illustration. These discussions of illustration in the digital age are explored in Chapter 2.

Qualitative interviews

There has been limited discussion about the issue of digital technology utilised in children's book illustration. In this research, therefore, in order to explore the issue in more depth, a qualitative approach was adopted. Using semi-structured interviews allows more detailed discussion and greater access to the practical context of practitioners. The interviews were conducted in two phases: an initial and a further interview, these were held in Britain and Taiwan with a number of children's book illustrators and experts. The illustrators selected ranged from those who used traditional to digital use in their practice and, provided a wide spectrum of illustrators who did/did not utilise a computer. The interviews aimed to offer greater understanding of how digital technology has been utilised within illustrators' work and to see the emergence of digital influence on children's book illustration. From the initial interviews, digital illustrators were then selected for further interviews, which mainly concentrated on the comparison of the selected illustrators' traditional and digital illustrations, and their digital working processes. The details of research methods are discussed and presented in Chapter 3.

Following this, the gathered data and visual evidence from the interviews are examined in Chapters 4, 5 and 6, to discuss the digital influences from three perspectives: digital experiences, digital working processes and the visual appearance of digital illustration.

Through the experiences of digital usage, the impact of digital technology on publishers, art directors and illustrators was examined, with particular analysis of significant themes that had emerged from the interview data. The analysis of digital working processes required an examination of the interviewees identified as using the computer during their creative processes. The analysis looked at the number of processes that have been commonly used in children's book illustration and examined the working processes provided by the interviewees, to understand the digital approaches in practitioners' current practice. In addition, the analysis also discusses the rationale behind illustrators shift to digital means. The final analysis evaluates the visual appearance of examples of digital illustration provided by the researcher and the interviewees/illustrators. The visual examples: the four books and the eight illustrators' traditional and digital illustrations were shown to the interviewees, so that they could evaluate the visual qualities of digital illustration and to determine which qualities were different from illustrations produced by traditional methods.

Finally, the research brings together all the research findings to provide key conclusions and to consider implications in Chapter 7.

Chapter 1 Trends in Children's Book Illustration

Illustration is a type of art used in conjunction with text to embellish its appearance or to clarify its meaning. It is a communicative tool combining personal expression with pictorial representation in order to convey ideas; it is usually a form of art created for reproduction in books, advertisements, periodicals, and in the new media. It is also essentially a popular rather than a fine art intended to be appreciated in a gallery or an exhibition.

Illustration utilised in children's books can be understood as an art form which is specifically dedicated to a youthful audience, helping young readers to understand the meaning of a text and expanding the readers' imagination in a book. Illustration is widely used in children's publishing, juxtaposing pictures and words. In this context illustration can be considered as important as the written words, if not more important. Since picture books are aimed at pre-readers and beginner-readers, their images are essential for the young and play a crucial role in enhancing children's literacy, although considering children's literature overall, picture books are only one type of children's books. By the mid-twentieth century, the advance of printing technology gave to the reproduction of imagery, a photographic quality and utilised inexpensive printing methods. This aided artists to develop a variety of artistic creations, thus the genre of modern picture books gradually emerged.

Nowadays children's publishing is dominated by imagery; picture books are one of the most important genres that have integrated both word and picture. In the opening to *American Picture Books*, Bader (1976) offers a succinct definition of picture books:

"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."

Picture books are simultaneously art objects as well as the primary literature of childhood; this indicates both the importance of design and the interconnections between word and image. In other words, picture books are 'written' with pictures as much as they are written with words. Picture books are compelling narrative texts which work on the basis of the 'drama of the turning page'; they are closer to theatre and film in this respect, silent films in particular. Picture books are different from other books as images in the books are considered to play an essential role as word and image are interdependent. More importantly, picture books are the main form which primarily utilises images within children's book publishing.

Therefore, in this chapter, I will focus on the developments of children's book illustration, in particular picture books in the United Kingdom and Taiwan. This will offer a broad spectrum of children's book illustration, developed in both Western and Eastern

countries, through a discussion of their publishing contexts and those illustrators who have cultivated and enjoyed prominent accomplishment in the field. This will also allow an understanding of the two countries evolution of children's books and will provide an insight into the context of illustration utilised in children's books.

The historical development of children's book illustration in Britain before the 1960s mirrored the evolution of printing technologies, since imprint techniques were essentially associated with the methods of mass production. It was not until the late 1950s, when the use of printing methods incorporated offset lithography that the limitations of reproducing an original drawing were significantly reduced for artists. Offset lithography enabled artists to have a printed image which was the same as their original drawing; illustrators therefore were freed from the need for the 'middle man', such as wood engravers, for mass production. In addition, the implementation of the 1944 Education Act had created a new school system, itself later supplanted by a change to comprehensive schools, which indicated the new political importance of the young and the value placed on education. In the meantime, British publishers started to establish children's lists and to have staff with responsibility for working only in this area. Due to these historical causes, I will discuss picture books specifically in a contemporary context in Britain and focus on the period from the 1960s to present day. In doing so I echo the argument of Graham, who states that there was little evidence before the early 1960s that children's picture books in Britain were created as the type of picture book available today; whose "Publishing aims and practices, printing procedures and possibilities, art styles, the balance between words and pictures and the content and

assumptions about the child reader have all alerted and combined to create a [new] type of picture book today..." (Graham 1998, p. 60). The discussion will consider three aspects: publishing practices and promotions, children's book prizes and the related organizations, illustrators and art styles.

It can be suggested that there are three evolutionary phases in the development of children's books in Taiwan that correspond to economic, political and social development: conceiving (1945-1973), germination (1974-1987) and growing up (1988-2001), since the Central Government moved to Taiwan (Lai 2002). In the conceiving phase, children's literature was mainly promoted by the government to establish its hegemony and entrench its ruling status after losing the mainland to Communists. During this phase many children's books were published under the influence of the government. Since the 1970s, Taiwan has become increasingly isolated diplomatically because of its secession from the United Nations and the collapse of its diplomatic relations with the United States and Japan. Both of these developments had a profound impact on society, for example, people worked even harder in this isolated situation as they felt the need for self-support. Consequently, the economy reached its peak during this time and children's literature was germinated through the prosperity of the economy. There was a strong demand for children's books, and as a result private enterprises stepped in and became the main force for promoting children's literature. The government in the meantime began to withdraw its input into children's book publishing and private enterprises were allowed to fill the role. The growth of publishing continued, especially with the lifting of martial law in 1987 which encouraged the society to become

more and more tolerant of political dissent. The restriction on newspaper licenses was removed, leaving the media with a considerably greater freedom of speech. As a result, the media encouraged enterprise and the publishing industry began to thrive as well. Many publishers focused on the children's book market and enthusiastically bought foreign copyrights from overseas. Because of these historical developments, in Section 2.2, I will mainly examine the evolution of children's books in Taiwan since 1945 from four perspectives: the government promotion, the role of private enterprises, the internationalisation process and the accomplishment of illustrators.

1.1 Developments in the United Kingdom

In considering the evolution of children's books and their illustrations in Britain, it is necessary to elucidate the development of children's literature in Western countries. The early history of children's learning stems from an oral tradition. Although books existed in earlier years, their illustrations were composed with the manuscript or handwritten book. The ways for producing multiple copies of books were time-consuming and costly. It is therefore unlikely that manuscripts were provided specifically for children; most of them were learned orally.

The invention of printing from movable type took place in the mid-fifteenth century, but the spread of printing in the late fifteenth and early sixteenth centuries changed the situation completely. It became comparatively easy to produce multiple copies of books

and these became cheaper, thus enabling the masses to actually own one. In England, in the sixteenth century, most illustrations were produced by woodcuts, but by the second half of the seventeenth century a change in the type of subject matter led to a demand for a finer kind of illustration than could be provided by the wood block. The increase in natural history and topographical studies, for example, required a more precise illustration which only the fine line of the engraver could provide. However in these books, illustrations usually consisted of small woodcut vignettes or engraved frontispieces created by anonymous illustrators, who played a relatively minor role (Whalley and Chester 1988).

In this period, there already existed two mechanical methods of producing illustration: one of these methods was the wood block, on which illustration was drawn on a block of wood and then the surface was cut away to leave only the design in relief. Afterwards, this was inked and placed under pressure in a printing press, which would print the picture in reverse; the pictorial version of the *Biblia Pauperum* (poor man's Bible) was made by this means (Figure 1.1). The other method was by means of copper-plate engraving. Prints made by this process were more complex to produce and were more expensive than using the woodcut method, but the result was usually far more successful than that of the simpler woodcut.



Figure 1.1 *Biblia Pauperum* (Poor Man's Bible), anonymous artist, National Gallery of Art, Washington, 1470

Prior to the mid-eighteenth century, books were rarely created specifically for children. The child's access to books would have been made through the parents' library, and in their original form they would have been somewhat indigestible reading for the younger mind. In particular, books for adults were generally written in a more complicated form/style that was beyond the reach of children's understanding, using words which had not been adapted for children. Thus children read books which were not specially created for them; this could have led to the possibility of limited understanding and enjoyment. Furthermore, at the time, children's reading was generally confined to literature intended for their education and moral edification rather than for their amusement. The books produced for children offered them no entertainment; for a number of centuries the Bible was the first required reading of most children. Therefore, religious works, grammar books, and 'courtesy books' which offered instruction on proper behaviour were virtually

the only early books directed at children in existence. However, there were still some exceptions before the eighteenth century. The early example devoted to children's education was the *Orbis Sensualium Pictus* (The visible world in pictures), published by John Amos Comenius in 1658, which was an encyclopedic assemblage of captioned illustrations of the natural world; it is regarded as the first picture book for children in Latin. *Orbis Sensualium Pictus* was translated into English by Charles Hoole as early as 1659 (Whalley and Chester 1988).



Figure 1.2 A late edition of Hoole's version of Comenius's *Orbis Sensualium Pictus* (The visible world in pictures), 1777

Comenius's book was innovative in its recognition that there are fundamental differences between children and adults' perception. As he wrote regarding the importance of pictures to give a logical and panoptical view to help children's learning:

“For it is apparent that Children (even from their Infancy almost) are delighted with Picture, and willingly please their eyes with these sights. And it will be very well worth the pains to have once brought it to pass, that scarecrows may be taken away out of wisdoms Gardens.”

(cited in Avery 1995, p. 7)

The other influential educator similar to Comenius was Isaac Watts; he was a non-conformist divine and realised that children were different from adults and needed special attention. He created simple poems for children intended to teach religious and moral truths, especially within the family. His contribution to children’s literature was first published in 1715; this was *Divine Songs attempted in Easies Language for the Use of Children*. Watts understood the need to approach the instruction of children by linking unfamiliar ideas with familiar experiences; his simple but memorable verses were read by children for nearly two centuries. Whilst Comenius had provided visual images of the world around, Watts supplied verbal pictures of all aspects of daily life. These two educators recognised the difference between children and adults’ reading materials, which initiated the idea of a distinct body of literature for children (Whalley and Chester 1988).

By the early eighteenth century, the interest in children’s literature and a rise in literacy led to new markets and a flourishing of new publishers, particularly in England. “A major reason for the expansion of the book trade for children in the eighteenth century was the increasing number of children as a proportion of the population” (Kinnell 1995, p. 29). The publisher John Newbery (1713-1767) was one of the first to recognise the

commercial implications of making children's books widely available and he quickly realised the value of illustrations in attracting young readers. Although he was by no means the first to produce books for children, he was among the first to appreciate the commercial importance of the children's book market. Other publishers soon followed his example and by the end of the century, books for children were firmly established as a genre in their own right (Darton 1982). Meanwhile, innovations in typography and printing allowed greater freedom in reproducing art through woodcut, engraving and etching; an increasing number of books accompanied by images had been produced for youthful audiences at the time. Unfortunately, there has always been the expectation that children's books were cheaper than those for adults, so it was no surprise that the earliest juvenile publications were based on producing children's books at a lower cost than adults. Thus the number of illustrations in the cheaper books was limited and was largely confined to frontispieces, which generally portrayed one of the more significant episodes in the book and was frequently signed by both artists and engravers.

The institutionalisation of the idea of childhood as a period distinct from adulthood and as a time to be enjoyed can be witnessed through the gradual appearance of many of the classics of children's literature in English, during the latter half of nineteenth century. The books were beginning to appear as a serious means for educating young, but not as explicitly didactic as in earlier writing, increasingly alert to the needs of a child, imbued with a sense of responsibility and duty, but with an increasing capacity for warmth, laughter and imaginative enjoyment too. This period also saw the emergence of picture books, in which the illustrations - and the artist's vision - were as important as the text.

Those artists were gradually aided by technical advances in printing and most artists still relied on wood engravers to reproduce illustrations for mass production.

Until the mid-nineteenth century, most children's books were printed in black-and-white, primarily in the medium of wood engraving, with the only colour provided by the laborious and expensive process of hand-colouring. After the mid-nineteenth century, colour printing was prevalent in children's books; the advances in colour printing emerged with the wood engravings of Edmund Evans. He succeeded in engaging such major artists as Randolph Caldecott, Walter Crane and Kate Greenaway, engraving and printing the books himself and working with publishers for distribution. Meanwhile, during the century two important developments of printmaking had taken place in the field, enhancing book illustration. These were the invention of lithography¹ by Alois Senefelder in 1798, and the introduction of steel engraving in place of copper. Both appeared in children's book illustrations in the period but did not have a very noticeable impact, owing to the expense of the technique. The number of illustrations which required the use of lithography was usually very limited. However the main impact of the lithographic process was to come later, when further developments and applications

¹ Lithography is based on the interaction of grease and water. The artist draws on a limestone slab with a wax crayon or pencil, over which water is spread with a damp roller. This separates the non-print areas from the image. When ink is applied to the stone, it is repelled by the water and only adheres to the greasy parts and an impression can be taken.

Descriptions of technical processes are derived from the author's own knowledge and experiences and supported by the literature references of Whalley and Chester 1988 and Graham 1998.

of the technique called chromolithography² were used for colour printing. Steel engraving³ was an extension of copper-plate engraving, but using the harder substance, steel, in place of the softer copper. With the increased demand for prints and illustrations, a process was needed that would enable long runs to be made for the more popular items.

Moving into the twentieth century, near-universal literacy in developed countries and technical advances have made it possible to produce relatively inexpensive high-quality illustrated books which have contributed to tremendous growth in children's publishing. In Britain, by the mid-1920s printing technology came to use colour lithography⁴ which allowed artists to express their colourful artistic drawing. The method used by William Nicholson with *Clever Bill* (1926) and *The Pirate Twins* (1929), pioneering the use of colour lithography, was published by Heinemann and Faber & Faber respectively. It was also the method used for Jean de Brunhoff's *Babar* books,

² Chromolithography was the first method cheap enough to rival hand-colouring. Colour printing was done with several lithographic stones; each main colour was printed by a separate stone.

³ Steel engraving was one kind of metal engraving. The method used a burin to incise the line into a smooth metal plate such as copper, steel and zinc. The plates were inked all over, and then wiped clear so that only the engraved parts retained the ink and would be printed on paper.

⁴ Colour lithography was the method which is normally printed on four plates for each page. Originally the plates were made of stone, later zinc, then plastic sheeting. Those parts that were to be tinted were drawn in black lithographic ink or chalk and artists identifies which colour they required for each part of an image, this was a laborious separation of colours. After processing, the process was based on the principle of grease and water not mixing, these plates were printed onto the same sheet of paper, one after another one, in the colour orders of cyan, yellow, magenta and black.

Kathleen Hale's *Orlando* books and Edward Ardizzone's early *Little Tim* books all produced before World War II. Compared with the former imprint methods, colour lithography gave the printed images a softer effect and a convincing illusion of a full range of colour, and more importantly those images resembled their original hand drawing. However, there were two main disadvantages of colour lithography; one was the need for separating the colours which proved so time-consuming. The other was the need for coated art paper, as colour lithography was the earlier 'half-tone' method for reproducing colour that also meant only the best glossy paper could be used (Graham 1998; Whalley and Chester 1988).

In the early twentieth century, the growth of children's book publishing should have been continued in the light of the British Empire and the advance of printing techniques. However, the prosperity of publishing was later obstructed by the wars; many artists were away at the front. There were many social and political changes after World War II. The number of new children's books published was greatly reduced; there was a severe shortage of all kinds of goods produced. Despite the large quantity of inconsequential books issued during the war, a few enterprising publishers set out to give the public reasonably priced but well-designed books. Allen Lane, founder of Penguin Books, experimented with a number of imprints for children during the war, culminating in the hugely successful Puffin books, under the editorship of Noel Carrington. Carrington's

discovery of offset lithography⁵ was applied to the mass production of cheap children's books in the Soviet Union, which led to the birth of a similar enterprise to that created by Allen Lane (Alderson 1994). However, the production of quality books for young readers was not prioritised by most publishing houses. Indeed, after the war, it was a time for recovering in the case of publishing, illustrators in particular were even gradually returning to their work. In the post-war period, however, very few illustrators immediately exploited the unique power of the picture books; finely illustrated children's books were being produced in the post-war period, but in most cases, publishers did not seek to use illustrations to depict the actual telling of the story as is seen today.

Meanwhile, according to Graham (1998), there was arguably little evidence before the early 1960s of children's picture books in Britain being created as the type of picture books seen today. Because the current production of a picture book needs to consider the publishing aims, procedures and possibilities of printing, art styles, the balance between words and pictures and the content and assumptions about the child reader; these have all been combined to create a picture book that is different from those produced pre-1960s. Graham thus states that it was not until the 1960s that contemporary-style picture books emerged in Britain. Although some scholars (Doonan 1996) have suggested that the mid-1920s was the time in which the characteristics of the modern picture book began to take shape, because of the advancement in technology of colour lithography

⁵ Offset lithography is the method now used for most commercial purposes; the inked image is passed from a flexible metal plate curved round a cylinder to a rubber-covered roller, and in turn to the paper. This makes it possible to print on a variety of surface, and the use of rubber helps wear and tear on the plates.

which made it possible for artists to create a reliable quality for mass produced images. But, as mentioned previously, colour lithography had two main disadvantages in its printing procedure: separating colours was time-consuming and there was a need for coated art paper. It was not until the late 1950s, when a gradual refinement in offset lithography offered the genuine possibility of a rapid and inexpensive mass production for picture books. The full possibilities of how this technology might serve in the development of picture books with more painterly qualities was realised in Britain; artists aided by the printing technology became unconstrained and were able to develop a wide range of colours and incorporate a variety of artistic styles. Therefore, the following discussion is mainly based on the development of picture books in Britain since the 1960s to the present, discussing picture books in the contemporary context of publishing practices and promotions, children's book prizes and the related organizations, illustrators and art styles.

1.1.1 Publishing Practices and Promotions

At the end of World War II in Britain it was rare to find specialist publishers for children; the publishing industry had been ruined, whilst the authors and illustrators found themselves involved with war work. Specialist children's editors were just emerging; periodicals and newspapers rarely covered children's books; and no organisation was concerned specially with promoting quality children's literature. At the time, many picture books originated from abroad, particularly America. They were often printed using techniques which were not widely available in Britain. It was only by the

mid-1960s that Britain finally possessed a viable picture book output which led to more balanced share of publishing between Britain and America.

One important influence on the children's book industry after the war was the implementation of the 1944 Education Act, creating a new school system which indicated the new political importance of the young and the value placed on education. The school leaving age had risen to fifteen and higher education greatly expanded. This Act influenced many publishers to begin to consciously establish children's book lists and to appoint staff with responsibility for working only in this area. Gradually, children's book publishers through such practices eventually created a type of picture book as seen today. The growth of the number of publishers specialising in children's books continued. According to the Young Book Trust, in 1996 there were more than 100 children's book publishers in Britain (Graham 1998). Growth in the numbers of publishers matched the increasing numbers of children's books published, over 10,000 new children's titles are now published in Britain annually (Kloet 2004). Nevertheless, it is not easy to extract the number of picture books from the figures of new children's titles. However the proportion of picture books to fiction titles before 1960 was likely to be smaller than in the latter part of the period, owing to the use of offset lithography since the 1960s. Picture books now became easier and more rewarding for publishers to produce.

The vast number of children's books published each year is in a competitive market place which means there is a possible danger of overproduction. In the 1970s and 1980s, picture books suffered from such overproduction, resulting in far too many

indistinguishable titles. Meanwhile, children's publishers were also challenged by the cuts in the library service and in school requisitions, and other recent attractions such as the Internet that threatens the market for books; this all results in serious competition between publishers. Despite the competition, the British publishing industry seems to be surviving by making major adjustments to its practice. One major change is to produce even more new titles, but eventually the print run for any single title tends to decrease. According to Ron Heapy, Managing Editor of Children's Books at Oxford University Press, "a print run of 7,500 would be normal for a title in the late 1970s. By the mid-1980s, no more than 3,000 copies would be printed and by the end of the century, he suspected, a print run of a new title will be around 1,500" (Graham 1998).

Another major development is the need for publishers of overseas sales to cover their costs. Fortunately, English is a language widely spoken; therefore British books are comparatively easier to sell to other countries, as some audiences may purchase the books for the purpose of learning English. If the need of books were not in English, they can be translated to other languages. Often the publishers manage the sale of translation rights on books originating from Britain, in the case of picture books printed in colour, the organising of 'co-editions' – that is, printing several editions at once, with only the text (printed in black) needing to be changed into another language. Thus, the combination of selling English versions directly and co-editing other languages could effectively cover the cost of imprints and increase revenue for publishers. The need for the market abroad to cover a print run of a commercially realistic size will still be possible. That is the reason why co-editions are essential for most publishers and could

explain the frenetic atmosphere at many book fairs, especially the annual Bologna Children's Book Fair, where publishers crowd into the Fair, busy searching for partners and buying and selling rights.

Another factor in this new atmosphere was the changing pattern of children's publishing, with many first editions seen both in hardback and paperback, and often paperback only, in order to reap quick returns on the original investment. Traditionally, picture books have always been published in both hardback and paperback. In the past, paperback publications have taken place one to two years after the hardback has been published. Most reputations were built on the hardback publication which could later promote the sales of paperbacks because their reputation had already been established from a well-valued hardback. However this pattern is changing; many books may eventually shift to only paperback to reduce spending on expensive warehouse space. Although it is not a universal agreement that the hardback is potentially doomed, since some scholars (Tucker 2005) have even predicted that hardback will perform better than ever. On the whole, the trend of picture book publishing over the years has moved towards more handsome and substantial paperbacks, occasionally supplying a smaller number of hardbacks.

In promoting children's books, publishers have to fight hard for attention in the current climate of competition from so many different areas. For most books, thus, an instant visual appeal is considered essential for attracting young audiences. It is the reason why now in the market, picture books sometimes are repackaged and reformatted to

introduce all sorts of accessories, such as tapes, CDs, soft-toy characters or even in-built mobiles. This is an attempt to add to the value of the books and further attract children to purchase them. Meanwhile, the avenues of selling books have multiplied, conventional book shops are no longer the only outlet. The numbers of outlets that can sell books include supermarkets and the Internet. In particular some book purchases on the Internet are often offered at a cheaper price than buying the same item in store. Books sold on the Internet may sell more rapidly than expected as via the Internet books not only sell in a local place but globally; most books sold online are commonly in the form of paperback in order to reduce postage costs. Nowadays, promoting picture books has become a highly competitive business that has pushed publishers to urgently adopt more aggressive marketing practices.

1.1.2 Children's Book Prizes and Related Organisations

Whilst parents were seeking well-created children's books, there were many children's book awards established after World War II, associated with promoting children's literature. Over the years an increasing number of awards for children's books and book illustration have been established which acknowledge talent, raise public awareness and increase sales. According to Barker "In 1945, there was one children's book award in the United Kingdom, in 1995 there were over a dozen awards as well as more localized ones and a significant international one. In 1945 the only award was presented by the librarian and gained very little publicity; in 1995 a number of the awards were sponsored and gained significant attention from the media" (1998, p. 42-43). With so many awards some

have obtained considerable attention and influenced book sales. The following discusses the significant awards and the related organisations in Britain; especially those for picture book illustration.

In Britain, the history of awards for children's books mirrors the development of British children's literature since World War II. The Carnegie Medal, the oldest children's book award was established for the writer of an outstanding children's book in 1936, in memory of the great Scottish-born philanthropist, Andrew Carnegie (1835-1919). Librarians were the main force behind this award at the time. One of the purposes of the medal was to encourage the improvement of standards, both in the writing and the production of books for young people. However, the Carnegie award made little impact as at the time specific children's librarians were rare and librarians themselves were not perceived as a group at the forefront of literary innovation. It was nearly twenty years later when the Kate Greenaway Medal was established by The Library Association in 1955, particularly for distinguished illustration in children's books. It was a landmark for the appreciation of children's book illustrations in Britain, awarding illustrators whose work was aesthetically outstanding as illustration for children. These two oldest awards initially were sponsored by children's librarians, but since 1991 they have been awarded by CILIP (the Chartered Institute of Library and Information Professionals) annually. The librarians wished to distance themselves from the vulgarity of awarding a cash prize and instead each prizewinner is able to donate the winning prize to the value of books to a library of their choice. This sponsorship deal was successful in raising the profile of the awards and many more reports have gained coverage in national newspapers as a result.

The most renowned international award in the United Kingdom is the biennial Hans Christian Andersen Award, first given in 1956 by the International Board on Books for Young People (IBBY). Initially the award was only given to authors, but ten years later an illustrator category was added in recognition of the importance of illustration in picture books and of illustrators who were valued as authors. The award was presented to the author and illustrator whose complete works have made a lasting contribution to children's literature; the award has gained international recognition, and is sometimes referred to as the 'Little Nobel Prize'. During its first year, in 1956, the British author Eleanor Farjeon received it for her writing, and, in 2000, Anthony Browne became the first nominee from Britain to win the award of illustrator category; two years later, it was won by Quentin Blake in 2002.

Since the 1970s new awards have proliferated, the majority of which have been concerned with individual aspects of illustrating. Many awards were established, for instance the Mother Goose Award in 1979 for new illustrators; this prize was formerly awarded to the most exciting newcomer to British children's book illustration. For example, in 1984, Patrick Benson's *The Hob Stories* won the award. Other new types of awards, which had been very popular in America, were introduced to Britain in 1980 by the Federation of Children's Book Groups. The Federation was founded in 1968 and was designed for parents who wanted to know more about children's books. Like all of the Federation's branches it works closely with children, so it was inevitable that its award would seek the views of children as its primary source. These award winning books are

often known as the 'children's choice' as they are voted for entirely by children, from a shortlist to the final overall winners.

The 1980s saw two further major awards, one of which introduced a new element into the world of children's book awards, that of sponsorship. The Emil award was founded in honour of Kurt Maschler in 1982, giving the prize to a book where text and illustration provided a harmonious whole. The importance of integration in children's books had been finally recognised. After three years in 1985, one of the most prestigious, as well as generous, awards was sponsored by Rowntree Mackintosh: the Nestlé Smarties Book Prize. The policy of this prize has been to involve children in the actual judging of children's books since 1993; the overall winner of the prize is selected by children, the prizes were categorised for the under 6s, 6-8s and 9-11s which are voted for by children themselves. The Smarties prize has often been considered a highly successful advertising venture on account of children who make the final decisions, drawn from a shortlist compiled by adults. The prize has attracted a considerable publicity and the winners ceremony has featured regularly on the children's television programme *Blue Peter*. Although the winners of the Smarties prize can gain a high reward and extensive publicity, the prize has not always been appreciated by the winners. For example, for Janet and Allan Ahlberg, the prize was refused because of its association with confectionary manufacturing (Barker 1998).

Since the previous awards had been mainly directed at illustrators whose books were published, it was only in 1985 that a prize specifically aimed at students was established,

sponsored by Macmillan Children's Books. The aim of the award was to stimulate new work from young illustrators in art schools and to help launch their professional careers. Up until 1997, the competition of the Macmillan Prize was primarily for a picture book that showed excellence in both text and illustration. But in 1997, the criteria were changed and the competition was judged solely on the aesthetics of the images; this has provided better opportunities for potential illustrators who were still in art institutes to present their talents which mainly sprang from their illustrative abilities. The other award that also examined visual accomplishment is the V&A Awards, which is one of the most important awards for professional designers and illustrators. The illustration award is given to the best overall magazine or book illustration. Two runner-up prizes are awarded, one for book illustration and the other for editorial illustration. These two prizes are seeking novel, creative illustration with superb drawing abilities, in particular creating different contexts for children's book prizes. Both the Macmillan Prize and V&A Illustration Awards are different from the other mentioned awards as they value illustration to be as important as the text and appreciating children's books on their visual merit.

Nowadays, there are abundant interactive media and games which are considered far more interesting than a static image in books. Often children are distracted by these kinds of entertainment which might have impacted on their reading ability. This situation has raised concern amongst many educators as well as the Government. Thus in Britain many organisations have developed greater links with children's literature, through support and promotion, such as the Booktrust, the British Council, the Federation of

Children's Book Groups, the Children's Writers and Illustrators Group and IBBY. To promote reading and the appreciation of picture books, some organisations held exhibitions of original drawings of picture books, providing the means of promoting illustrators' artwork, and reinforcing the importance of their work through viewing the originals. Amongst many exhibitions held are those by The British Council and The British Library, which were based on different themes, for example the theme of 2002 was the Magic Pencil. The exhibition of the Magic Pencil had been even held around the world. The other equally important organisation for promoting original artwork is The Association of Illustrators which regularly holds exhibitions and publishes journals that are essential for illustrators nowadays to promote their work and understand their rights; the Association has also offered illustrators practical suggestions in negotiation with publishers.

Winning the prizes has helped to sell books as well as increase publicity about children's books, providing a field for discussion, competition and selecting talented illustrators for outstanding well-illustrated books. Private entrepreneurs are keen to sponsor the prizes to build up their positive images. In the future, there might be more brands associated with children's book awards; the organisations will continue to play crucial roles to saturate the market of children's books and the existing awards will keep announcing new winners. However the ideas of the pioneers of early awards are not that different from those of today's selectors, and the winners of children's book awards will continue to engage and captivate a new generation of children and the adults who select material for them.

1.1.3 Illustrators and Art Styles

In Britain, the period from 1945 to the early 1960s is more notable for the black and white line drawing in fiction for older children than it is for picture books. When the development of printing technology in the 1960s advanced into half-tone colour printing, this brought a dramatic explosion of light and colour to the world of illustration and new horizons opened up for picture books. Now free of so many of the constraints and limitations in terms of reproduction, artists were able to employ a much wider range of media, and picture books became bolder and brighter than ever before. In Britain, some of the important author-illustrators of the period had already established their reputation in the 1960s: for example, Charles Keeping, Brian Wildsmith, John Burningham, Raymond Briggs, Michael Foreman and David McKee. Some like Shirley Hughes, were well-established illustrators of others' work who from the 1970s started to write and illustrate their own books. Others have come to prominence during the last thirty-five years: for example, the Ahlbergs, Quentin Blake, Anthony Browne, Patrick Benson, Helen Oxenbury, Tony Ross, Colin McNaughton, and many more (Watkins and Sutherland 1995).

Charles Keeping and Brian Wildsmith, for instance, two of the most noticeable picture book illustrators, gave their images an unprecedented painterly quality since the limitations and restrictions of reproducing original artwork had been lifted from artists.

The work of Kepling which has brilliantly coloured inks and textured effects, were presented in his picture books, such as *Charley, Charlotte and the Golden Canary* (1976). Similarly, the master of colour Wildsmith produced his *ABC* (1963) which brought a blaze of colour into children's books and was considered spectacular in its day. In the meantime, John Burningham whose first picture book *Borka: the Adventure of a Goose with no Feathers* was published in 1963, an exemplar of a painterly approach, with the picture plane alive with rich textures and gestural sweeps of the brush. A much wider range of media and textures were experimented with by these illustrators in the early days of offset printing, showing how, with the capability of printing technology, production of a wide range of colours allowed the presentation of detailed textures as seen in the original drawings.

Another illustrator emerging at this time was Raymond Briggs, who began his career as a writer and illustrator. In his most well-known book, *The Snowman* (1978), a little boy is taken on an enchanting journey by a snowman in the night sky. This has become a legendary book. Briggs's customary comic strip format was magically enhanced by the tactile quality of pencil and coloured crayon. He sees no age limits and its easy-to-read style make his books accessible at almost all levels of understanding (Briggs and Jones 2003). An illustrator with exquisite watercolour technique who also started his career in the 1960s was Michael Foreman. He first came to the public eye with his series of humorous picture books, expressing social and political ideas, such as *Moose* (1971) and *War and Peas* (1974). After that Foreman's watercolour gradually developed to incorporate a use of space and gently graded washes that could create both mood and

mystery; the themes had been developed, including conflict and war. One example, *War Game* (1993) a moving and complex companion volume, set in the First World War, was inspired by and dedicated to his four young uncles who died in the fighting. The images show a refined wash technique which deliberately portrays the open landscape of a war scenario. David Mckee, an illustrator with a very different interpretation of the modernist conventions of the twentieth century, published his first book *Two Can Toucan* in 1964. He refuses to take for granted how stories 'should' be told, pictures viewed, and books held, flattening his world up against the picture plane in a tiny perspective. His characteristic of illustration has paid homage to artists such as Klee and Matisse. The most recent well-known creation is *Elmer, the Patchwork Elephant*, which has developed into a book series; *Elmer* is now published in more than 20 languages and has spawned a range of merchandise. These author-illustrators started their careers in the 1960s, but their creations have spanned to today and they are continuously producing books which delight in both illustration and text.

Diversity has always been the hallmark for today's picture books; if we were to look in a children's book shop, we would be astonished by the rich diversity of the different categories on offer. There is a proliferation of 'first books', books for toddlers and pre-school children. Shirley Hughes, Helen Oxenbury and the Ahlbergs are just a few of those who have created an abundance of books that explore the everyday textures of life from a child's point of view. Hughes's *Lucy and Tom's Day* (1960) was drawn from her own experience of family life, chronicling the everyday life of children, combined with a watercolour technique that was both vigorous and sensitive (Hughes 2000). The line

between everyday life and the world in Janet Ahlberg's illustrations brought a new simplicity to the way children were portrayed, faces with little more than a line, two dots and a rosy blush. For example, in her *Peepo* (1981) the succinctly drawn characters with a scattering lived-in interiors expressed a charm of affectionate nostalgia. The children drawn by Helen Oxenbury are much more contemporary. Her *Alice's Adventures in Wonderland* (2001) is exuberant, contemporary, and lovingly created. Although the story has been created by John Tenniel and Arthur Rackham (Figure 1.3), setting a high standard for illustration, Oxenbury still beautifully created a book with modulated watercolour, competing with those precursors (Figure 1.4).

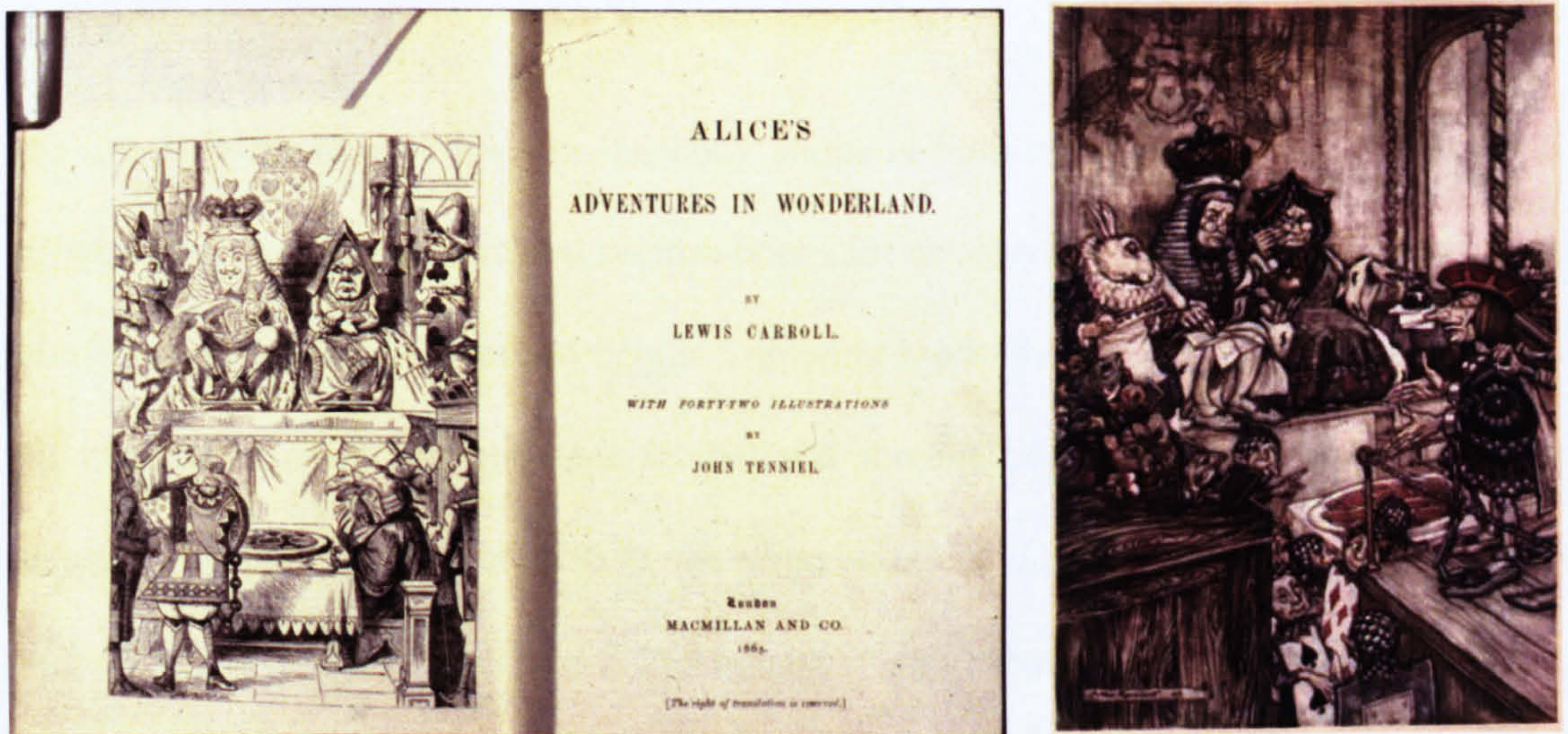


Figure 1.3 *Alice's Adventures in Wonderland* (1865), illustrated by John Tenniel and *Alice's Adventures in Wonderland, Who stole the Tarts?* (1907) illustrated by Arthur Rackham

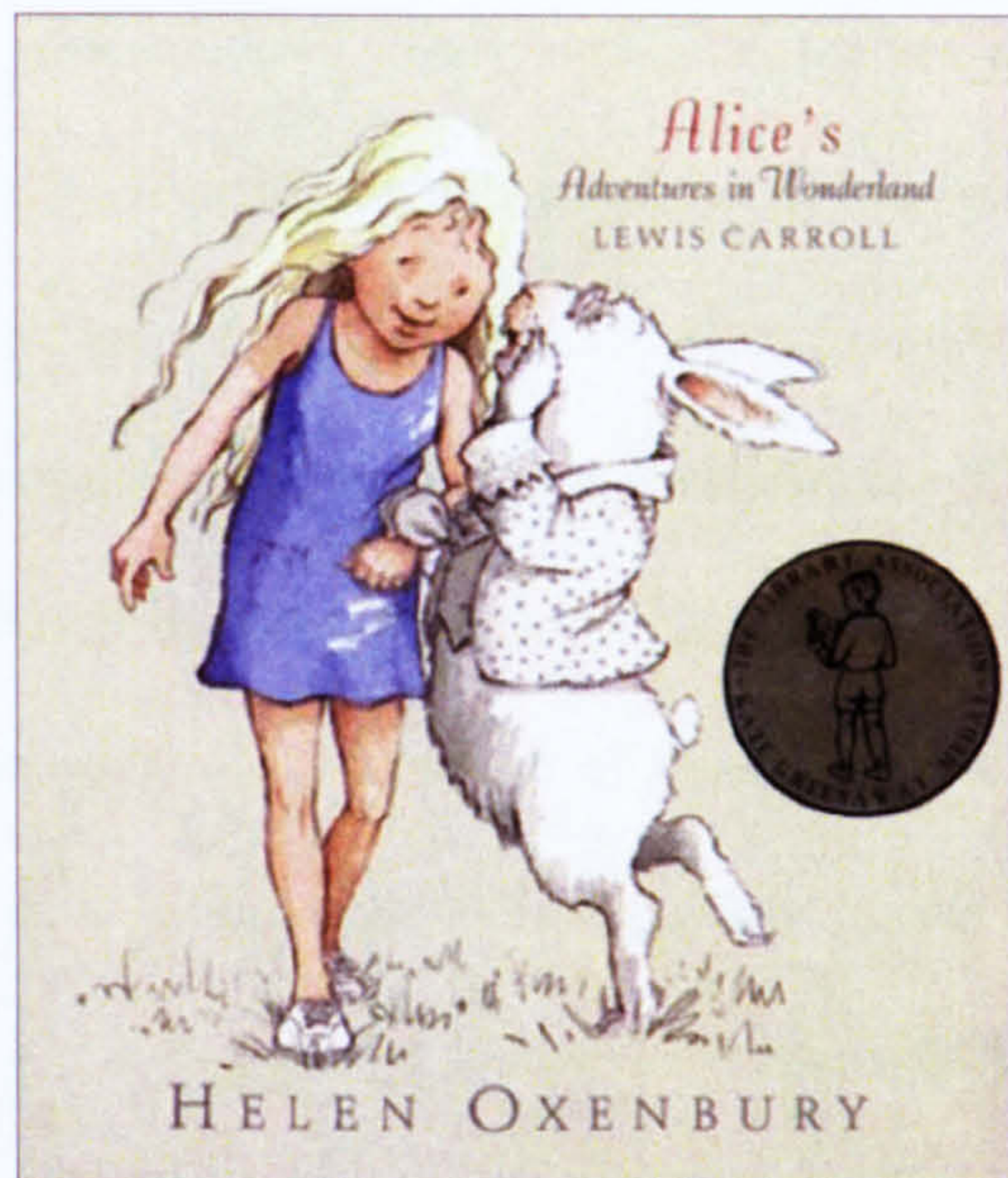


Figure 1.4 *Alice's Adventures in Wonderland* (2001),
illustrated by Helen Oxenbury

The other theme always seen in the book shops is humour. Those creators were often initially caricaturists then created picture books for children. For instance, Quentin Blake, John Burningham and Raymond Briggs originally made their mark as humorous artists, but they all reached out to areas far beyond the realms of humour. Blake had first successfully submitted cartoons to *Punch* when he was still a schoolboy. He now employs the cartoon technique to create a loose, casual style that has an uncanny knack for commenting aptly on a text (Blake 2000). For example, *The Story of the Dancing Frog* (1984) shows Blake's awareness of potential form of picture books, illustrating by economical use of deft pen strokes and watercolours.

By the end of the twentieth century, the diversity of characteristics in picture book illustration was further developed by illustrators such as Sara Fanelli, Lauren Child,

Helen Ward and Dave Mckean, and many more illustrators joined in the creation of picture books. Some illustrators followed traditional footsteps; others created picture books which attracted audiences that were of an older age, often adults. Sara Fanelli is one of the most adventurous artists working in the field of children's books today. Her graphic work often pushes at the boundaries of what is considered visually 'appropriate' for children and she has spawned a plethora of imitators. Notwithstanding, her books have sometimes been questioned, exploring whether books like *Wolf* (1997) or *It's Dreamtime* (1999) fully engages the age group for whom they are ostensibly bought. Similarly, Mckean's *The Day I Swapped My Dad for Two Goldfish* (2004) was also criticised as actually more relevant to parents rather than their children, or to art students and other artists. His work is often aimed at an older market and is an exemplar of how digital and hand drawing can be integrated as a whole. The books created by both illustrators have been widely appreciated, though the real consumers may not be children. It is therefore the consideration of golden-rules of creating picture books for young children that may have been broken, the intended market could now be adapted to respond more to parents and buyers within the art related world and these books could still sell well.

Since the last decade of the twentieth century graphic programmes have enabled artists to solely create an illustration on the computer or to integrate digitally produced with hand-drawn work. Many illustrators have used the computer as part of their drawing repertoire but the appearance of the illustrations does not always reflect a digital quality. Dave Mckean is one of the exceptions, since his work can be perceived as having a digital

quality; other illustrators' work could not be seen as having incorporated digital technology. Illustrators, such as Lauren Child, Nick Sharratt, Robin Harris, Bee Willy, Emily Gravett and Paula Metcalf, all have been working with digital methods and have vigorously presented the diversities of their characteristic illustration. Child's work appears as kaleidoscopic collages; Gravett's illustration on the other hand conveys the simplicity of collage. The illustrations by Harris and Metcalf deliver vigorous and exuberant tonality; by contrast Sharratt's work presents flat and perfectly coloured images. Willy does not display vibrant colours, but uses the computer to obscure the painterly features such as in a gloomy night image. These illustrators all incorporate digital means in different ways and present a variety of styles. It is significant that they work alongside other illustrators who solely employ traditional media, sharing the journey of picture books into the twenty-first century.

In the new century, excellence in both the creativity of the illustrators and the marketing strategy of publishers has led prominent British illustrators to become well-known on the global market. It is therefore no surprise that many illustrators from Britain are also very popular in Taiwan. According to Shuqiong Zhang, former vice-planning manager of the Eslite Books children's book department (a famous chain of book retailers in Taiwan), "picture books by many outstanding British illustrators such as Quentin Blake, Lauren Child, Sara Fanelli, Anthony Browne, David Mckee, Lucy Cousin among others are well recognised in Taiwan... products and cartoons from Lucy Cousin's 'Maisy' series are very

popular amongst the 2 to 5-year-old group.”⁶ This may imply that the aesthetics of British illustrators do not only influence its own market but their influence is extended to other countries as well. Ironically, there might be a risk that different national and cultural characteristics will become merged into a more uniform ‘style’, reflecting no particular tradition, and lacking any individuality of its own.

1.2 Developments in Taiwan

China has not had a long history of children’s literature; its evolution was similar to that of children’s literature in the western world. In other words, children’s literature is strongly associated with the oral tradition. The art of ‘Telling Books’ was an important cultural activity for the Chinese because it helped spread written literature to the masses in the form of oral performances. In ancient times, literacy education was an exclusive privilege for the rich and noble, while such opportunities were not easily obtainable by the masses. ‘Telling Books’ was the key means for children to access literature and folktales (Liu 2003). Early children’s reading materials were drawn from adult literature, such as myths, legends, fables and tales, which were gradually integrated into children’s favourite stories. This later evolved into a category of children’s literature.

In China, the first ever children’s literature produced with illustrations was similar to

⁶ Personal communication on 21 October 2004

Orbis Sensualium Pictus. The Chinese ancestors believed that education nurtures the young and cultivates their moral characters. Thus the illustrations appearing in children's books were intended for learning as well. According to research by Dr. Arthur W. Hummel, the American Congress Library has collected the *Fifteenth Century Illustrated Chinese Primer* (新編對相四言), which was published in 1436 (Yuan Dynasty). It was perhaps the earliest 'text-learning-from-picture' book, where each word with a matching illustration helped children to learn Chinese characters (cited in Lai 2002). However, the illustrations had always been taken merely as ornamental in ancient children's books because the aim for children's education was perceived as learning the words only. Texts were therefore far more important than illustrations. As a result, illustrations in children's books were not developed much further; the books often consisted of only imprinted texts or a few pages ornamented with images of a crude quality. Additionally, the details of images appearing in books were limited by the print techniques, such as woodblock printing which was the common method used in that period. During the early Qing Dynasty (1644-1912), imprint techniques and design skills were vastly improved. Although fierce competition existed between the bookstores, the book producers were mainly concerned with lowering the book production cost. Thus textbook illustrations were still printed in black and white, having very few pages of coloured illustrations within.

The Republic of China was established in 1911, but it was the May Fourth Movement (五四運動), which took place in 1919, that set the milestone for contemporary literature which effectively popularised the official Chinese language in China. In 1949, Mainland

China and Taiwan formally separated, owing to political differences and subsequently the Central Government moved to Taiwan. Taiwanese children's literature was significantly influenced by Japan, as Taiwan was colonised by Japan from 1895 to 1945 after the Sino-Japanese War, during which China was defeated and the Treaty of Shimonoseki was signed, ceding Taiwan and Penghu to Japan. Due to the Japanese colonisation, the older generation (aged 70 and above) were profoundly influenced by Japanese education. This is described by Duan (1997) when explaining the factors behind the development of Taiwanese children's literature:

“Due to historical and geographical causes, the development of children's literature in Taiwan, after separating with China, has been an interaction among three forces: the Chinese mainland culture, the indigenous culture in Taiwan (Taiwanese, Hakka and aboriginal), and foreign powers (especially the United States and Japan).” (p. 153)

Duan highlighted how the influences on Taiwanese children's literature intertwined with three major forces: the Chinese mainland culture, indigenous culture and foreign power. The population that came from mainland China with the Central Government in 1949, after losing the mainland to the Communists, brought with them their mainland culture integrating it with the indigenous culture (Taiwanese, aboriginal, and Hakka). In addition to the mainland and indigenous cultures, Taiwanese picture books were also significantly influenced by foreign powers. In particular the powers initially came from America and Japan, and were followed by Europe and Australia (Hong 2004). That period of time was an unsettled one in Taiwan, economic poverty and restrictions of

imprint technology meant that children's literature in Taiwan developed slowly and marginally at the beginning. It was not until the 1970s, when children's literature development began to mature, that parents started to acknowledge the importance of other essentials for children, e.g. picture books, which parents could by then afford. Meanwhile, greater imprints and book binding techniques allowed publishing companies to incorporate intricate images in books and to design variable forms of children's books. Improved imprint techniques led to more illustrations emerging in children's books. Consequently, they enhanced the development of picture books in Taiwan, so much so that parents purchased picture books not only for children, but also for their own personal admiration.

The evolution of children's books in Taiwan has been categorised into phases. There are a number of time periods suggested by researchers. According to Lai (2002), the development of children's books in Taiwan could be divided into three phases: conceiving (1945-1973), germination (1974-1987) and growing up (1988-2001). However, different researchers have various definitions for each time period. For example, Duan (1997) identified five phases: stagnation (1945-1963), sprouting (1964-1970), growth (1971-1979), blooming (1980-1990) and intertwining (since 1990). Generally speaking, their views are not crucially different, essentially reflecting a slow and gradual development towards the internationalisation of children's book publishing in Taiwan. In the following examination of the factors that have shaped current picture books in Taiwan, I will consider these definitions of time periods to chronologically describe government promotion, the role of private enterprises, the internationalisation process

and the accomplishment of illustrators.

1.2.1 The Government: from *The Primary School Student Pictorial Semi-monthly* to *The Zhonghua Children's Books Series*

Following Taiwan's separation from Mainland China, the Central Government sought to establish its hegemony and entrench its ruling status after losing the mainland to Communists. The government therefore intervened strongly in the development of children's literature, adopting an advocacy role on behalf of the Mandarin Chinese language (Duan 1997). In March 1951, the Taiwan Education Department sponsored *The Primary School Student Semi-monthly* (小學生) and in 1953 *The Primary School Student Pictorial Semi-monthly* (小學生畫刊), to promote Mandarin Chinese and literacy simultaneously. Overcoming limitations of former imprint techniques, *The Primary School Student Pictorial Semi-monthly* was a colourful journal which used offset printing techniques, presenting both pictures and text. It challenged the traditional presentation of Taiwanese children's books, where images seemed more important than text, and enabled parents to gradually accept a greater use of pictures rather than only plain text. It declared the dawn of the 'Pictorial Era' in children's books.



Figure 1.5 *The Primary School Student Pictorial Semi-monthly*, vol. 308, published in 1965

After *The Primary School Student Pictorial Semi-monthly* had been published for eleven years, the Editorial Task Force for children's books was set up in 1964 by the Bureau of Education with funding from UNESCO. Experts from the United States improved techniques in the typesetting, formatting, printing, illustrating, and writing of children's books. In the same year, the Editorial Task Force started editing the *Zhonghua Children's Books Series* (中華兒童叢書) and published the first book, *I Want a Rooster* (Figure 1.6) and other picture books title.



Figure 1.6 *I Want a Rooster* (1965), illustrated by Quozong Zhao

Junyen Tsao who created his first children's books, *The Little Red Taxi* (1966), for *The Zhonghua Children's Books Series*, and later became the art editor for the book series, described the situation in Taiwan at that time:

“The field of art was dominated by fine artists, a substantial number practiced as applied designers but just a handful of illustrators. Therefore, seeking to work as an illustrator was not straightforward. Usually it was through personal contact or by being introduced via other connections in the related industry, e.g. advertising company.”
(Lai 2002, p. 34, in translation)

In response to a need for more practitioners to illustrate images, the Editorial Task Force started searching for artists. Junyen Tsao, Quozong Zhao, Dejin Xi, Mingjin Zheng and Yinan Hong were all from a fine art background, but they created illustrations for *The Zhonghua Children's Books Series*, because the books required a considerable number of illustrations. They were the pioneers in developing Taiwanese picture books in the early

days and introducing exquisite pictorial images in contemporary picture books. For instance, Junyen Tsao and Mingjin Zheng published a number of books and articles to introduce picture books whilst working as illustrators. Meanwhile, they also educated relevant or interested parties (librarians, primary and secondary school teachers and children's book sellers) to understand how a picture works and interacts with text. Because of them, the seeds of picture books were sown and accelerated the future publication of picture books.

However, a change of government in 2000 ultimately sowed the seeds of change for children's book publishing. The newly elected government adopted a different approach to literacy by reducing the subsidies for children's book publication and its practice. *The Zhonghua Children's Books Series* publication was finally stopped in 2002; altogether more than 900 children's books had been issued in the near 40-year period. Initially, the book series had been founded in literature, science and health, and later the additional subjects of art and society were also included. They were brilliantly illustrated children's books of abundant content including Taiwanese culture and society. These books allowed the opportunity for talented illustrators and authors to exhibit their expertise. For these reasons, it was seen as a disappointment to end *The Zhonghua Children's Books Series* publication, as Qiu expressed:

"Although *The Zhonghua Children's Books Series* became history due to the change of government policy, we believe that its significance in the development of Taiwanese children's literature will continue to influence our children and never to fade out in our memory." (2003, p.

16, in translation)

From *The Primary School Student Semi-monthly* to *The Series of Chinese Children's Books*, which were both funded by the government, the official influence strongly dominated children's literature. This altered the nature of illustrations in children's books, encouraging many private enterprises to follow the government's lead into the children's book publishing industry; consequently many exquisitely-drawn picture books were produced. On the other hand, the government virtually withdrew its involvement and handed it over to the private publishing companies instead. The government believed Chinese Mandarin had been established as the official language in Taiwan and therefore did not see any further need to continue its advocacy role.

1.2.2 Private Enterprises: Establishing Children's Picture Book Awards

Although Taiwan became increasingly isolated diplomatically after the 1970s, the economy boomed and there was a strong demand for children's literature. The official forces that had shaped children's literature were now gradually superseded by large private enterprises. During the 1980s, there was a rapid increase in percentage of working mothers, day-care centres and kindergartens. In any double-income family, culture spending became a stable expenditure. Previously, in 1968, nine-year compulsory education had been mandated: six years of primary school and three years of junior high school. Throughout this nine-year compulsory education, junior high school and senior high school students were obliged to sit for public examinations in order to qualify for

higher education entry. Therefore these students had limited time for leisure reading and only the pre-schoolers were exempted from the pressure of examinations. Due to the aforementioned situations, pre-schoolers became the target of publishers along with considerable investments directed at the children's book industry.

The private companies adopted a different way of approaching the government. Their common practice was to set up literary prizes for children's literature, to attract authors and illustrators, and publish the works of the winners and runners-up. Simultaneously they provided activities with seminars, published exquisite picture books in sets and held book fairs to promote the range of titles available, which stimulated a torrent of children's books. Fundamentally, the children's book awards were of the utmost importance. The Hong Jianquan Children's Literature Award (洪建全兒童文學創作獎), Hsin-Yi Children's Literature Award (信誼幼兒文學獎), Mandarin Daily News Children's Literature Mu-Di Award (國語日報兒童文學牧笛獎) and Chen Quozheng Children's Literature Award (陳國政兒童文學獎), all had a significant influence on encouraging practitioners to dedicate their professional energies to creating picture books.

In April 1974, the Hong Jianquan Group began publishing children's books and funding prizes for children's literature. The setting up of the first children's literature award helped to cultivate talents and accelerate the children's book publishing industry in Taiwan. As the Hong Jianquan Children's Literature Award was funded by private enterprise, more private enterprises were stimulated to join the children's literature industry. For the eighteenth Hong Jianquan Children's Literature Award, its

administration was transferred to the Society of Children's Literature of China, under which the same award is still being presented today. Historically, the Hong Jianquan Children's Literature Award was the longest running children's literature award in Taiwan; hence it encouraged many followers to establish the other children's literature awards.

One of the most prominent private enterprises was the Hsin-Yi Education Foundation which aimed to fund the work of early childhood education in Taiwan. The Foundation established Early Childhood Education in 1977 and later held the renowned Hsin-Yi Children's Literature Award in 1988. Again, winners were awarded notable prizes and provided with opportunities to have their artwork published. As a result, it encouraged the participation of many new talents. The award included two categories - illustration and text - and was awarded annually. Winning the prize for illustration was significant, especially for illustrators who were dedicated to the children's book industry already and for students with relevant backgrounds who intended to work in the field of illustration. By offering a considerable amount of prize money, the fourteenth Hsin-Yi Children's Literature Award attracted 128 creations competing for the illustration prize. In contrast, the Hong Jianquan Children's Literature Awards had only a mere 28 pieces of artwork participating in the same year. The Hsin-Yi Children's Literature Award attracted a comparatively higher quantity of creations than other similar awards because of the prize money (Lai 2002).

Meanwhile, the Hsin-Yi Education Foundation has been running a course of Creativity in

Children's Picture Books since 1989 which was closely associated with their literature award. Their aim is to enable native people to be acquainted with the process of creating picture books and cultivate knowledge for illustrations. The courses were conducted by distinguished Taiwanese and international illustrators and were an important opportunity for local illustrators to be stimulated and inspired. The significance of the Hsin-Yi Education Foundation lies in their impact on early childhood education. It has already had a profound influence on Taiwanese picture books, promoting Taiwanese culture through its publications of many excellent picture books during recent years (Figure 1.7). Largely, the published books presenting Taiwanese culture have challenged the roles of other major private enterprises that have focused on importing and translating books from abroad.



Figure 1.7 *Red cakes* (1991), illustrated by Junyen Tsao, published by Hsin-Yi Foundation Press

During the promotion by the Hsin-Yi Education Foundation, the Chen Quozheng Children's Literature Award was established in 1993, by the Formosan Magazines Press

Inc., in memory of the founder, Mr. Quo Zheng Chen. But it did not last for long and was stopped after the ninth award in 2002. In addition to that, the Mandarin Daily News set up the biennial Mu-Di Award starting from 1995, when the prize-winning books would be published. The aim of the award was to encourage Taiwanese children's literature, to recognise books which provide an excellent presentation of a nation's life style and attitude (Lee 2003, p. 9). With the advertising power from the Mandarin Daily News there was little difficulty in attracting a large target audience to the books, whereas previously noteworthy prizes were presented to attract illustrators. The Mu-Di Children's Literature Award was similar to the Hsin-Yi Children's Literature Award in the way that they both offer an attractive sum for the picture book prize and publish the award-winning books.

Since a trend towards internationalisation of children's books in the 1990s, the majority of children's books were translated or imported from foreign countries, with the remaining small quantity of products created by Taiwanese authors and illustrators. Therefore the Taiwanese children's book awards stimulated the children's book market as well as encouraging local illustrators to present their talents. The award-winning books were able to engage with Taiwanese children and more importantly, they are related to both Chinese and Taiwanese cultures, thus enhancing cultural understanding. Although Taiwan seemed isolated by international society, her economic prosperity allowed Taiwanese publishers to develop and co-produce with foreign publishers. The suggestion of growing numbers of co-editions in Taiwan can be found in the description of the Bologna Children's Book Fair by Clark (1996) when he depicted the situation of the book

fair, and highlighted how Taiwan has become one of the growing markets for co-production of books.

“In 1994 it was reported that Western Europe was no longer the rich source of partners for co-production, and the countries of Eastern Europe, Taiwan and South Korea had become the ‘growth market’.”
(p. 475)

1.2.3 Internationalisation: Importing and Translating Foreign Picture Books and Publishing Picture Books in Sets

With the lifting of martial law in Taiwan in 1987, Taiwan became increasingly tolerant of political dissent, and with the removal of the restrictions on newspaper licensing, the media had considerably more freedom of speech. As a result, the media began to expand their enterprises. During this expansion, the publishing industry began to thrive as well; many publishers focused on the children’s book market and enthusiastically bought foreign copyrights from abroad. The numerous famous books fairs such as the Frankfurt Book Fair, the Bologna Children’s Book Fair and the Biennale of Illustrations Bratislava (BIB) became the major sources of foreign copyrights for local publishers who were introduced to European picture books. Thus Japan and America were no longer dominant in the Taiwanese market as Europe had become the preferred choice (Duan 1997).

Meanwhile many local publishers either bought copyrights or formed joint ventures with

publishers from abroad, introducing foreign masterpieces for children. According to Shuqiong Zhang, 70% of the Taiwanese children's book market is either directly imported from foreign publishers, or translated to Chinese and then printed in Taiwanese with copyright permission from the overseas publisher.⁷ The remaining 30% is based on Taiwanese productions. A number of significant publishers emerged during that period. Some of the more important ones will be reviewed in the following section.

The Mandarin Daily News has been publishing *International Children's Literature Masterpieces* since 1965. They are the earliest systematically translated children's books of American and European origin presenting various cultures. Before that, the materials for Taiwanese children's books were mostly adapted from Japan and indeed influenced by Japanese culture. These masterpieces ended in 1996, with the total of 12 volumes, each made up of ten books, and amongst the 120 books published several won the Caldecott Award (Lai 2002). These masterpieces influenced those working for the children's book industry in strengthening the concept of creating a picture book that incorporated drawing skills from other cultures. At the time, one of the sales strategies was the promotion of book sets, these could be sold faster than an individual book. This led to the need for uniformity of size and book cover for a set of books; thus the format of foreign children's books was changed to an identical shape and size. As a result, the presentation altered the original aesthetic of the artwork, distorting its visual appearance and altering the quality of the original picture books.

⁷ Personal communication on 21 October 2004

In the early 1980s, the Han-Shang Publisher bought copyrights of picture books from Japan, America, Britain and other countries, and published the *Hanseng Selections of the World's Best Children's Picture Storybooks*. It contained 105 books which were similar in size to the original picture books, expressing as authentic a visual effect as the books before translation, and having an impressive translation that accurately conveyed the original content (Hong 2004). Another publisher, the Yuan-Liou Publishing Company, released the *Chinese Folktales Picture Books* in Chinese-English bilingual versions in 1992, which consisted of 30 versions, involving outstanding Chinese illustrators from around the world. Selections of symbolic folktales from various ethnic groups in China were integrated into these beautifully illustrated picture books, which addressed children's interest in Chinese folktales in particular. With its high quality illustrations, it unexpectedly attracted an international audience.

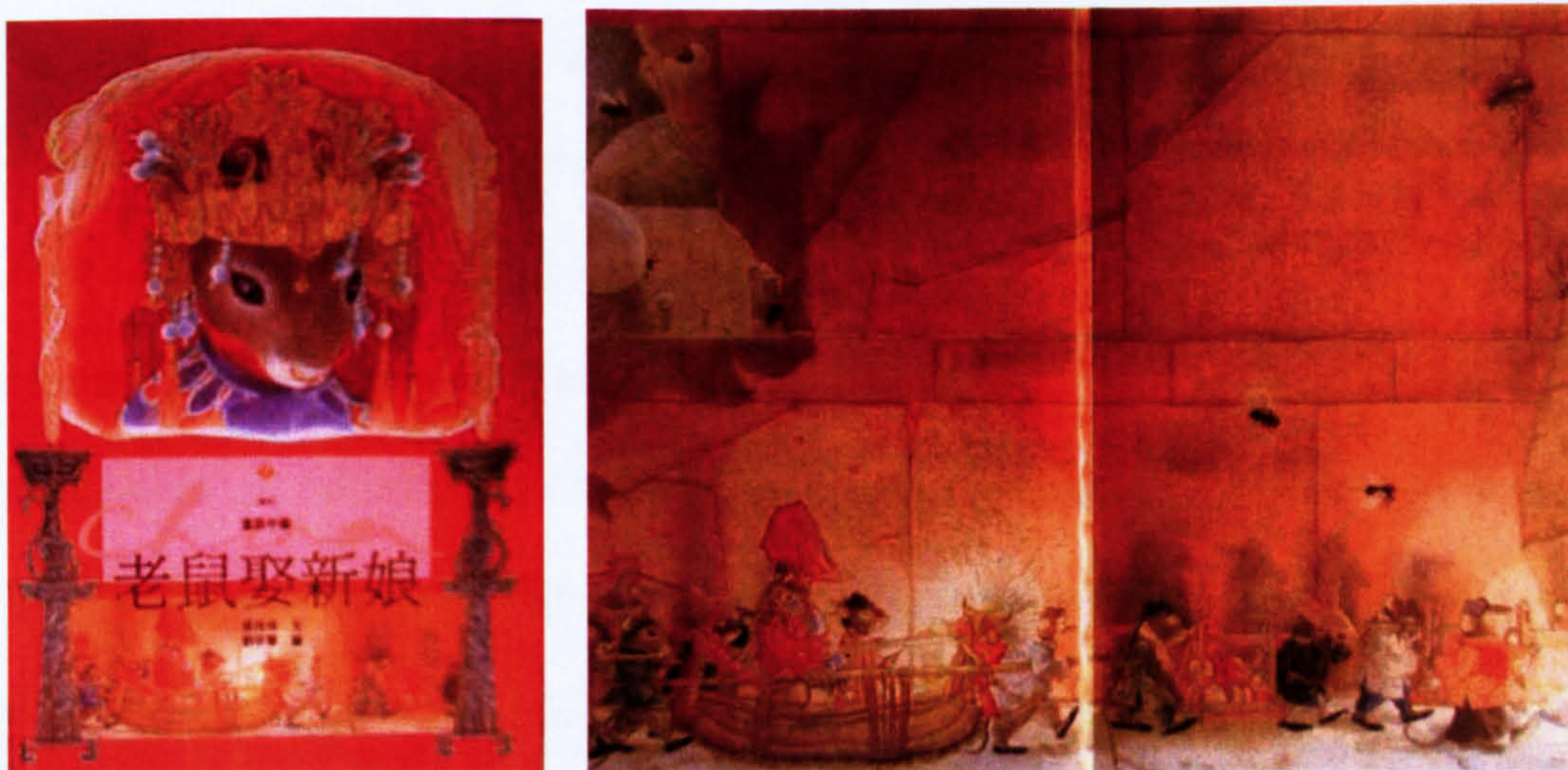


Figure 1.8 *Marriage of the Mouse* (1992), illustrated by Lesley Liu, which won the 5th Premi International Catalonia D'illustracio in Barcelona, published by Yuan-Liou Publishing Company

In 1993, the Grimm Press was established by Mr. Guangcai Hao, another adventurous publisher, leading the way in internationalising picture books in Taiwan with collaborations between writers and artists throughout the world. *The Modern Fairy Tales* was the first masterpiece that sold its copyright abroad whilst still being edited. The Grimm Press published picture books written in Chinese and illustrated by artists from around the world. Therefore it promoted masterpieces from foreign children's books and also internationalises the work of Taiwanese illustrators. There seems to be a trend to intertwine local and international talents in children's books; picture books became joint ventures in which the boundaries separating nations disappeared, and various cultures appeared to cross-fertilise.

The general trend in publishing was to have children's books published individually or in sets. However some publishers preferred to sell in sets normally sold through direct sales. In this way, sets of books are not found in bookstores; instead buyers contact the publishers personally or via sales personnel for information regarding purchases. The trained sales person has become an indirect factor in publicising Taiwanese picture books. Direct sales and selling in sets have contributed to the emergence of a trading pattern for picture books. As described by Mingjin Zheng, the acting editor of the *Hanseng Selections of the World's Best Children's Picture Storybook*, regarding the local picture books sales at that time:

“...an estimated 2000 copies of picture books were sold each year, which was well below par cost effective wise. In order to achieve the

minimal sales target of 5000 copies, Hanseng deserted the traditional publishing and sales approach... let direct salesperson deal with the sales." (Lai 2002, p. 73, in translation)

As mentioned previously, the Taiwanese publishers especially favoured publishing sets of translated picture books of award-winning books, such award-winning served as a guide when choosing a 'good' book, because the prize winning books equated with high quality. However, the infatuation with the awarded books is not as intense as before; readers now select their books based on variety of reasons, which may stem from the influence of television's characters, which are loved by children, or the genre of an illustrator's work.

1.2.4 The Illustrators: Working in a Contemporary Context

Today's children inhabit a world in which imagery bombards them from all directions: TV, 2D/ 3D animation, films and Internet. This contemporary 'visual bombardment' influences children throughout the world, as well as those in Taiwan, with a variety of visual experiences through new technologies. Illustrators were faced with new technological challenges when trying to adapt to the mainstream children's book market. Moreover, the influence of globalisation on the existing small publishing market in Taiwan resulted in the association of several outstanding illustrators with foreign publishers. For example, Chinlun Lee who works with Walker Books, published *The Very Kind Rich Lady and Her One Hundred Dogs* (2001) and *Good Dog, Paw* (2004); her brilliant and humane illustrations caught the attention of international audiences. As

Lee has studied in Britain, the aesthetics of her illustrations were indeed influenced by Western culture. Lee has admitted her admiration of John Burningham's work and how she has emulated his achievement.⁸ Lee's work is enhanced by the tactile quality of crayon and modulated gouache, and appears as if spontaneously drawn, her images are often given an impression of modern feel. Another illustrator who won the Hsin-Yi Children's Literature Award three times, Chihyuan Chen whose picture books were also sold well in America, namely *On My Way to Buy Eggs* (2003) and *Guji Guji* (2004), was published by Kane/Miller Book Publishers. The books received delightful reports, as commended by the School Library Journal on *On My Way to Buy Eggs*: "This universal tribute to the power of a child's imagination will strike a familiar chord with dreamers everywhere" (Loch-Wouters 2003, p.115). Chen created the book with pencil, drawn partly on brown paper which records a sentimental memory of childhood before convenience stores prevailed in Taiwan, where small shops always gave brown paper bags. His collage invites readers to return to the time of the 1980s presenting a sense of affectionate nostalgia. The other two illustrators who have also had an opportunity to create images for foreign publishers were Chih sien Chen and Lesley Liu; both created books for the Houghton Mifflin Company, *Square Beak* (1993) and *On a White Pebble Hill* (1994) by Chen, and *Cat and Cat-Face* (1996) by Liu. Although these illustrators are not as famous as prominent British illustrators such as Lauren Child in the current market, at least they advanced into the international market and have been recognised for their distinguished achievements.

⁸ Personal communication on 16 August 2005

In Taiwan, the most influential illustrator in recent years was Fubin Liao, who has used the pseudonym Jimmy (幾米); his books have been translated into several languages including English, French, German and Japanese. Liao's work has been very popular in East Asia though he did not create many picture books for children. His illustrations are created especially for adult readers and have indeed touched readers' hearts with depiction of the loneliness of city life. Liao's *A Chance of Sunshine* (2000) portrayed people, who lived in the same city but never had a chance to know each other; the skilful lines and washes gave images a relaxing power though the main characters lived alone (Figure 1.9). Meanwhile, much of his work has been translated to films and stage dramas. As Liao created images that portray the sentiment of city life, he created a so-called 'Jimmy phenomenon', to illustrate the reality of life in which people wear masks to show well-being, but subconsciously they are still waiting to be understood.

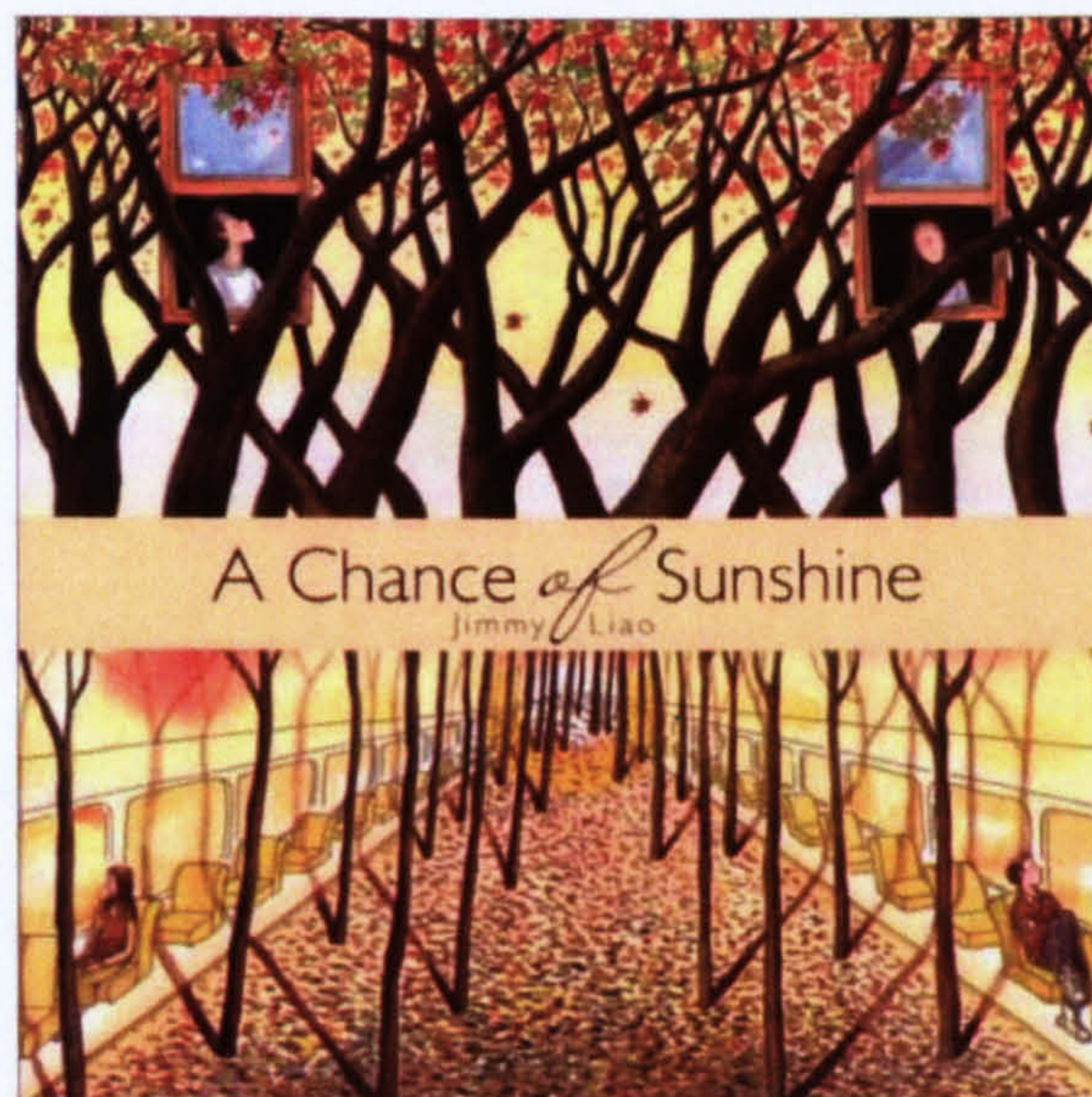


Figure 1.9 *A Chance of Sunshine* (2002), created by Fubin Liao

Since Liao has succeeded in creating picture books for adults, there were many followers who joined in this type of picture book, expanding picture books not only for children but also for adults. The other two illustrators who created adult picture books are Zhenxing Zhan and Hongfa Quo, both producing books with different approaches. Zhan often used the pseudonym Cola King (可樂王) and created picture books with a sense of childhood nostalgia. His work is based amongst the 1960s and 1970s toys, inviting readers to return to the time of their youth and evoke memories. Quo's pseudonym is Mr. Red (紅膠囊), whose work often conveyed the sentiment of passing love. He used the computer to manipulate his drawings, superimposing text to produce a fluency of visual composition. Liao, Zhen and Quo, have often been referred to as three tycoons of adult picture books in Taiwan. Although the primary work of these illustrators was not for children, they have influenced the general public to appreciate an integration of both text and image in a harmonious whole and have created a new type of picture book (Lai 2005).

Few illustrators had an opportunity to publish children's books internationally; the majority of Taiwanese illustrators only publish their books locally unless books have sold well, then there may be the possibility of publication in other countries. Most of those illustrators did not solely create picture books; they have to also illustrate in various media for survival in a relatively small market. For example the illustrators, Kaixin Yan and Chuanzong Lin, still work mainly in Taiwan, they have created illustrations for children's-related publications as their style of drawing is suitable for children's

illustrations. Since the availability of computers for creating illustrations, they have adopted digital methods and now their major illustrations are produced only on a computer. Taiwan is a small market but some illustrators have not withdrawn from children's publishing, and have worked to cultivate Taiwanese picture books. Luqian Chen is an example of someone who launched programmes exploiting creativity and creating handmade picture books to encourage the enthusiasts who like picture books. Subsequently, Chen's students have started several clubs to exchange information and organise exhibitions jointly since 1996, which has significantly extended the picture book territory in Taiwan.

This new generation of illustrators has encouraged and led the way towards internationalisation. However, very few could have a foothold in the global market. There are insufficient job opportunities locally for the Taiwanese illustrators, as they need to compete against prominent international illustrators. Because of this, some Taiwanese publishers would prefer to cut costs through joint ventures with Mainland Chinese publishers and employ illustrators in China. Liu (2003) noted that many scholars and researchers have concerns that children in Taiwan have been reading stories and books that do not reflect their own life experiences and that translated children's books could monopolise the market. Since the 1990s, the development of picture books has reached impressive heights, becoming the most popular presence in children's literature. However, the publishing environment remains imbalanced. The main threat for local illustrators has been imported or translated children's books, which have limited their livelihood. An illustrator could only survive such harsh reality by improving their

capability and creativity. To carry on presenting the essence of Taiwanese images to audiences, creating work of superior quality remains crucial.

1.3 Summary

The development of children's book illustration in both Britain and Taiwan has been linked with many factors. Although before the 1960s children's book publishing was largely related to printing technologies, economic prosperity and political situations also played crucial roles in the evolution of children's books. In Britain, an inexpensive and painterly quality of illustration was developed in the late 1950s, which led to the emergence of the type of picture books seen today. With the rapid and inexpensive reproduction of imagery during the 1970s and 1980s, picture books were overproduced which increased the need for overseas sales. Now co-editions with the publishers of other countries are seen as an essential publishing practice for most British publishers. Nevertheless, the establishment of children's book prizes was another practical means of promoting children's reading. There were two main types of initiators in Britain, private enterprises and book organisations. Private enterprises associated with children's book prizes primarily hoped to gain publicity and positive feedback. The organisations who established the prizes, on the other hand, aimed to introduce excellent picture books and encourage reading. Due to well developed drawing skills and concepts of picture books, many prominent British illustrators became very popular in other countries. This may

imply that different national and cultural characteristics will become merged into a uniform 'style', reflecting no particular tradition.

The development of children's books in Taiwan has been closely intertwined with its social-political-economic evolution. Initially, it served immediate political and social needs and the advocacy of Mandarin Chinese. In the 1970s and 1980s, many Taiwanese private enterprises began to introduce and translate masterpieces from abroad which had stimulated the creative ability of Taiwanese practitioners. Meanwhile, some of those private enterprises also established children's book awards to cultivate Taiwanese illustrators and authors who worked for picture books. These gradually nurtured Taiwanese illustrators. Since the 1990s, the expansion of children's book publishing and the consideration of the marketing strategies have led to a closer-working relationship between Taiwanese and overseas' publishers; the publishers either bought the copyright or formed joint ventures with foreign publishers. This created a dual role for children's book illustrators in Taiwan. They not only create picture books, but also needed to explore the option of other illustration commissions in order to survive in the market. Moreover, cheaper joint ventures from mainland China have also duplicated the working opportunity of Taiwanese illustrators, who were already working in a small market.

The competitive market of children's publishing has led British and Taiwanese publishers to largely co-produce children's books with overseas publishers, and it is very important for today's illustrators to sell books internationally. Whilst illustrators try to create picture books, the methods of creating an illustration are essential. Particularly with the arrival of

digital technology, practitioners who worked for the publishing industry have found the need for adopting digital usage. Although some illustrators do not feel the necessity to use the computer, they were still influenced by digital means. In the following chapter, I will specifically focus on the arrival of digital technology and discuss the issues which have arisen during the transition to a digital era in both countries and look at the phenomena of how digital technology influenced the appearance of children's book illustration.

Chapter 2 Illustration in the Digital Age

In the previous chapter, I outlined the developments in children's book publishing in the United Kingdom and Taiwan, with particular focus on a discussion of children's book publishing in a contemporary context and on their illustrators. In this chapter, I will consider two issues: the transition from traditional to digital illustration, and children's book illustrations within the digital realm. The first part of the discussion will look particularly at the controversies of digital usage in creating illustration and the issues in conjunction with its visual performance since 1990. The second part of the discussion will examine some existing digital imagery in the children's book market, to establish a basic understanding of the context of digital illustration—which has been specifically used in children's book publishing.

Since digital methods have been utilised in the creation of illustration, the computer has challenged the stereotype of an artist bent over a drawing table with a brush or pen in hand. It has also forced a re-evaluation of the nature of illustration and its impact. Speed, accuracy and endless creative options are just a few of the advantages in using a computer to illustrate. The ability to make corrections or changes to a drawing without having to start over again has been a time-saver for artists, but, on the other hand, there have also been implications over its visual quality, which was not always genuinely appreciated by practitioners and critics. This phenomenon especially appeared in the 1990s when the computer began to be widely employed in illustration practice. There

followed a flood of poor digital illustration – poor because many of the new users were not skilled at drawing and because they were seduced by superficially attractive functions in the software, temporarily forgetting their artistic integrity. This phenomenon is a concern amongst many visual practitioners, but there is only limited research on illustration in particular. Instead there was considerable discussion on visual communication; the digital impact has largely been debated and centralised in the field of graphic design rather than on illustration.

“... there has been little sense in the U.S. (and none whatsoever in Britain) that illustration has been in any way central to debates in the 1990s about visual communication. There are many regular writers on graphic design issues, representing a gallery of viewpoints, but in Britain not a single journalist or critic is strongly identified with contemporary illustration.” (Poynor 1999, p. 16)

In Britain there are a few critics and practitioners, who have reflected on and debated the issues of the transition from traditional to digital use during the 1990s, and these include Rick Poynor and Robert Mason. Poynor founded *Eye*, the international review of graphic communication, and edited it from 1990 to 1997. He has written several articles to emphasise the crisis of digital influence on illustration (1998b; 1999). Mason has been subject leader in illustration at Norwich School of Art and Design since 1990, and wrote *A Digital Dolly*, a subjective survey of British illustration in the 1990s. The publications of both Poynor and Mason can be considered key sources in conjunction with other sources gathered from *AOI journal*, *Eye*, *Design Week* and *Graphis* that consider the issue of transition. Notwithstanding, there have been limited publications debating the digital

influence on illustration in Britain, whereas in Taiwan, the situation has been even worse. There have been virtually no publications that particularly examine the digital impact on the presentation of illustrations. This may be related to the context of Taiwanese society which has emphasised the importance of computer knowledge. This emphasis on the computer has also appeared in academic research, which has considered the positive aspects of digital influence rather than reflecting on its visual appearance. Therefore in the section about the transition to the digital era in Taiwan, I will largely discuss the transition from a subjective viewpoint, referring to the field of art and design and consider the impact of the use of computers in the education sector. These details of transition from a traditional to digital era in both countries will be further examined in Section 2.1.

Despite the controversies over the influence of digital technology on illustration practice and on the illustrators' drawing ability, design practice has largely been influenced by digital means because most publishers now work in an entirely digital environment. The influence can be seen through more sophisticated design, in which both illustration and text are integrated. With the use of the computer, customised personal designs can be created, which almost act as a trademark for illustrators. This could create a characteristic typeface for illustration, harmonising both illustration and typeface. Nevertheless the general public may be unaware of differences between the pre-digital and digital eras of children's book design. From a designer's viewpoint, the supply of visual effects which have currently been employed, such as the transformation of one image into another, could only be laboriously achieved without the use of the computer. In Section 2.2.1,

therefore, I will discuss phenomena surrounding computer use for publication, particularly in children's book illustration and design. Additionally, in the digital era, children's book illustration has been challenged by the variation in children's preferences. This has influenced publishers to produce books which children would like to purchase, in order to profit from this competitive market. Digital illustration has been produced in the market, but what is the nature of its appearance? In Section 2.2.2, I will focus on the visual appearances of digital illustration published in the children's book market.

2.1 Transition to the Digital Era

The use of computers for illustration began in the early 1980s with the advent of workstations. Three of the first workstations to be used by illustrators were the Genographics slide-making system, the Via Video system, and the IMAGES system from the New York Institute of Technology (Wands 2000). All of these workstations were able to create digital images and types. New software was evolving and a new visual style was emerging because of it. Early computer imagery limited by the software and technology available at the time displayed bold colours, geometric shapes and a jagged appearance due to its low resolution, which when compared with today's digital images appears primitive. Although the computer imagery at the time suffered from a variety of limitations, these systems were ground breaking for computer illustration and offered a preview of how computers could develop in the context of publishing in the future.

The first IBM PC was introduced in 1981, mainly for business applications, databases and spreadsheets. The most important innovation to affect illustrators was the introduction of the Macintosh computer and the LaserWriter printer in the mid-1980s. Apple Computer's introduction of the first-generation Macintosh computer in 1984 was based on technology pioneered on its Lisa computer. It displayed bitmapped graphics; its screen presented information as dots called pixels with 72 dots per inch (dpi) on a black-and-white screen. After one year, Apple Computer introduced its first laser printer, whose 300 dpi output enabled its typographic proofs to more closely duplicate typesetting. Since then, the use of 'desktop publishing' has become common and very important for the design community. Desktop publishing saved a significant amount of time and money in preparing pages for printing (Meggs 1998). However, the first Macintosh desktop design system was crude; illustrators could only work in black and white, then scan their drawings into the computer, and manipulate them. Digital effects could be added to traditional work and changes could be made quickly. Simple functions such as copy, cut, past, invert, print enlarge or reduce, were commonly used at the time.

Early computers were slow and computer software had many limitations. As the processing speed gradually increased, computers changed from black and white or limited colours to full photographic colour. QuarkXpress, Adobe Photoshop and Illustrator are examples of the different kinds of software that have been in use in editorial practice since 1990. QuarkXpress was an application for creating and editing complex page layouts and was primarily used to produce publications such as magazines,

newspapers, catalogues, and similar printed materials. It incorporated improved type control, thus setting the standard for typographers and layout artists to create complex page layouts in a manageable way. In 1990, the software company Adobe launched Photoshop for editing and manipulating images and soon became a market leader. Photoshop was a bitmap⁹ type of software; its most powerful capability was that of layers, which allowed images to be rearranged under and over each other, for placement in the illustration. The other popular programme also produced by Adobe was Illustrator; it was a vector-based¹⁰ type software which provided sophisticated tracing and text manipulation capabilities as well as colour separations, using less memory for storing images than other bitmapped software. Adobe Illustrator allowed artists to create illustrations that could be scaled to any size. During the 1990s, there was a dedicated effort to make a wide range of typefaces available to illustrators through the computer. As many computer programmes became available for producing publications in a digital environment, the revolution had begun; publishers began to convert towards to digital means and manual methods of production for many publications began to be replaced by digital processes.

⁹ Bitmap or raster graphics was a data file or structure representing a generally rectangular grid of pixels, or points of colour, on a computer monitor, paper, or other display device. The colour of each pixel was individually defined; images in the RGB colour space, for instance, often consisted of coloured pixels defined by three bytes—one byte each for red, green and blue. Less colourful images required less information per pixel; an image with only black and white pixels required only a single bit for each pixel. Bitmap were distinguished from vector graphics in that vector graphics represented an image through the use of geometric objects such as curves and polygons.

¹⁰ Vector graphics or geometric modelling was the use of geometrical primitives such as points, lines, curves, and polygons to represent images in computer graphics. It was used in contrast to the term bitmap graphics, which was the representation of images as a collection of pixels.

Before the introduction of computers, the design and preparation of printed material was a completely photographic, and analogue process. To produce a printed publication relied on the skills and expertise of a wide range of specialists (designers, typographers, page layout/paste up artists, proof readers, transparency/plate makers and printers). Since the introduction of computers, the process today for producing a book has become completely digital. Now the process can be completed by a single person from the design right through to the plate making/printing stage of the procedure; the only person indispensable (to date) to the process, besides the designer, is the printer. Thus, as the computer was incorporated in editorial practice, considerable-resistance and concerns about the arrival of the new technology arose through the redundancies of the specialists who had been previously essential in print production. In the meantime, not only these specialists, who had been threatened by possibly losing their work, but illustrators were also aware that the use of digital methods could encourage art designers to bypass illustrators and create images by themselves. This could have a potentially serious impact on the number of illustrative commissions. Furthermore, with the advent of image editing and manipulating software, illustrations could be produced instantly through the software without the need for any drawing skills. As a result, there were a vast number of illustrations using Adobe Photoshop's 'filter' function, with an instant filter made imagery. Digital images could also be created by professional illustrators, yet there was a problem if a new user was not familiar with the graphic software. The digital illustrations created in the early 1990s seem less than satisfying to many critics who worked in the field of art and design at the time. The arrival of digital technology raised many concerns

in the world of publishing and led to much controversy during the early period of transition.

2.1.1 The Controversy in British Illustration

The appearance of digital illustration in the 1990s was disappointing for many practitioners. Poynor has noted (1998a) that many illustrators' work has suffered from digital technology which appeared to mainly rely on the function of graphic applications. The work created by the illustrators themselves was seen as less exciting. Poynor urged practitioners to reflect on their working practices and claimed that British illustration was in a state of crisis, "In Britain, where I write, it would not be an exaggeration to say that illustration is now in a state of crisis. It long ago ceased to embody the look of the moment" (1999, p.16). Poynor believed that digital technology did not contribute to the creation of exciting work in Britain, but contributed to the creation of superficial work, which imposed a dependency on technique at the cost of imagination. He has also compared British illustrations with those created in America, where American practitioners had demonstrated an experimental intention along side the use of digital means in their creations. David Carson for example and the art direction of Ray Gun, in the early to mid-1990s, showed how new approaches to typography and image-making could be fused in powerful editorial collage. But Poynor argued that "this kind of experimentation with the commissioned image had no British equivalent... the most inventive British new wavers preferred to construct their own imagery, usually based on photography" (1999, p.16).

Poynor was not the only one who believed that in the 1990s, the use of digital technology created illustrations presented a much lower level of creative intent in Britain. Mason echoed Poynor's argument in *A Digital Dolly* (2000), and extensively examined the environment of the British publishing industry and criticised its illustration. The book is partly an historical overview, looking back at the late seventies and trying to trace links between then and the present, and partly a critique of attitudes and practices which may have undercut illustrators' status in the 1990s. In the book, Mason criticised images created by digital methods, which created a degree of illustration awareness in the technical process and in particular repetitive similarities which were attributable to the software rather than its creator. An artist might neglect their creative processes preferring to concentrate their efforts instead on the capability of the computer, e.g. whether Photoshop could achieve certain special effects or not. Mason further described the 'orthodoxy of digital appearance' that had been created, especially in the early phase of the use of computers because of the limitations of graphic applications and because of many computer users' claims they were illustrators as well. The orthodoxy of digital appearance was likely to be "one of layers, filters, blurs, saturated colours and super-smooth imagery," it was not truly of the creator's own making but was more of "a geeky obsession with what the software can do", which "limits and dehumanises the genre's aesthetic" (Mason 2000, p. 16).

Furthermore, over time as digital editing and manipulating were becoming the dominant methods in editorial practice, illustrators were increasingly aware of an uneasy

relationship between themselves and designers. The reasons have been noted by Steven Heller (the art director of the *New York Times Book Review* and also co-chair of the MFA design program at the School of Visual Arts), about why designers and illustrators have had an uneasy relationship (Heller 2000a, 2000b). This is because such media, specially the Photoshop extension, has had a profound influence on the way that art directors and designers view illustration. Heller declared that Photoshop has been far more threatening than any previous technological development in the history of illustration. The reasons are: 1) Some graphic designers have used their own collage and montage to bypass illustrators and Photoshop has allowed this to become a common practice; 2) Designers have easily changed components of artwork as digital technology has eased the process without further reference to the illustrators; 3) With more efficient digital platforms and websites, stock art has become an accessible and inexpensive alternative to commissioning original illustration; 4) Certain stock houses have hired novice artists as an alternative to a higher-priced more experienced illustrators, paying the novice a lower fee to render generic concepts in distinctive styles of images; 5) If finished art could be easily bought from online catalogues, then young art directors and designers would not be able to develop intimate relationships with illustrators; finally, 6) With a trend toward fewer designers commissioning fewer illustrators, the bias against original illustration has been inevitably reinforced. These reasons could highlight why many illustrators at the time suffered from a substantial fall in commissions, and even anxiously questioned: "Is this the end of illustration?" (Heller 2000a, 2000b) and "Has there been a worse time to be an illustrator?" (Rich 1999, p. 10) A meeting of American illustrators in Santa Fe in 1999 was a response to this crisis – devalued by stock art and marginalised by designers

with little interest in the craft illustration, 5000 concerned illustrators met to discuss the future of their profession (Heller 2000a).

However, from a more positive and historical perspective, some practitioners optimistically believed that there would always be the need for illustration of all kinds to act as counterpoints to type and space. They believed the applications for illustration may change – the printed page may become the screen, but this did not mean the variety of subject matter would shrink. The computer brought about changes but it was not a primary threat, the changes only led to an increase in the creation of illustration and not to any demise or marginalisation. The optimists said “If you can scan something in, then I see no reason why this shift to the screen need render illustration obsolete” (Rees 2000, p. 6). Meanwhile, Freitas (2000), in his reflections on the future of illustration, described from historical evidence the photomechanical methods of reproduction in the 1890s. The introduction of such methods widened horizons for illustration beyond all expectations. Although, a certain type of illustration suffered and was removed from the field of illustrative practice, such as the reportage illustration of the newspapers and magazines, but illustration at large was to benefit from the developments in reproductive methods. Freitas believed that a similar development would happen again, “What is happening now, in general, has happened before and historically change has brought with it opportunities that have widened the horizon for illustration. I see no reason why The Future shouldn’t see this happen again” (2000).

The debates between optimistic and pessimistic perspectives on the future of illustration

continued. However, to solve the problems of an unstable or probably a shrinking market leading to a pessimistic future for illustration, the art education circle offered a pragmatic solution. It was one that enabled illustrators to develop graphic design skills because there was more work and more career opportunities available in graphic design. Illustrators could design Web sites, books, become art directors, in addition to opportunities just for illustration. Yet, Heller has criticised the solution. "From my experience, there is only one other career choice for most illustrators and that is figuration in a fine art context... No one would presume to tell fine artists that instead of making pictures they should become plumbers or lawyers, sell insurance – or do graphic design" (Heller and Arisman 2004, p. 30); Heller believes that there are fundamental differences between illustrators and designers. He has suggested a solution to enmeshing the discipline of graphic design at certain stages of the creative process. With the computer, designers needed to be able to draw, whilst illustrators needed to be literate with type. On a conceptual level, illustrators and designers could share visual ideas, methods, and strategies for conveying information and benefiting both sides in telling a visual story (Heller 2000a). There were various opinions on how to educate illustrators and designers. However, in the current climate there are many overlaps in both disciplines, illustrators have been taught how to create a book as a whole including the drawings and layout; graphic designers are also taught to use methods of collage and montage to manipulate the collected images as an image-maker. As most graduate students from illustration departments also know how to apply graphic software, many may not work for illustration, but for graphic design and advertising instead. This may be because illustration is primarily a freelance career, which means illustrators may not

be guaranteed financial security, in comparison with graphic design, although some designers are freelance, it is often a salaried position.

The arrival of digital methods utilised in editorial practice seems to have further amplified the uneasy relationship between illustrators and designers. This unease was partly caused by the development of graphic programmes such as Photoshop, which has contributed to a reduced need for commissioning original illustration and partly caused by the easy access of online images and stock art. Designers could largely use these images instead of developing a relationship with illustrators. Though online images and stock art were rarely used in children's book illustration, they have been largely used in other types of publication and advertising. The arguments of Poynor and Mason during the 1990s offer an insight into the practitioners' anxieties for the future of British illustration. Despite many criticisms, some practitioners still believed that the future of British illustration could be prosperous if there was a greater move from paper to screen. Now illustrators are learning both digital and traditional techniques, and most importantly superficial digital techniques are not applied; instead the computer is used as a creative tool, which maintains artistic integrity.

2.1.2 The Controversy in the Taiwanese Education Sector

Similar to British illustration, Taiwanese illustration has been considerably influenced by digital technological innovation but with less concern for artistic appearance. The reason largely lay in the Taiwanese belief that having 'digital technology is equal to economic

progress'. This can be seen in the development of the prosperous Hsinchu Science Park (新竹科學工業園區). In 1973, the Industrial Technology Research Institute (工業技術研究院) was established in Hsinchu, founded by the Ministry of Economic Affairs (經濟部). The park created an environment conducive to high-tech research and development, production, work and life to attract professionals and technology. Because of the park's prime location and the rapid growth of its companies and products, it has been named the "Silicon Valley of Taiwan". The park has cultivated high-tech industries and developed digital technology to ensure that it is one of the most important sources for Taiwan. Due to the success of the Hsinchu Science Park, other science parks have rapidly sprouted up in many cities around the island. As these parks have created working opportunities, the new digital technology is now considered essential for economic prosperity; promoting high-tech/digital technology is a primary policy for Taiwan's future.

A high-tech frenetic atmosphere has prevailed amongst Taiwanese society, although in some areas criticisms have emerged over such issues as the influence of digital technology on teenagers' behaviour and also their visual preferences. It seems, however, that none of the criticisms have addressed the visual appearance of digital illustration and have instead focused on the negative influence of the technology on the aesthetics of illustration. In particular, at the end of the 1980s, the design community began to enthusiastically invest in digital equipment, changing design processes from a manual page layout to entirely working in a digital environment. The movement of digitalising design processes was largely influenced by America and meant that through the use of

digital means; a design project could be carried out, starting with a design right through to its end result. This revolution in the design industry led to design-education programmes altering the direction of their graphic disciplines to echo the needs of the industry. Most disciplines of design and illustration are within design-education programmes in Taiwan; illustration has never been seen as an independent discipline as in Britain and it has always been embedded within design programmes; therefore illustration was considered part of design training. This has resulted in a pool of professional illustrators who often came from a fine art or a design background.

During the last two decades, many colleges were transformed into universities and many new universities established in Taiwan. The number of universities has increased from 28 in 1986, 50 in 1991 and later to 148 in 2001, an increase of more than five times that of 1986 (Lin 2007). The considerable number of new universities has also increased the market share of higher education. In the meantime there is a pattern of falling student numbers, due to a fall in the birth rate, this has presented Taiwan with the issue of how to attract students and this has become very important. Some universities have altered their programmes within existing departments or have established new departments which are extensively related to digital technology; this has proved a successful way of recruiting students. Similarly, art and design related departments have also amassed digital equipment and offered graphic design courses to attract students, valuing the latest equipment as being of the utmost importance. Paoteh Han a prominent Taiwanese art educator, reflects the importance of having digital equipment in schools. In his impression of European art education, Han noticed the different attitudes towards the

need for digital equipment in art institutions both in Taiwan and European countries. He highlighted that Taiwanese art education has excessively valued computer facilities as he said "In Taiwan, when visiting schools they always introduced their computer facilities and spaces but did not explain their education methods and achievements" (2000, p. 79).

Before the introduction of digital means for creating illustration, most art and design departments in universities would still value traditional drawing as a primary skill for art training. In the first and second year of university, students were generally trained in charcoal drawing to enhance their hand drawing skills. Although, the teaching method was problematic in that it mainly taught students how to replicate an object, it still offered training in traditional drawing on paper as a primary discipline. But, since 1990, many art schools and universities through their design-education programmes have instead taught students to use a computer as a major creative tool. It has resulted in an increase in students who are more capable at utilising computer programmes than drawing. Many teachers have emphasised the knowledge of computers and demonstrated those technical functions in the software, with little acknowledgement that a well-conceived ideas rendered by a skilled hand trained drawing is fundamental for creating a piece of high-quality illustration. One of the possible reasons for this approach is that those teachers may not have been fully trained or have had enough experience as illustrators and designers themselves, but primarily know how to employ graphic software. Therefore, through their teaching, they would be able to demonstrate how to use software such as Photoshop and Illustrator but may not be able to convey the essence of drawing. The educators have placed emphasis on computer training but have

neglected the traditional hand drawn techniques and the importance of aesthetics, which has resulted in a similarity of styles and has to a certain extent raised concerns about the aesthetics of the genre. Designers and illustrators being seen as simply users of the computer but not creators of a piece of artwork.

“Most artists were often restrained by digital technology... when they used the computer programmes, their creations would be restricted by the functions available in the programmes and this resulted in similar work. Losing the depth and aesthetic of work, simply emphasising the digital techniques...artists were seemingly not creators but users” (Chien 2004, p.162).

It is a phenomenon that has raised concerns in design education, a greater emphasis on improving skills in the use of digital equipment, and less attention on improving aesthetic sensibility. One survey by Lai has echoed how the design industry reflected the quality of the students' work since the education sector has largely supported computer techniques over hand drawn imagery. The survey used interviews of over a hundred practitioners who worked for the design industry, funded by National Science Council in 1999, and highlighted that graduate students commonly had been well-trained in and were knowledgeable about computer techniques. But the students' hand drawn skills in these practitioners' points of view were generally poor: “...generally their hand drawing skills have a poor performance and are comparatively not as good as before of those students that had not been trained to use the computer” (Lai 2002, p. 184).

In the context of design and illustration, education in Taiwan since the advent of digital

technology has been viewed both politically and socially as one of the most important sources of income for Taiwan's future, as a result many changes have happened in the education sector. The change in universities which have competitively established computer application programmes to adapt the environment of the design industry and further to attract students. Due to the establishment of a vast number of new universities and with the transformation of many colleges into universities in the last two decades, the universities are now in a crisis in terms of student recruitment. Thus, how those potential students value a university is essential during student recruitment, therefore establishing a computer related programme is a possible solution for universities. The other change is in drawing training; prior to computer usage, art and design departments in Taiwan still consider hand drawing to be fundamental and comparatively more important than in other design courses. After the arrival of digital technologies the education sector changed its emphasis to gravitate more towards the digital industry because of the increased working opportunities. Thus digital knowledge has been seen as instrumental in preparative skills for undergraduate students. This has resulted in a wealth of neophyte designers/illustrators who are experienced in advanced computer based illustration rather than in how to create illustration manually.

2.2 Children's Book Illustration in the Digital Realm

There is no doubt that digital technology has enhanced graphic design, resulting in more

sophisticated compositions and various visual effects within publications. Although as discussed above there are controversies over how the computer has caused a similarity of characteristics within illustration, its influential role in the issue of falling commissions for illustrators and its impact on students who seem less concerned with developing their hand drawing skills. Generally speaking, using digital means to create imagery is now a necessity for the design industry, the preference for digital or traditional illustrations all depends on marketing strategies. However, in the children's book industry, illustration by traditional media remains the preferred choice, particularly those illustrations which are to be used in picture books. But, there remain many exceptional illustrations which clearly demonstrate digital techniques, such as 3D illustration. Many more illustrations that might at first appear hand drawn, have in fact been created through the computer which has tried to simulate traditional media or hand drawn images and then integrated them into a digital process. These illustrations have enriched children's books with characteristics of imagery that may not have been seen before the advent of the computer.

2.2.1 Digital Phenomena

Since the 1990s digital technology has increasingly influenced our daily life in various ways such as email, the Internet, multimedia and television; young children have especially adapted to digital environments, accommodating digitally produced imagery. Digital imagery for them is not a new phenomenon; in other words, it is a typical type of image for them to enjoy, some of whom may particularly like these kinds of

'razzle-dazzle' images in a movie or television programme.

The influence of 3D animation on the imagery of picture books

When the first fully computer-animated feature film *Toy Story* was launched by Pixar in 1995, it revolutionised the animation industry in its use of digital techniques to create 3D animation. This kind of three dimensionality of the animation could not have been achieved using traditional hand drawn techniques. Although earlier animated films such as Disney's *Beauty and the Beast* (1991) and *The Lion King* (1994) had made use of computer animation in crafting three dimensional animated shots, they had still relied on traditional hand drawn techniques. But with *Toy Story*, Pixar formulated the technique of constructing characters as a series of digital models with limbs and facial expressions that could then be moved in any direction inside the computer environment. The result was animation wherein the animation camera could track and move through the computer-generated action three dimensionally, in almost exactly the same way that a tracking shot could do with a live film.

Although with such advances, this technique could now be used for creating 3D animation, the technique has its distinctive characteristics evidenced in the slightly too perfect geometric depth of atmosphere and the appearance of the surfaces. Nevertheless, these flat and plastic surfaces are well served in the creation of the faces of Woody and Buzz in Figure 2.1, as both are the features of plastic toys. Since the success of *Toy Story*, this kind of flat surface has influenced children's preference and many picture books since then have been created in this genre, with the 3D illustration possessing flat

surfaces and presenting a glossy impression.



Figure 2.1 *Toy Story* (1995) The first CGI feature animation created by Pixar, the book published by Golden Books

As a result of *Toy Story*, there are now many CGI (Computer-generated imagery) feature animations that have followed in its footsteps, not only on film but also for television animations. In order to maximise revenue, most of those animations are accompanied by the publication of tie in picture books and other related toys. These picture books are often released at the same time as the launch of the animations. Contrary to these are well-known picture books which have existed in the children's book market for a considerable time and are still appreciated by young audiences that have made the transition in the opposite direction. Within these well-known picture books the illustrations have been subsequently altered and recreated using computer-generated

tools. For example, the series of Miss Spider books were successfully presented as picture books and were then recreated for animated television programmes. The illustrations were initially created using oil paint, but the main characters and scenes are now generated through computer-generated processes, expressing a more glossy and flawless surface. In figure 2.2, the left image shows the book cover created by oil paint containing a hand drawn imitation 3D illustration; therefore when the artwork is adapted to echo the animation style, there would be no obvious differences. Compared to this, the book on the right has an image that originated from the animation itself, presenting comparatively perfect geometric depth.

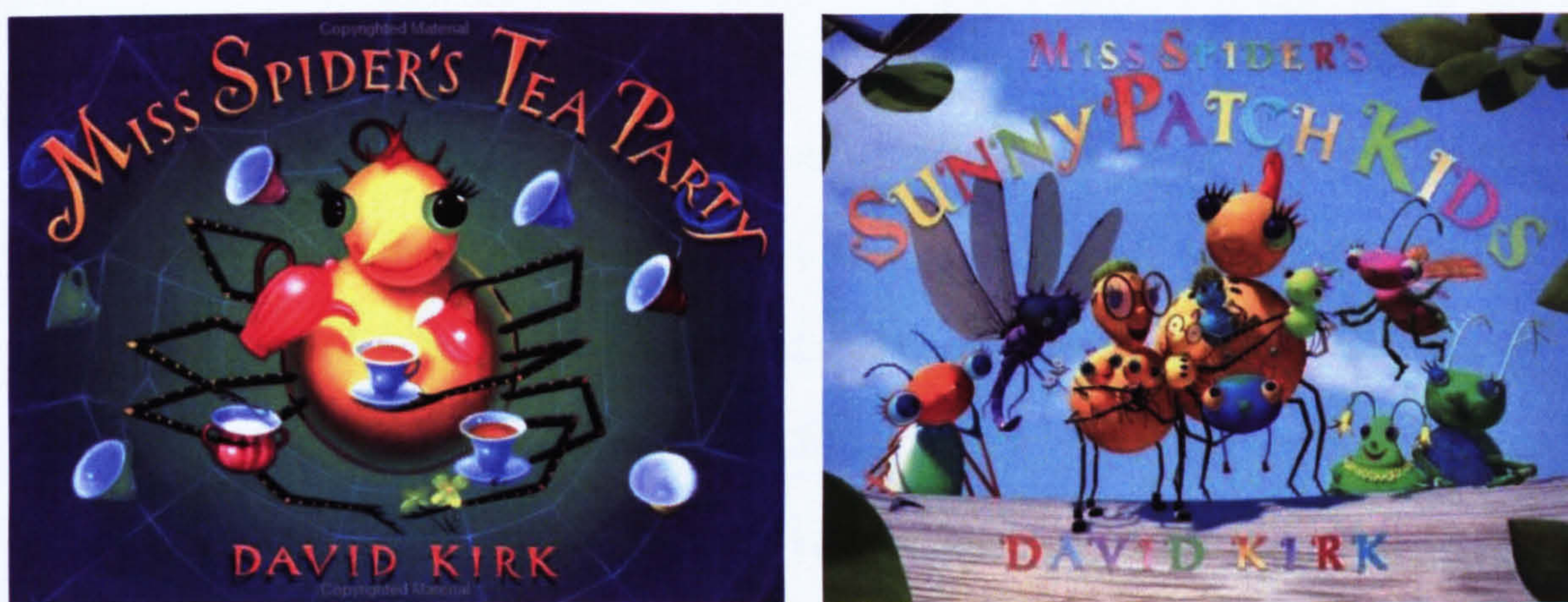


Figure 2.2 The series of Miss Spider; *Miss Spider's Tea Party* (1994) and *Miss Spider's Sunny Patch Kids* (2004), created by David Kirk

Animation to a certain extent has often been connected with picture book publishing, as the book is often one of its spin-offs. *Toy Story* created a digital phenomenon of 3D imagery with its dazzling and flawless surfaces. It has influenced children's book publishing which now produces more 3D illustration for young children and these

illustrations possess a particular characteristic, rarely seen before the digital era.

The variation of the use of the computer in children's books

One of the interesting phenomena in using digital methods for children's book publishing is the variety of use of the computer, accorded to different age groups of children. The variation seems to correspond to the children's ages, as their age increases, the images start to demonstrate more obvious traces of digital manipulation. In the instance of picture books created for young children (aged 3-7) these are often made by illustrators and presented as if rendered using traditional media. Although the images may not have all been created by traditional methods, they are perceived as if drawn by hand. On the other hand, the covers of children's fiction are often created by art directors, incorporating methods of digital manipulation, collaging a range of material and overlaying them with a variety of typefaces. There is a tendency when designing for younger children for fiction covers to be produced often using hand drawn illustrations. For example in the catalogue of Macmillan Children's Books for 2004, there is fiction for four age groups: 5-7, 7-9, 9-11 and 12+. In the younger age groups 5-7 and 7-9 illustrations were generally created by illustrators, the covers of these books were perceived as a hand drawn imagery, but the fiction for older age groups 9-11 and 12+ were mainly designed by art directors, utilising the methods of digital manipulation and collaged images. Typical examples can be seen in Figure 2.3, which shows fiction for the younger age group; the cover drawn by an illustrator, and for the older age group a cover entirely created by an art director, using digital methods.



Figure 2.3 *Ms Wiz Smells a Rat* (1998), fiction for age 5-7 illustrated by Tony Ross, and *The Transfer* (1998), fiction for age 9-11 created by an art designer

It can therefore be understood from examining the catalogue that although a fiction cover's design depends on the selling strategy, there is also the tendency that an increase in the children's age group is often coupled with a more obvious use of digital effects. This may relate to how children are influenced by surrounding digital media as they grow up, and how they have gradually accepted digitised imagery or even prefer images that appear to be computer-generated. Therefore, using digital effects for visual creation in children's books would not be necessarily be seen as an obstacle; in contrast these images might even be preferred by some children who have been watching and absorbing digital imagery every day through television and computer games.

Sophisticated graphic design in children's books

Since the widespread use of computers in editorial practice, the design for children's books has offered more sophisticated composition with various materials, and those images have been manipulated in a way which may have once been considered too difficult before the advent of the computer as a tool. Readers might not be aware of this subtle development, but the use of computers has significantly influenced children's book publications, resulting in the appearances of children's books becoming more detailed in their design, these have been manipulated with the aim to sell books in an increasingly competitive market. Designs for children's books have integrated such elements as text, photographs, textures and hand-rendered illustrations. As graphic programmes have facilitated the digital processes of collage and manipulation of images, the design of children's books has often become collage-based and layered, especially, those covers for children aged 9 and over.

In addition, having a wide range of typefaces available has also influenced the design of children's books; this is due to a sustained effort to make various typefaces available for visual design through the computer during the 1990s. Those typefaces have been largely integrated into illustrations and photographs as a whole, often resulting in a more dynamic design composition when compared to that produced before the use of digital methods. Figure 2.4 demonstrates the variety of typefaces that can be used in fiction cover designs, integrating with the pictures and drawings. Before the advent of the computer, the use of typefaces was generally constrained by the availability of styles. Production of these designs would not have employed digital methods; this is

demonstrated through their greater degree of flexibility within the composition and a stronger relationship between both text and image in their designs.



Figure 2.4 The example of a wide range of typefaces used in the covers of children's fiction for ages 7-9, in the *Macmillan Children's books stocklist 2004*, page 26

Since the personal computer has provided the opportunity to create custom typography with an increased potential for personality and expression, there appears to be interplay between the characteristics of typefaces on the cover of the picture books and their illustration. For example, typefaces can now use an illustrators' own handwriting, such as the typeface in Figure 2.5 created by illustrator Nick Sharratt. The text in the white cloud was designed by the publisher to be based on Sharratt's handwriting and created

26 bespoke letters. This kind of customised design has appeared in many picture books to present a design that can be integral with illustrators' individual design style. Overall, however in most picture books typefaces that are currently available in the market are still commonly used, without needing a customised personal typeface for individual illustrators. Nevertheless, with the use of the computer, the variety of typefaces for children's books has certainly been increased, including those that reflect the characteristics of the creators' styles.

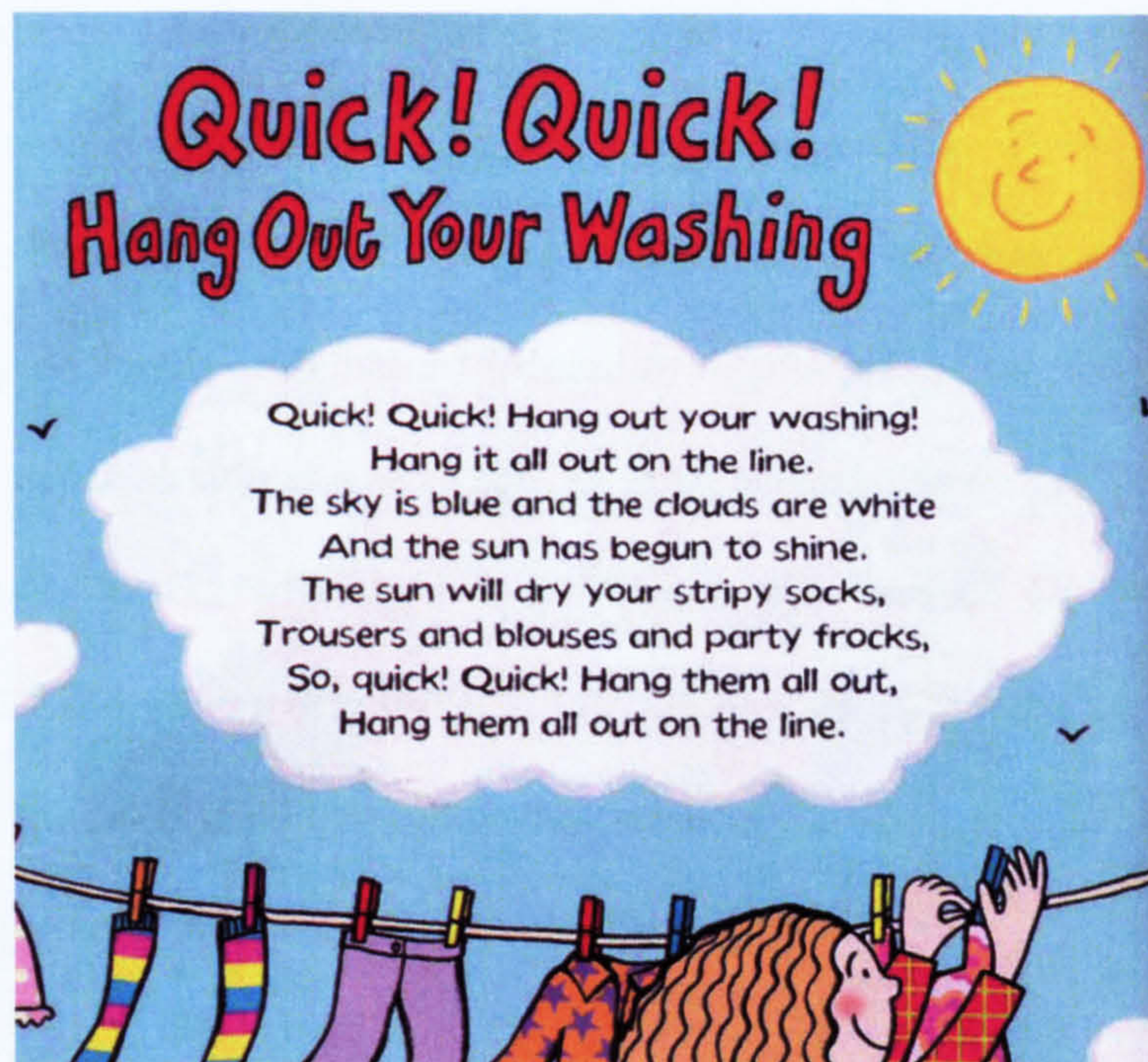


Figure 2.5 Example of a customised typeface for illustrator, Nick Sharratt

Blurring the lines between traditional and digital methods

Through the use of the computer, the issue of how to identify whether an image was

created through a traditional or a digital process has arisen. This is because most graphic programmes aim to imitate hand-drawn traditional media, even though some traditional techniques employed before the use of the computer no longer exist for producing books. For example, before the introduction of the computer, the design and preparation of printed material was a completely photographic process. This process is now digital, therefore when artists want to produce a certain quality in their books that would normally produced by a photographic process, they would now use the computer instead to create these qualities. For instance, the books in Figure 2.6 demonstrate how although digital processes have been used to produce the book, the end result looks the same as that traditionally achieved by a photographic process. These books are both created by Lane Smith. The book, *The Happy Hocky Family!* (1996), has used an established colour printing technique - original art printed from process-colour plates onto recycled oatmeal paper, which simulates a retro style of print making. However, by the time Smith began the sequel *The Happy Hocky Family Moves to the Country!* (2003) the technique changed, "all the old-timers who did that [old style] technique were gone, so I did the entire book on the Mac. If you compare the two books side by side, you'd never know they weren't done with the same technique" (Gibson 2005).

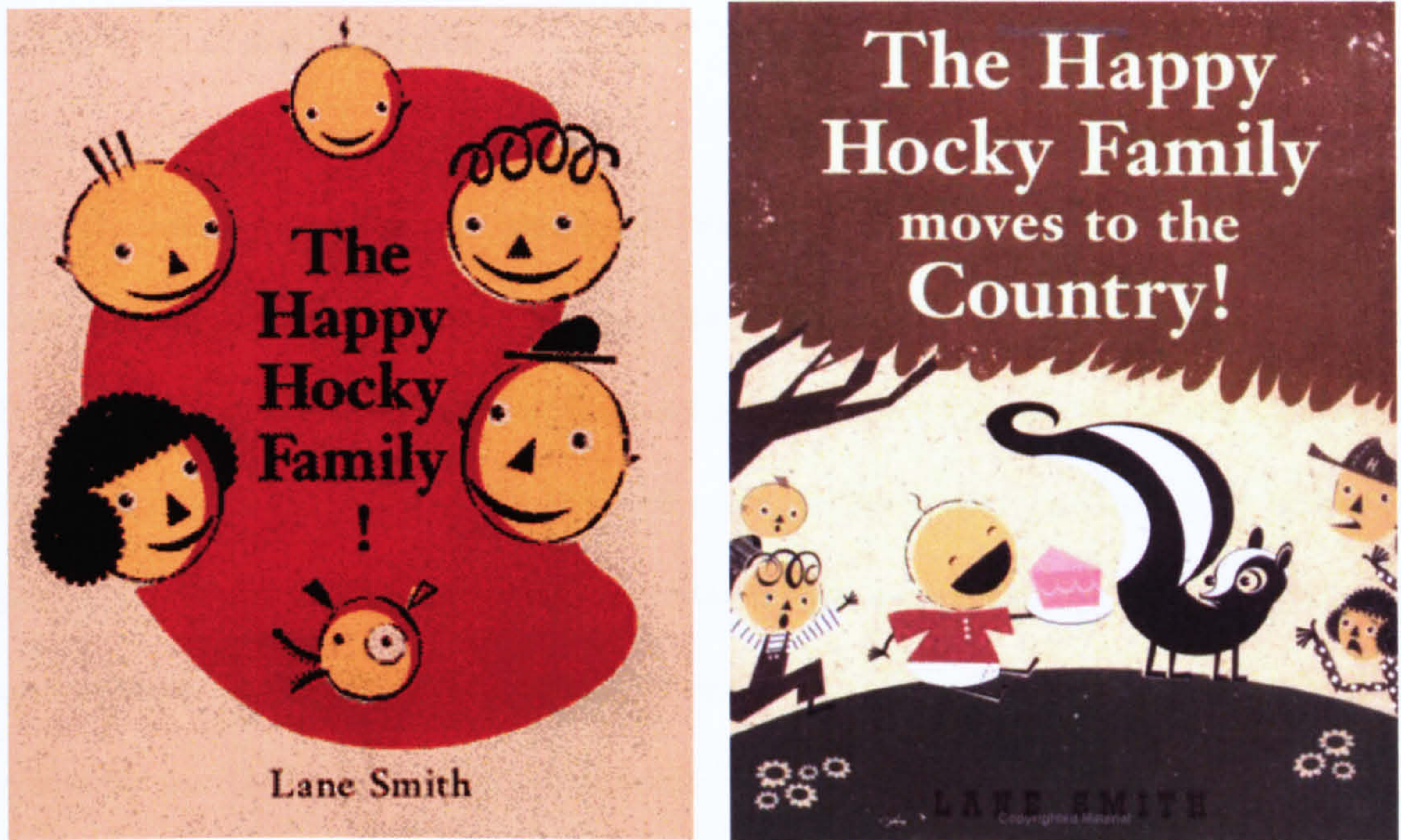


Figure 2.6 The books of *The Happy Hocky Family!* (1996) and *The Happy Hocky Family Moves to the Country!* (2003) were produced by photographic and digital processes respectively, created by Lane Smith

The Happy Hocky Family Moves to the Country! was entirely created on the computer and retains the same quality as *The Happy Hocky family!*, which was produced using traditional methods, this shows that there is little difference in the visual characteristics of both books. Blurring the lines between traditional and digital methods is one of the phenomena in children's book illustration, as many illustrators, especially picture book illustrators, still prefer to be recognised through their use of traditional methods. This preference is described by Smith "so when they said I used a silkscreen or wood block technique, I thought that was a nice compliment" (Gibson 2005).

2.2.2 Visual Appearance

Digital imagery commonly simulates traditional media, through its geometric perspectives, saturated colours, use of ready-made pictures, and use of collage. The result is an abundance of manipulated images and an impressive spatial atmosphere (Sun 1993). But what exactly is the visual characteristic of digital illustration particularly in children's books. The following discussion will examine certain examples which demonstrate this new aesthetic genre and retro-graphic style in the visual appearance of digital illustration currently seen in the children's book market.

New tools for new aesthetics

Since the arrival of digital technology, new genres of digital images have been produced using new digital equipment for the entertainment of young children. Children's preferences are now developed and influenced by surrounding digital technologies. Some well-established children's programmes therefore have had to adapt to today's visual preferences to create a style of illustration with a 'contemporary' feel. *Toy Story* has introduced a style that presents clear and flawless 3D imagery and this is now accepted by young audiences. Therefore, those well-established children's programmes such as Thomas the Tank Engine have had to realign their appearance in order to create a more contemporary visual 'look'. For example, Figure 2.7 shows the books from the Thomas series which have been produced through both traditional and digital methods, the image on the left is from the series of Thomas books produced in 1994. At that time, the train on the original cover was drawn using traditional media, the colours now appear

slightly dull and the typefaces are aligned, displaying a still and less dynamic composition. On the other hand, the image on the right shows saturated colours and a more animated composition; the perception of the image of Thomas on the right is that it appears to have been influenced by 3D animation, depicting a glossy and flawless appearance. This kind of image has given Thomas and his friends a dazzlingly modern 'feel'.

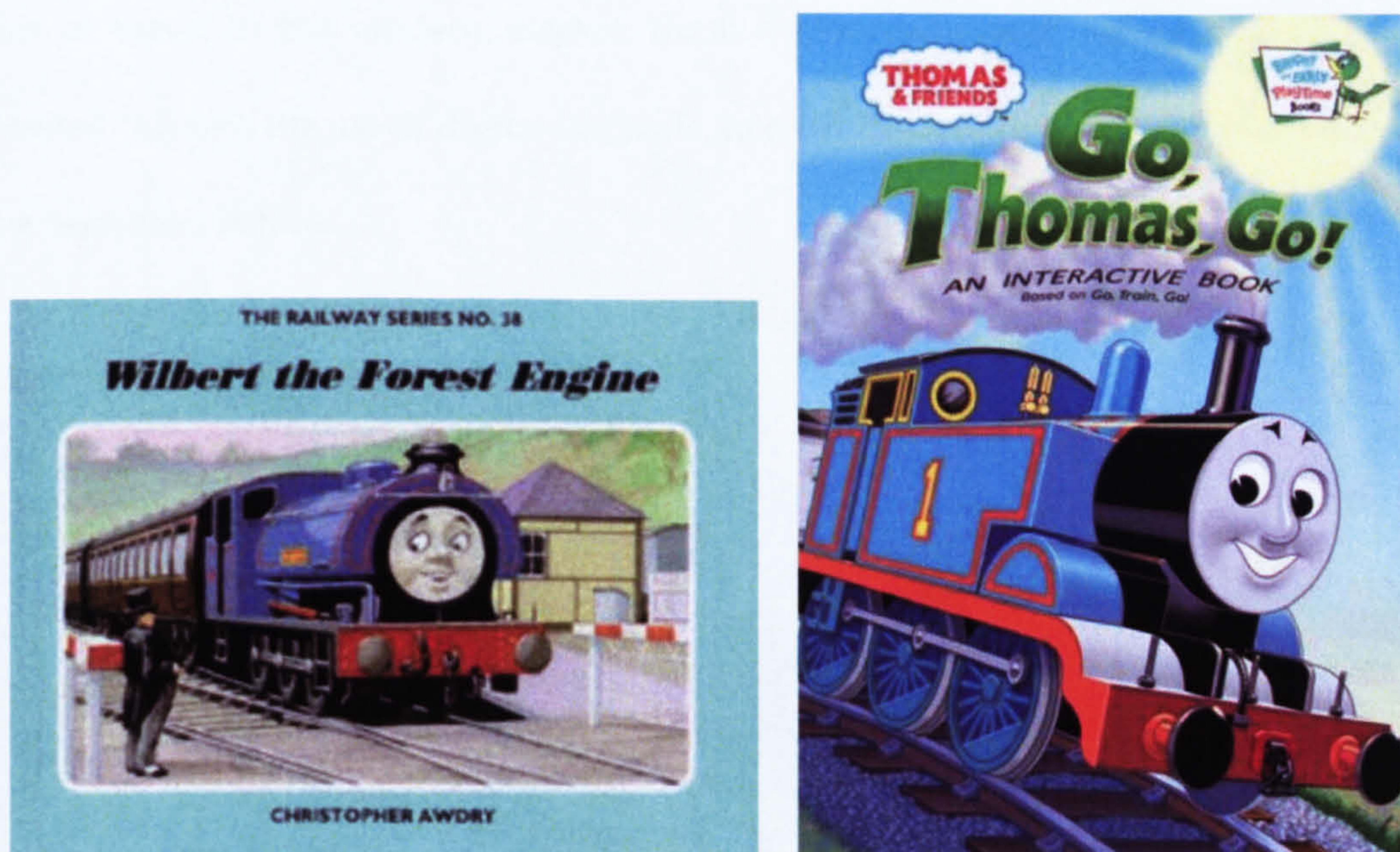


Figure 2.7 *Wilbert the Forest Engine* (1994) and *Thomas and Friends: Go, Thomas Go!* (2007), using traditional and digital methods respectively

Similarly, since the advent of the computer, the recreation of some famous classic stories such as the fairy tales by Hans Christian Andersen have taken place. The stories have often been redrawn by different artists. Through using different tools, illustrations can be rendered and perceived differently. The examples in Figure 2.8 show how the character,

Snow-White, was created by two different illustrators. The book *Andersen: the Illustrated Fairy Tales of Hans Christian Andersen* (2004) was created using digital methods which give Snow-White distinctive features compared to the image of *Snow-White and the Seven Dwarfs* (1987). The Snow-White depicted in white fur expresses a comparatively cold and arrogant personality, portraying a new type of Snow-White, which contrasts with the softer impression of Snow-White seen in the image from 1987. Snow-White portrayed by digital methods provides the chance to rediscover a familiar fairy tale from a new visual point of view. In the modern market, these traditional stories are continually being recreated through the use of digital methods, to create a visual experience which may not have been seen before.

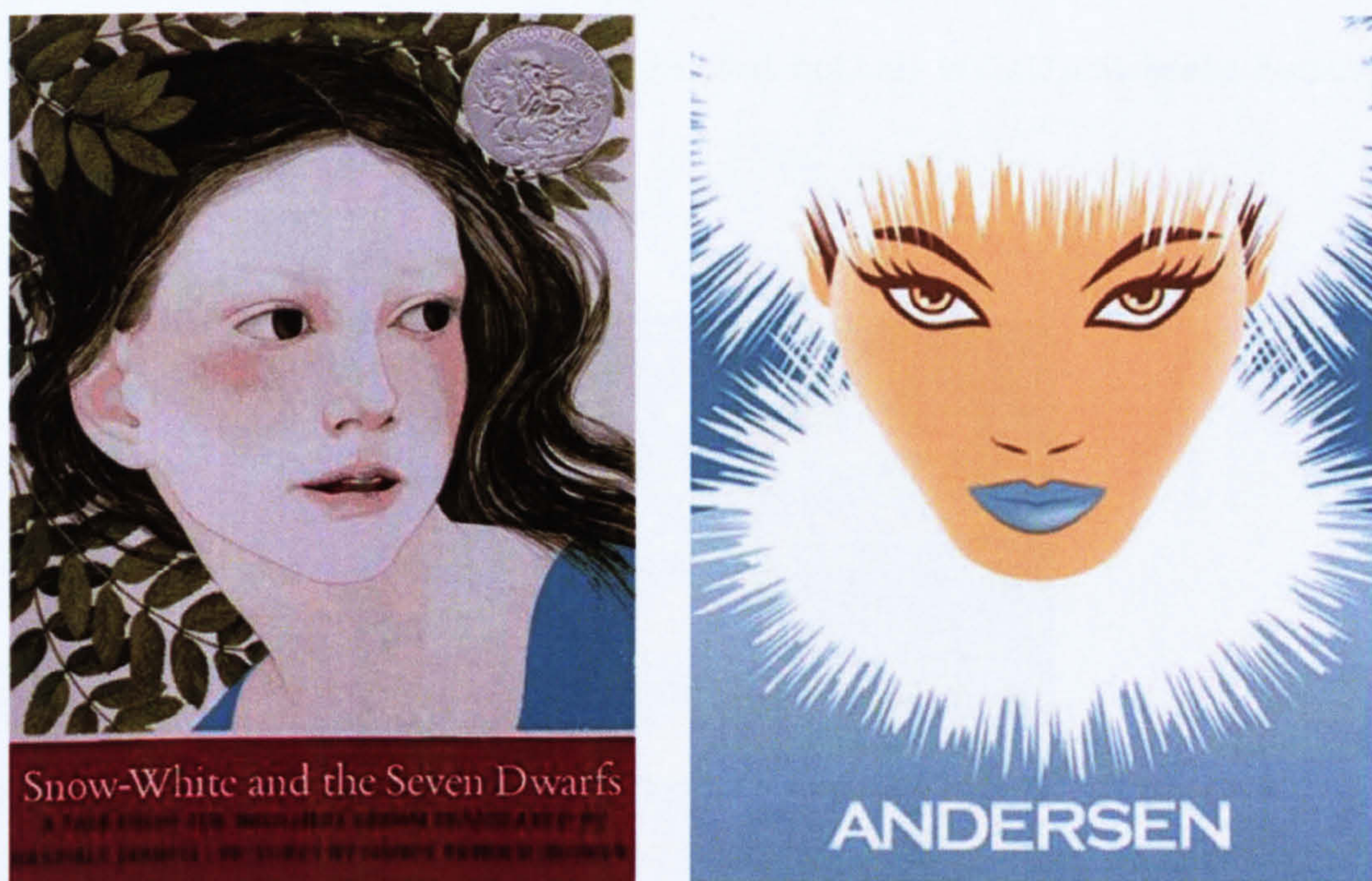


Figure 2.8 *Snow-White and the Seven Dwarfs* (1987) illustrated by Nancy Ekholm Burkert and *Andersen: the Illustrated Fairy Tales of Hans Christian Andersen* (2004) the cover illustrated by Moritz Adler

New tools for old fashions

In contrast to using digital tools to create new aesthetics in illustrations, some illustrators have used the computer to create a retro style imagery in the children's book market. Through well-developed graphic programmes, artists can use the computer to simulate various types of old fashioned imagery. The graphic programmes Photoshop and Illustrator have served well to create the type of imagery normally produced using printmaking in periods such as the 1950s and 1960s. These illustrations often show simplicity of composition and characters designed with simple shapes and plain colours. For instance, Figure 2.9 was created by Bob Staake, using digital methods to convey a retro-style graphic; his eclectic sense of graphic illustration and regularly composed elements presents a simplistic aesthetic for the cover of his picture book. This retro-graphic style has commonly been practised, not only in children's books, but also in other publications.

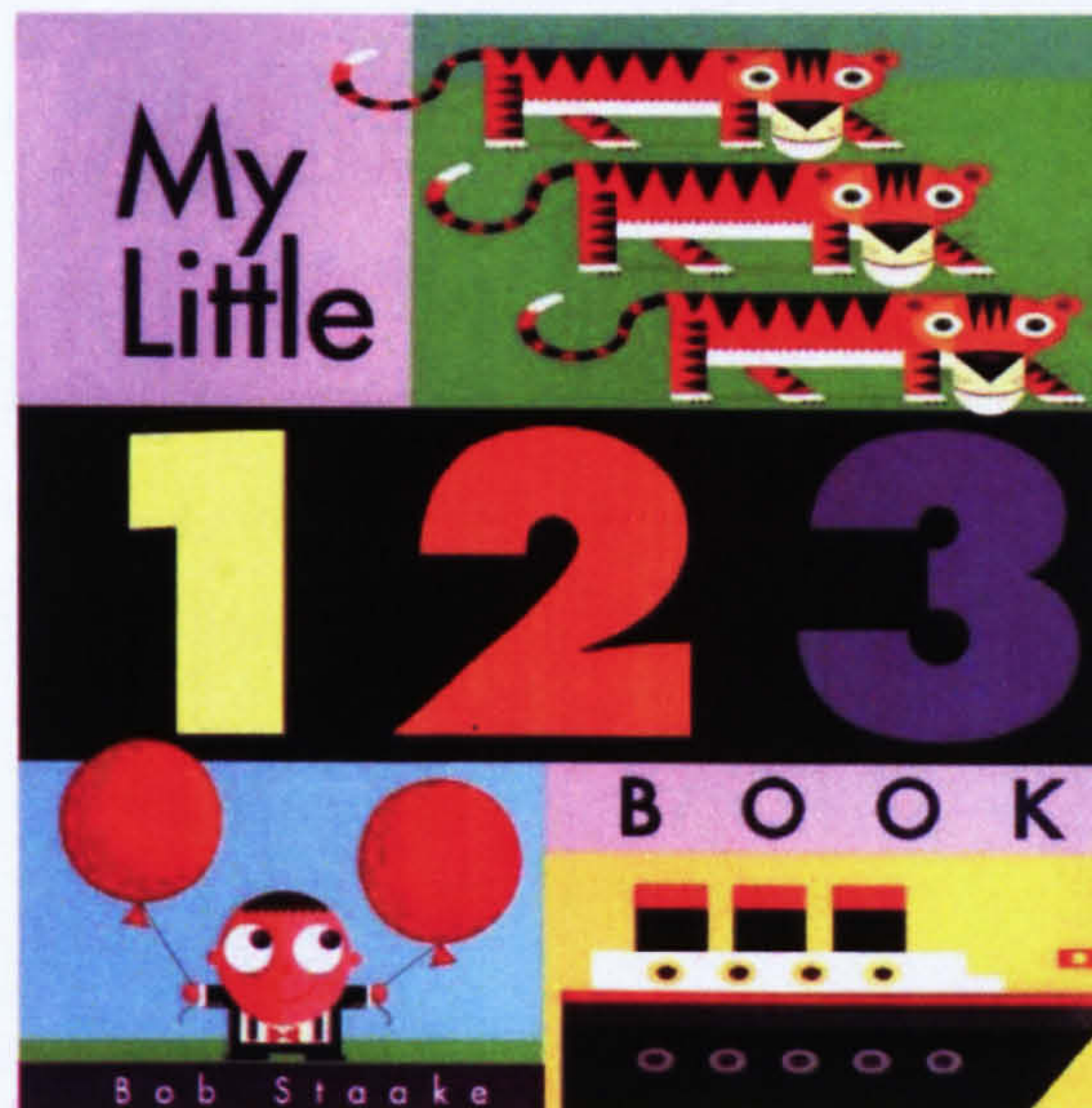


Figure 2.9 *My Little 123 Book* by Bob Staake (1998)

Other examples also show the use of digital means to simulate earlier graphic styles, as seen in a retro-drawing of an illustration in a Chinese style; this kind of digital illustration has been very popular in Taiwan. The popularity of retro-drawing was initially created by Shufen Chen in the early 1990s; her drawings have been used for fiction book covers and were readily appreciated by younger audiences. As the success of this type of digital illustration in the market has increased, it has been further used for advertising and packaging commodities. The images of Taiwanese retro-drawings often portray beautiful and angelic female figures, posing as if for a photograph, with a sense of a romance in the atmosphere. In Figure 2.10, *Enchanting Eyes* (2000) shows how Chen used digital means to create an old style illustration similar to the type of Chinese calendar poster (月份牌海報), which began in Shanghai and was very popular in the early twentieth century. The poster often showed a well-dressed female figure with a charming face, dressing the fashionable style at the time as seen in the sample on the left of Figure 2.10.



Figure 2.10 The images of a popular Chinese calendar poster in the early twentieth centuries and a retro-drawing *Enchanting Eyes* (2000) by Shufen Chen

Chen's success spawned a plethora of followers who created versions of female figures for the covers of romantic fiction. Meanwhile, as the popularity of retro drawing in Taiwan increased, many 'cram' schools provided the training for computer drawing, which taught students the skills of digital drawing in a short time. These created digital illustrations with a superficial beauty but which had lost the most important features for creating an illustration, conceptual ideas and artistic integrity. Figure 2.11 shows a webpage advertisement to recruit students. This style of digital illustration has been described as "work with a refreshing taste but which is less nutritious and cannot be considered as 'gourmet'" (Lai 2005, p. 132).



Figure 2.11 Partial webpage of the advertising for recruiting students who like to learn the comic style of digital illustration (accessed 17 march 2008)

Although, this genre of retro-drawing has become a phenomenon on many covers of Taiwanese fiction for younger audiences, it also represents a digital form of illustration that has become well received in Chinese society. The new digital tools have created a contemporary aesthetic as well as reviving those earlier images and allowing them to be perceived differently. The computer has certainly provided the visual experiences which could not have been imagined before illustration moved into the digital realm.

2.3 Summary

Since the arrival of digital technology, the design and illustration communities in both

Britain and Taiwan have experienced considerable challenges, as digital means has offered easy access to creating visual work. This has widened the scope for almost anyone to become an instant illustrator or designer often ignoring the quality of the creation. Additionally, the artwork created by some practitioners has been influenced by the superficial functions keys of the computer, creating work that cannot be as fully appreciated as that drawn using traditional methods. These examples of the creative process have caused controversy regarding digital illustration in both the design and illustration community.

In Britain, the debates have largely focused on the visual performance of digital illustration. During the 1990s, the computer began to be widely used in drawing practice, and yet at the time, practitioners and critics generally believed that digital means could not contribute to more exciting artwork. This is partly because there were so many limitations and restrictions in the early development of graphic programmes and some digital illustrations were produced through digital means rather than through their creators. The debates also stemmed from the question regarding the future of illustration. Graphic programmes such as Photoshop have further challenged the relationship between illustrators and designers. On the one hand, through Photoshop for example, art designers have been encouraged to bypass illustrators and to draw by themselves. This has reduced and marginalised illustrative commissions, therefore placing the future of illustration in a state of crisis. On the other hand, the future of illustration should be more prosperous because it is no longer limited to print based publications; there are far more possibilities than before.

The debates surrounding the influence of digital technology on illustration have not had the same impact in Taiwan. This may be because its society and education sector have viewed the digital influence on illustration from a more positive aspect. Practitioners themselves have barely reflected on issues of digital technology in the context of publishing compared with their counterparts in Britain. Discussion of the digital impact on illustration itself can be experienced from the changes in design-education programmes, offering us an insight into the influences of digital technology. In Taiwan, universities have competed to establish new courses for computer programmes and have altered existing design courses to include digital methods. There has also been a change in drawing education; for the disciplines of design or illustration, there now appears to be less emphasis on the skills of hand drawing in design-education programmes. This may have affected many neophyte designers/illustrators who will gain experience in advanced knowledge of computer-based illustration, rather than in how to create the same work manually.

When considering the use of digital means in the design and illustration of children's books, there are several significant factors that have occurred. The phenomenon of the interconnection between 3D animation and picture books, which has seen some books being influenced by the surface style of *Toy Story*, creating 3D illustration with flawless and plastic surfaces. This genre of illustration was rarely seen in the pre-digital era. The phenomenon of variation in computer usage in children's book imagery, which matches

the children's ages; when children are older, the images they experience tend to have clearer traces of digital effects. Moreover, there is the phenomenon of sophisticated graphic design within children's books; design in the digital era has created more sophisticated compositions with various elements such as hand drawn figures, photographs and textures all combined using the collage and the manipulation of imagery. Typefaces used in children's books in the digital era have also been developed to convey more interplay with the images. The computer can provide a multitude of ways to manipulate those typefaces offered at the publishers, as well as the current availability of a wide range of typefaces available to designers and illustrators through the Internet. In addition, since the introduction of the computer, design and preparation of printed material has become a completely digital process; previously used print processes are no longer readily available. Ultimately, the computer has been able to duplicate the quality produced by earlier photographic print processes.

Since the beginning of the use of computers in children's book illustration, many illustrations have been produced through digital processes and appear different to the work created in the pre-digital era. Examples can be seen in those books which have been well-established through children's programmes, such as Thomas the Tank Engine. Due to the change in children's preferences, and in order to adapt to such changes, the image of Thomas has been redesigned using the effects of 3D rendering and dazzling sharp surfaces. Further examples can also be seen in other traditional stories, the images which have now been recreated through digital processes to present a new visual aesthetic.

With the computer, some illustrations have been created with a new aesthetic but others have been created in a deliberate retro-style. Examples can be seen in the 1950's/60's retro-style graphics, and the retro drawing in the style of Chinese calendar posters of the early twentieth century; both examples utilise digital methods to give an impression of old-fashioned and nostalgic sentiment. The illustrations created during the digital era demonstrate diverse genres and show considerably enhanced visual effects, as the computer provides easy ways to create these effects. The visual appearance of digital illustration in children's books has created a new aesthetic which before the advent of the computer had rarely been seen. It has also led to a simulation of traditional media, which has been so successful that it is often difficult to distinguish whether the illustrations have employed digital methods or not.

In conjunction with this examination of children's book illustration in the digital era, it is important to note that there is virtually no literature that discusses the influence of digital technology specifically in the field of children's book illustration. To further investigate this influence, it is necessary to develop a method for gaining insight into digital technology used in children's book illustration. Therefore, in the following chapter, I will discuss the methods employed for investigating digital illustration in children's book publishing.

Chapter 3 Research Methodology

In the previous chapter, I outlined the arrival of digital technology with reference to illustration practice and discussed the controversies that have arisen during the transition to the digital era in both Britain and Taiwan. In addition, I also examined the phenomena of how digital means have influenced the appearance of illustration and design, particularly in children's books and the examples which have been produced for the market. In this chapter, I will discuss in depth the methods employed for investigating digital illustration in children's book publishing.

During the transition phase from traditional to digital drawing techniques in the early 1990s, graphic applications were used, despite their limitations and constraints, to produce vast numbers of images; this, however, led to a controversy over visual quality. Many visual practitioners and critics wondered if graphic software contributed to less exciting illustration, as the illustrations produced seemed to be influenced by the functions in the graphic software such as Photoshop, appearing to be of a similar genre. The controversy also included the future of illustrators, because some graphic designers used digital methods to draw which led to a crisis of decreasing illustrative commissions in the illustration community. Furthermore, the impact of digital technology in education has been criticised because of its influence on students' hand drawing ability; the Taiwanese education sector in particular, has over emphasised the role of digital

technology in its art and design programmes. These controversies have challenged the community of illustrators. But, whilst many professional illustrators have confronted the impact of digital means, those illustrators who work in children's book illustration seem less influenced by digital methods and bookshops are still dominated by hand drawn images created through traditional media. This is particularly the case in picture book illustration where the images appear to be hand crafted without using the computer. Why has this area of illustration not been affected by digital technologies? What are the working processes of these illustrators? What are the distinctive differences between traditional and digital illustration? The investigation is therefore divided into two parts. To address these issues, firstly, I have examined the attitudes and experiences of practitioners using digital technology and the working processes of digital illustration. Secondly, I have analysed the visual appearance of digital forms of illustration.

Since the first part of the investigation focuses on the attitudes and experiences of practitioners and their working processes, it was considered important to have primary data from the practitioners' viewpoints. However, the issue of digital technology in children's book illustration has rarely been discussed. The majority of research publications refer to digital influences on illustration as part of a broader concept of 'general illustration'. Publications have generally discussed the illustrators in the wider context of their productions in advertising, fashion, magazine and children's books. Children's book illustration is only considered as one form of production. For example, in the field of illustration, the books referring to digital use emphasised how to employ the computer, and its influence on illustrators in a contemporary context (Mason 2000;

Poynor 1993; Zeegen 2005a). The books were not particularly focused on children's book illustration but on a broad spectrum of illustration. The other domain that may refer to children's book illustration is research in the field of children's literature. However, this field generally refers to illustration in the discussion of visual perception and the relationship between text and image, mainly investigating how children perceive images (Arizpe and Styles 2003; Catalano 2005; Lewis 2001; Nikolajeva and Scott 2000). To summarise both fields, one addresses digital illustration but does not especially discuss children's book illustration, the other addresses children's book illustration, but has not investigated it from the point of view of digital influences.

Therefore, to obtain data that refers to digital influences only in the field of children's books, a qualitative interview approach was adopted. The decision to adopt a qualitative interview and the reasons for employing semi-structured interviews rather than unstructured interviews will be described in Section 3.1. To conduct semi-structured interviews, there should be an appropriate number of practitioners. The criteria for the choice of interviewees were: 1) the selected interviewees are valuable to the study objective; 2) they are accessible for the researcher; and 3) present an appropriate number of interviewees. In this study, purposive sampling was employed, and the reasons for this choice and an explanation of the selection of interviewees are detailed in Section 3.2.

Semi-structured interviews are conducted with a set of questions designed to produce a conversational interview. In this study, the interview questions were designed to allow consideration of two issues: digital usage and visual appearance. The questions of digital

usage were concerned with the experience of interviewees when they work digitally or their personal observations of digital methods employed in children's book illustration. The questions also included opportunities for explanation of interviewees' own working processes, accompanied with an illustrative set of images provided by the interviewees. Referring to the other questions based on visual perception, the aim was to elicit examples of illustrations showing similarities and differences between traditional and digital methods. In Section 3.3, the design of questions and the interview process will be explained. Using a common set of questions as a guide, interviews were conducted in Taiwan and Britain in 2005 and 2006. The interviews were conducted in two phases, initial and further interviews. The intention of the further interviews was to allow for a deeper examination of more specific questions, which were not fully investigated in the initial interviews. In Section 3.4, the circumstances of the interviews in both countries are described, and the problems and issues raised after the interviews are discussed.

After the verbal data from both countries had been collected, transcriptions were produced for further analysis. The data analysis sought to identify key areas and any contradictions and inconsistencies from the data, to define common themes. The themes were also referred to similar or different perspectives identified in the literature review. These merged themes consequently underpin the main topics in the chapters on digital usage and visual appearance, and will be analysed in depth in these chapters. The details of the approaches to the data analysis are explained in Section 3.5.

3.1 Qualitative Interviews

In this study, qualitative interviews were undertaken to investigate the influence of digital techniques and the visual perception of digital illustration in particular, through the viewpoints of practitioners. It was decided to apply qualitative interviews because this structure allowed me to gain insight into practitioners' perspectives which were considered meaningful to the study (Patton 2002). In addition, when addressing issues of meaning within the interviewees' actual experiences and generating information relevant to an individual, the qualitative interview is more appropriate because it has a flexibility that allows communication with the individual and allows the development of new insights and ideas through a dialogue process. The needs of this research involved capturing other practitioners' opinions and experiences of digital impact, so this method of interview seemed most appropriate.

Qualitative interviews can be either unstructured or semi-structured; both types place an emphasis on the quality of information gathered rather than the quantity. In other words, the obtained data tends to be rich and there are detailed answers. Unstructured interviews are modelled on an open-ended conversational exchange and are valuable in gathering personal feelings following the thoughts and discussion processes of the interviewee. The unstructured interview offers maximum flexibility to pursue information from the interviewee. However, data obtained from an unstructured interview can be difficult to either transcribe or analyse, compared with semi-structured

interviews (Wisker 2001). Since unstructured interviews do not use schedules of questions, the interviews generally follow the thoughts of the interviewee. The interviewer simply probes points that seem worthy of being followed up. Therefore, each interview will require a great deal of time to analyse, and it is difficult to cross reference between data sets.

On the other hand, semi-structured interviews are also modelled on an open-ended interview, but are conducted with the same set of questions being asked of each interviewee to develop a mutual conversation. The interviewer uses the questions to guide the course of the interview according to the aims of the research. Due to the semi-structured interview having applied the same questions to each interviewee, the obtained data is more focused on the research aims and more manageable for data analysis compared with unstructured interviews.

Furthermore, as Bryman (2004) suggests, if the research process has a fairly clear focus, rather than a general notion of simply wanting to do research on a topic, then the semi-structured interview is preferred and more specific issues can be addressed. As this study focuses specifically on the influence of digital usage and a visual analysis of digital illustration, it was felt this provided a sufficient and clear focus to adopt a semi-structured approach. The semi-structured interviews also seemed preferable to the unstructured interviews for this study in terms of manageability of data.

However, it is also acknowledged that the role of researcher was to guide and facilitate,

rather than dictate the course of the interview. A number of open-ended questions would allow answers to develop, following up interesting points made, prompting and probing where necessary. It was also considered necessary for me to remain alert to what was being said and to draw attention to any inconsistencies in the interviewees' answers. As the interviews were conducted in the United Kingdom and Taiwan, the cultural differences between these practitioners in their attitudes to adopting the computer and their evaluations of digital form illustration were an important issue. Any similarities and contradictions between practitioners should be deliberately considered during the interview process, and followed with in depth discussion to probe issues that relate to cultural differences.

3.2 Selecting and Categorising the Interviewees

One of the most significant aspects of qualitative research is that it looks deeper into behaviour within a specific setting rather than at broad populations (Holliday 2002). Therefore, in this study, the researcher decided to select a sample providing a significant but small enough number of interviewees to allow insightful interpretations regarding children's book illustration. Purposive sampling was therefore considered as an appropriate sampling method for this study. With regards to this, the reasons for selecting the interviewees were considered as follows:

Value to the study's subject

Interviewees were chosen because they have particular characteristics and attributes which enable detailed exploration of the research objectives. In this study, children's book illustration is the specific concern and the practitioners who work in this field are of priority in this choice. Therefore, illustrators and the field experts were chosen according to their attributes for this study. The chosen illustrators include those utilising traditional methods, and others employing digital processes. The perspectives of both traditional and digital methods' illustrators were sought for a general view of digital usage rather than only digital methods' illustrators, as this might cause a data imbalance and a bias in describing the influence of digital technologies. In addition, a group of experts was also considered valuable to this study because experts have a broad viewpoint for understanding the digital influences on illustration, which provided supplementary information. The cultural differences of interviewees are other facts that can influence interviewees' attitudes to confronting digital techniques. Different cultural backgrounds could change their approach to the computer used in drawing, and it was useful to the study to distinguish where the differences of cultural backgrounds affected their attitudes. Representing Eastern and Western culture, the selected interviewees were from Taiwan and Britain.

Accessibility

The study focuses on children's book illustration; therefore, the field of publication was restricted to simply children's book publication. It was necessary to also consider issues of physical accessibility. Since my background is a Taiwanese, Taiwanese practitioners

were considered to be the first priority of interviewees, which was both accessible and feasible. On the other hand, I now live in the United Kingdom, so British practitioners were chosen to be the other interviewees. Because of the dual location, I can efficiently make contact with the interviewees and conduct the interviews.

Appropriate number of interviewees

Purposive sampling suggests that the size of sample remains small yet is able to support convincing conclusions. However, as argued by Bryman (2004), it is difficult to identify how many interviewees is a sufficient number, and this likely to vary somewhat from situation to situation when designing a strategy of research. The appropriate number of interviewees also concerns practical issues in that I must have the capability to conduct the necessary number of interviews. In this study, 20 interviews was considered the optimum number that I could complete and keeping the number this small allowed me to deeply interact with the interviewees.

Due to the above reasons, 20 interviewees were chosen which included 14 illustrators: 7 British and 7 Taiwanese, and 6 experts: 3 British and 3 Taiwanese. The interviewees were also classified into those who employ digital and traditional methods. However, it should be noted there is a difficulty in identifying particular drawing methods whether digital or traditional before undertaking interviews, because even those illustrators employing digital processes tend to disguise the effects of being digitised. Three possible sources of identifying illustrators' working processes are publications, AOI (Association of Illustrators) and field experts. The publications include books (Coates-Smith and

Salisbury 2001; Lai 2005; Mason 2000; Rose 2003) and web pages (Gibson 2004b). Amongst the experts who provided useful information was Shuqiong Zhang (a previous manager of children's book department of Eslite Books) who gave key information on Taiwanese illustrators.

The selected illustrators were grouped into digital and traditional illustrators, shown in Table 3.1. The consideration of grouping the illustrators was for better understanding their predominant methods. The predominant methods, however, did not mean that the illustrators could only use either digital or traditional method.

	Digital	Traditional
British	Stephen Stone	Ruth Hearson
	Bee Willey	Helen Ward
	Nick Sharratt	Martin Salisbury
	Robin Harris	
Taiwanese	Zhenxing Zhan	Chinlun Lee
	Kaixin Yan	Luqian Chen
	Chuanzong Lin	Fubin Liao
		Junyen Tsao

Table 3.1 Names of the selected illustrators

The range of ages amongst the selected illustrators was also an important consideration, since this group may have been influenced by their learning environment. During the time of selection of the interviewees in 2004, the interviewees' ages were collated and grouped, as shown in Table 3.2. In order to achieve a balance sample I selected interviewees across three age ranges, this allowed for some comparison as well as having

an emphasis on the middle age range most significant to the research aims, as follows. In the age group under 40 years old, there was a greater opportunity for using computers, since the computer was gradually introduced in to art and design circles during the 1990s. This group of illustrators might have been trained therefore in the use of computers and the application of graphic software from their universities or colleges. The second group, aged 40-50, was considered the group of illustrators who had possibly made the transition from using traditional media initially to later adopting digital methods, as a result of either self training or through training centres. This group of illustrators represents those practitioners who have developed their skills through the application of digital methods to traditional media. Given that the research mainly focuses on the transition from traditional to digital illustration, the number of interviewees in this group would therefore be greater than in the other groups. Finally, there was a greater possibility, within the group aged 50 and over, that there would be both a continued use of traditional media, and a much weaker influence from digital technology.

Age group	Digital	Traditional
<40	Stephen Stone	Ruth Hearson
	Zhenxing Zhan	Chinlun Lee
40-50	Bee Willey	Helen Ward
	Nick Sharratt	Luqian Chen
	Kaixin Yan	Fubin Liao
	Chuanzong Lin	
50<	Robin Harris	Martin Salisbury
		Junyen Tsao

Table 3.2 Age groups of selected illustrators

In addition, the 6 selected experts are shown in Table 3.3. The backgrounds of these experts are different in both countries. In Britain, the art director has a close working relationship with the illustrators, which influences the final outcome of the book. However, the art director in Taiwan has comparatively less authority in influencing the result of the book. Therefore, the three British experts are art directors for publishers. The three selected Taiwanese experts are veterans of children's book publishing, having a good knowledge of the influence of digital technologies. These are two head editors and one manager of a children's book department.

The United Kingdom	Taiwan
Julia Thompson (Walker Books)	Quangcai Hao (Grimm Press)
Mike Jolly (Templar Publisher)	Zhuqi Lin (Children's Publication)
Tim Rose (Orchard Books)	Shuqiong Zhang (Eslite Books)

Table 3.3 Names of the selected experts and their companies

For simplicity, abbreviations are assigned for referencing each interviewee, which will be used throughout the remaining thesis. It is to be noted that in the abbreviations, BI denotes British Illustrators, BE denotes British Experts, TI denotes Taiwanese Illustrators and TE denotes Taiwanese Experts, as shown in Table 3.4.

British Illustrators		Taiwanese Illustrators	
BI 1	Stephen Stone	TI 1	Zhenxing Zhan
BI 2	Bee Willey	TI 2	Kaixin Yan
BI 3	Nick Sharratt	TI 3	Chuanzong Lin
BI 4	Robin Harris	TI 4	Chinlun Lee
BI 5	Ruth Hearson	TI 5	Luqian Chen
BI 6	Helen Ward	TI 6	Fubin Liao
BI 7	Martin Salisbury	TI 7	Junyen Tsao
British Experts		Taiwanese Experts	
BE 1	Julia Thompson	TE 1	Quangcai Hao
BE 2	Mike Jolly	TE 2	Zhuqi Lin
BE 3	Nia Roberts	TE 3	Shuqiong Zhang

Table 3.4 Abbreviation of interviewees

3.3 Interview Process and Questions

The interviews were conducted in two phases: an initial and a further interview. The initial interview had two sets of questions to ask the interviewees due to the differing backgrounds of illustrators and experts: Interview Questions of Illustrators (Appendix A) and Interview Questions of Experts (Appendix B). Each set of questions has ten key questions. Every key question is followed by a set of sub-questions for probing the question in depth. The further interview was only conducted with selected illustrators who use digital methods in order to examine certain questions that were not completely

investigated in the initial stage: Interview Questions of Digital Illustrators (Appendix C).

The questions were designed to approach the fundamental aims of the study; these involve two aspects, digital usage and visual perception.

Questions of digital usage

The questions concerning digital usage were designed to enquire into the attitudes and experiences of the interviewees confronting digital usage. The questions included the practitioners' digital experiences and their working processes. Questions concerning working processes were also asked in order to provide visual evidence for reference when interviewees mention their drawing procedures. The following images exemplify a working process which was provided by an interviewee.

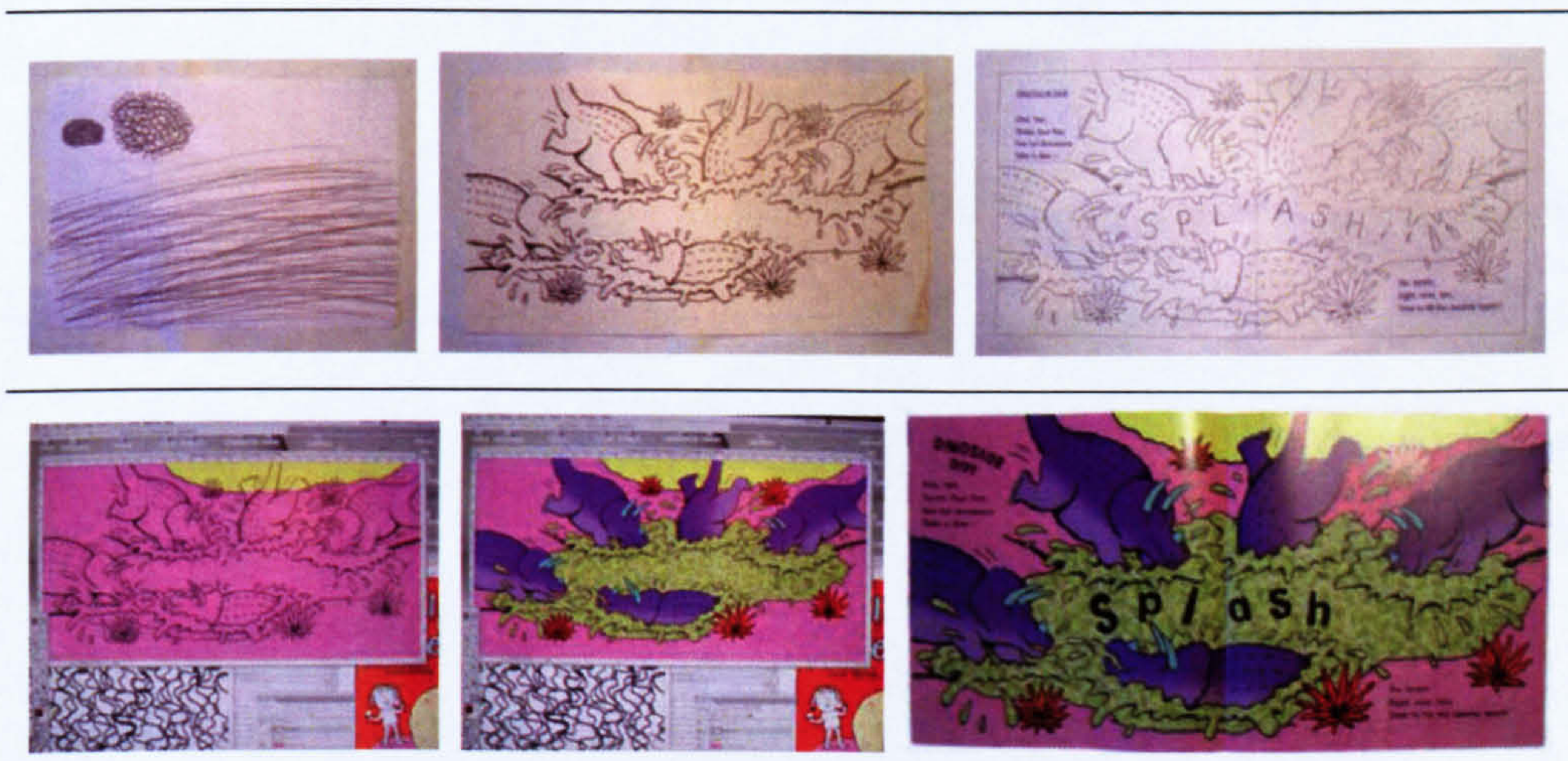


Figure 3.1 Example of working process, provided by BI 3

Questions of visual perception

The questions of visual perception were undertaken to examine digital illustration from an interviewees' perspective. Visual examination considered the additional information of whether the digital process affected the visual appearance of the work. In order to explore this issue I asked all interviewees to look at four children's books that employed digital processes, and eight traditional and digital illustrations provided by digital illustrators. The selected four books cover various genres, these are:

(a) *The Wolves in the Walls*, by Dave McKean, the book appears to use photographic/cinematic drawing, integrating different images taken from photos and paintings. The use of the computer overlaps these images to blend into some areas which need to have special effects. The text has been designed as part of the image using the computer; the text merges in a sophisticated way with the images and the flow of pages.

(b) *I will Not Ever Never Eat a Tomato*, by Lauren Child, was created spontaneously as child like drawings, then the hand drawn figures were scanned onto the computer in order to superimpose, re-size and collage. The creator collaged the figures, textures and photographic imagery to deliberately build up an atmosphere of low quality and hand drawn, un-retouched images.

(c) *Wriggle and Roar!*, by Nick Sharratt, appears as a naïve line drawing in charcoal, the black-and-white charcoal lines combined with very neat patterns and perfectly flat colours. The creator scanned the charcoal line onto the computer in order to add colour

and pattern and to have more control of drawing process when changing the colours and repeating the patterns.

(d) *Marmalade and the Magic Birds*, by Robin Harris, appears as drawn in traditional media (acrylic), however the elements of the illustration were executed entirely on the computer. Subsequently the elements are collaged onto the illustration. Meanwhile, the illustrator created image libraries to ease managing the design elements so that when it was necessary to collage a figure, the elements could be found in the image libraries.

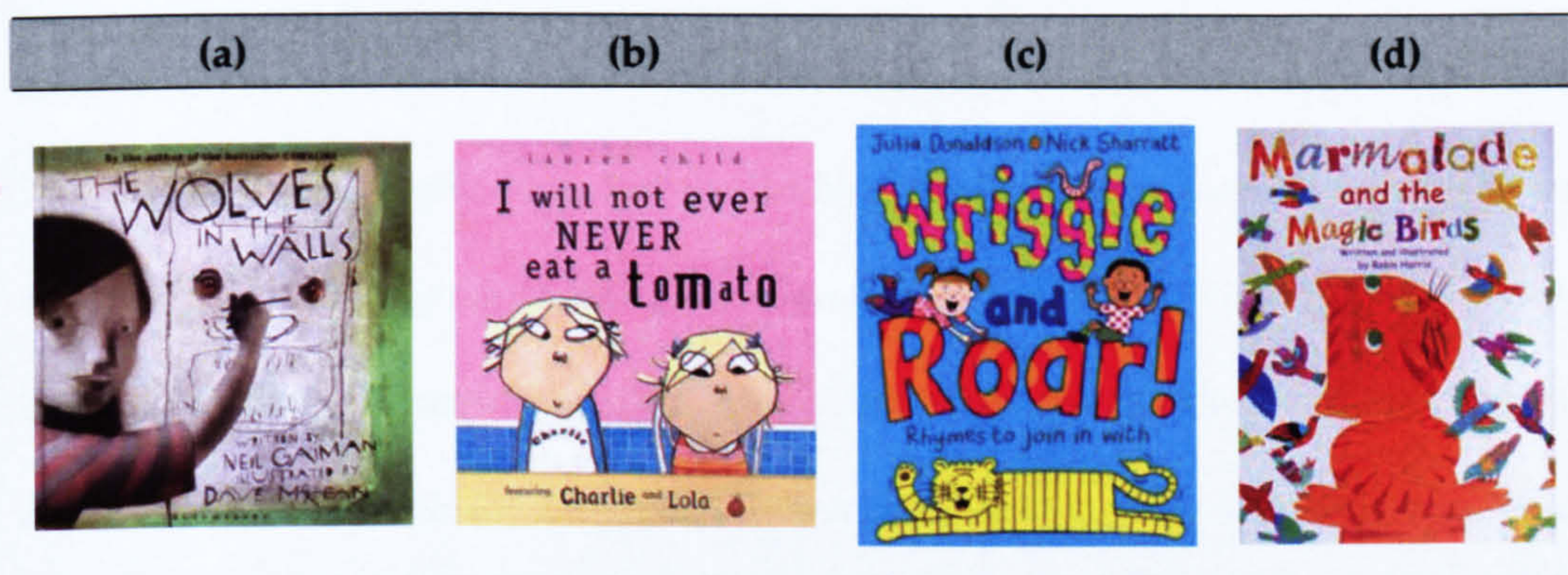


Figure 3.2 Covers of the selected four books

Whilst graphic software is utilised in drawing, illustration has been developed in various genres. In this study, I would simply group two main characteristics of digital illustration which are 'new aesthetic' and 'simulating traditional'. The new aesthetic illustration is considered to be that which without the computer the appearance of the illustration would appear varied. For instance, in a digital superimposition with different layers, one could gain translucent, blurred and blended image effects, and could seamlessly blend

several images. These effects would have been arguably hard to achieve, or even conceive of before digital techniques were invented. In graphic design, this new experimental approach has prevailed. David Carson was one source of inspiration; he used the computer to make "his page cinematic by letting articles and headlines flow from spread to spread and by wrapping pictures around the edge of the page onto other side." (Meggs 1998, p. 463). He has inspired young designers in particular who adored the new look and digital appearance. However, this digital experiment has rarely been seen in children's book illustration. The selected book Figure 3.2: (a) is a rare example of this experiment in children's book illustration. The purpose of selecting the book (a) for examination by the interviewees was as an example of where the image can be achieved by utilising digital application, but would be difficult to have created manually. Another way of utilising digital techniques, simulating traditional drawing, is popular in children's book illustration. The main reason for simulating hand-drawing is convenience and flexibility of process when drawing digitally. However, the simulated illustration is difficult to identify, and the books Figure 3.2: (b), (c) and (d) are selected for analysis where the illustrations can be distinguished even if using the computer to mimic traditional drawing, and traces can be found in the books that are caused by digitally generated processes.

Furthermore, in selecting these four books, the study also considered their drawing processes. The books (a), (b) and (c) employ digital drawing processes partially. Examination of the books can provide an insight of where traditional drawing methods are used instead of digital processes. The book (d) is entirely drawn on a computer,

which allow us to understand the capability of the computer for simulating traditional media and uses software such as Photoshop and Painter to entirely substitute for traditional media.

In another visual examination, the eight interviewees' traditional and digital illustrations were mainly provided by illustrators using digital methods (see Table 3.1). Only one was obtained from an illustrator (TI 4) who was initially categorised as using traditional methods. After the interviews there were two illustrators who admitted that they used a computer, but only one was willing to offer examples of the images.

Because these eight interviewees were identified as having experiences of transition from traditional drawing to later employing a computer, I asked them to provide their traditional and digital form illustrations. These can offer a picture of how the creators thought about their own artworks before and after digitisation, and identify the intrinsic differences between traditional and digital illustrations, such as colour, tone, hue, stroke and texture. The images that the interviewees provided had a similarity in genre even though they employed different techniques. Figure 3.3 shows illustrations using both methods, and shows the nuanced appearances between both illustrations. For example, the subtle differences in background tone gradation or regularity of line. The purpose of asking them to provide similar style images was because it would be easier to gain an insight into differences between traditional and digital appearance.



Figure 3.3 Example of illustrations of traditional and digital method, drawn by TI 1

3.4 Data Collection

Data collection was carried out in Taiwan and the United Kingdom with initial and further interviews, conducted between summer 2005 and summer 2006. A brief introduction to the research, consent forms and the questions of interview were posted to each interviewee before undertaking an interview. In Britain, interviews were normally conducted in the interviewees' own working spaces, since this provided a familiar setting, in which the interviewees could feel comfortable to talk and able to show visual examples such as children's books after the interviews. The visual examples are one of the most important sources for this research; I wished to collect the evidence of the examples the interviewees mentioned. To interview participants in their workplaces was

the easiest way to obtain their visual examples. Interviews in Taiwan were also largely conducted in the interviewees' own working places, however, some interviews with Taiwanese Illustrators were carried out in coffee shops due to the fact that many digital form illustrators are now working with a portable laptop, and their working environments are changeable, so a quiet coffee shop is one of their favourite places.

At the beginning of an interview, Holstein and Gubrium (1995) have suggested that having an introduction to an interview is something of a signpost to guide active respondents through the open terrain of their experience. In doing so, interviewees were briefed about the nature of the investigation, and asked for their consent to the recording of the interview visual examples before conducting interviews (Appendix D and E). The interviews were audio digital-recorded and were supplemented by notes taken during and after the interviews. The use of some permanent method of recording interviews has two advantages. Firstly, it helps the natural limitation of our memories and permits repeated examinations of the interviewees' answers. Secondly, it allows the interviewer to concentrate closely on what interviewees have to say. The interviews were recorded and stored in digital form, which included English and Chinese language. The records of English interviews were transcribed. The records of Chinese interviews were transcribed, and subsequently translated into English. Both transcripts were then merged for analysis (Appendix F, in Volume II).

After the data had been collected, I noticed that some issues had arisen during the interviews. Firstly, the illustrators tend to disguise the effect of digital processes upon

their artworks. After the initial interviews, two interviewees have been identified as having used a computer. The interviewees, TI 4 and TI 5, were later moved from traditional to digital illustrators. However, they were reluctant to be called digital illustrators even though they had used a computer. In other words, they did not like their images to be distinguished as digital. This could imply that the negative perceptions of digital illustration in the early 1990s may remain in their minds as 'edgy' and mechanical in appearance. Regardless of the interviewees' cultural backgrounds, these negative perceptions were not only in the minds of traditional illustrators but may also in the minds of digital illustrators. The term 'digital illustration' for children's book illustrators was seen as an 'inferior drawing'. Secondly, changing working environments were not the same in Taiwan and Britain. Use of a laptop allows illustrators to change their working domains from one to another and illustrators are now finding it easier to work out of a design studio context. In Taiwan, some digital illustrators tend to work in a public setting. This phenomenon was different to the illustrators in Britain, which may relate to the density of population in Taiwan, the illustrators' working places being comparatively smaller than British illustrators' studio. So working in a public setting is seemingly one option for the Taiwanese illustrators.

Thirdly, the capability of graphic software influences the interviewees' evaluation of digital form illustration. Whilst I interviewed 20 interviewees: 14 illustrators and 6 experts, there were only 7 digital form illustrators and the other 7 used traditional methods. When these traditional illustrators evaluated the four digital children's books provided, they generally had difficulty in distinguishing where the images were being

generated, and they often questioned whether it was a real image digitised, particularly in the book (d), *Marmalade and the Magic Birds* (see Figure 3.2). The knowledge of using graphic software seems vital to their understanding of digital appearance. Furthermore, after the interviews, I also found the interviewees who employed a computer, or the illustrators who drew digitally and were mentioned by the interviewees were dominated by certain styles, such as flat colouring, repetitious patterns, photographic, collage and three dimensional illustrations. These styles of illustration used graphic software which seemingly can facilitate their drawing processes and allow their creators to adopt digital technologies more easily.

Due to these issues arising, I have learnt several things which need to be considered further. The hidden digital processes are not easy to identify unless one has evidence from interviews or reports that have discussed illustrators' working processes. Since two traditional illustrators had changed their status to digital illustrators, I had learnt these days, with massive numbers of children's books in bookshops, book illustration which appears as hand-drawn has no guarantee not employing a computer during the creative process. Although the general public would not consider this is an issue for choosing a book, for this study I needed to identify the images when they begin to discuss digital illustration in children's books, and must not simply rely on their appearance. Another thing also learnt from the interviews was that the children's book market is generally a conservative market compared to other areas of publishing. This may relate to why the digital illustrators tend to disguise and hide digital processes in their artworks, and why the majority of digital illustration in the market is simulating traditional illustration

rather than establishing the characteristic of a new aesthetic. This can be discussed further in the context of the interrelationship between publishers and illustrators, in particular those illustrators who are using digital means to simulate traditional drawing.

Moreover, I needed to consider the ability of the interviewees using digital software when I analysed the data, since this would influence their evaluation of the four digital books, and this influence may be present in the transcribed data. Therefore, the interviewees' capability to use digital technologies could be one of the considerations of the interviewees as they gave different answers in their evaluation. Most importantly, during the data analysis, I needed to refer to this fact to better understand the responses from the interviewees. Finally, I have learnt from the interviews that they simulate traditional media and an entire digital process could possibly 'pass off' as a traditional drawing, especially the book (d). The illustrators who were using digital techniques to mimic the traditional media depended on their knowledge of software, and the better they were able to apply the software, the greater the tendency to gradually adopt an entire digital process. In other words, the illustrators who know better digital techniques will work more on a computer and can still present their work as traditional drawing.

Whilst I have learnt the aforementioned from the initial review of the interviews, the subsequent data analysis takes account of these factors during the analysis of the transcripts.

3.5 Data Analysis

The data analysis began by examining the transcripts carefully at least twice and identifying points that appeared valuable to the study, such as noting contradictions and inconsistencies and identifying common themes and references to literature. Once the transcripts were fully examined in this way, the identified data was assembled according to key points, and assigned to the subjects of digital usage and visual appearance. The data relating to digital usage was further categorised into digital experiences and working processes. The data associated with visual appearance was also separated into the evaluation of digital illustrations and the comparison of traditional and digital illustrations, according to the four selected children's books and the images provided by the eight digital form illustrators. The process of data analysis is shown in Figure 3.4.

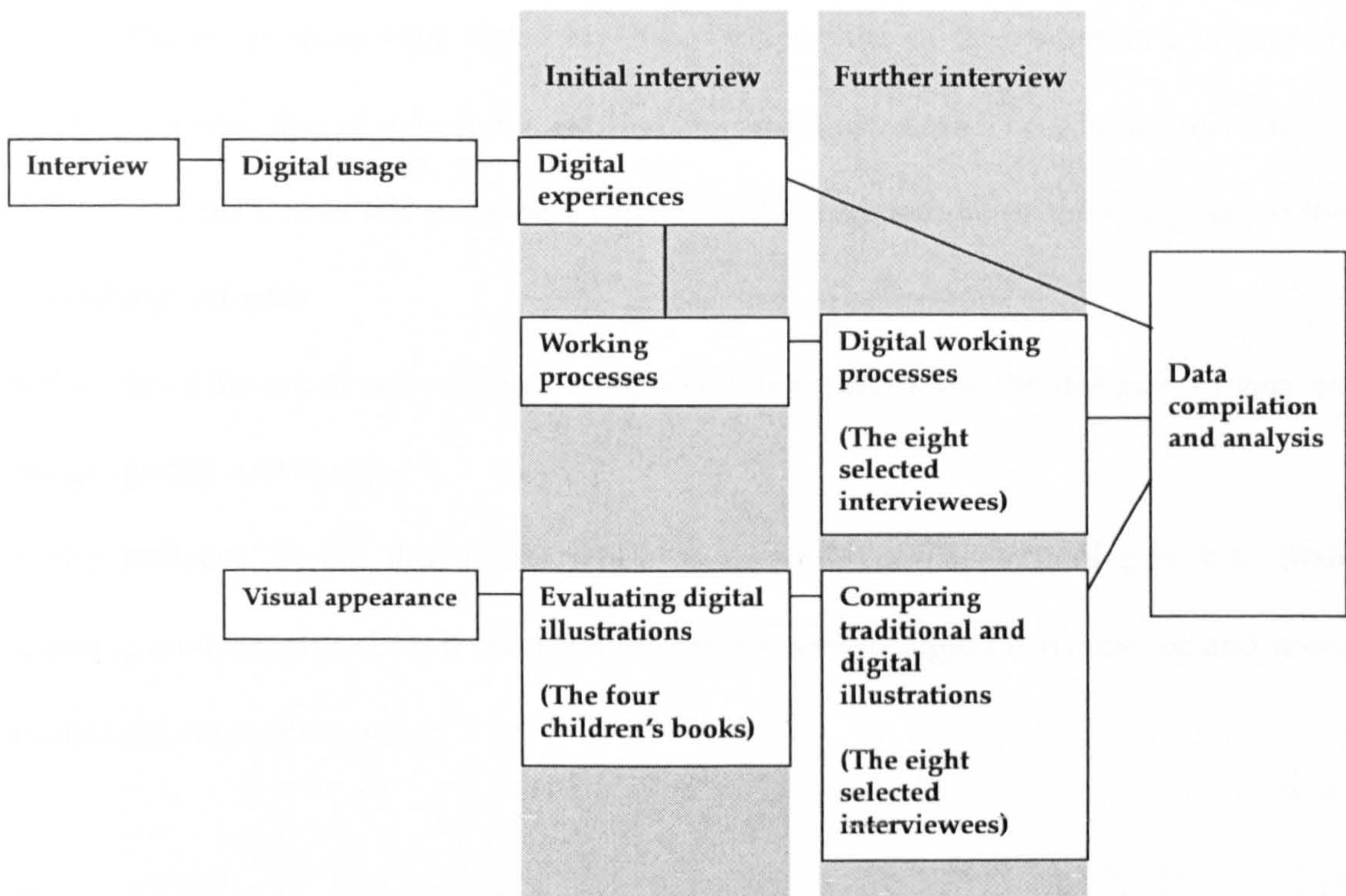


Figure 3.4 Process of data analysis

Analysis of computer use; 'digital experiences'

The analysis of digital experiences first relates to the areas of graphic design and illustration which were discussed in relation to the impact of digital practice on practitioners, and classified as domain themes. These themes form a framework with which the accumulated data may be categorised, for example, the concept of ownership which has been discussed in many professional journals, such as *The Journal of AOI* (Gladwin 1997; Lands 1999). Other themes emerging from the data itself were considered significant to the digital experiences of practitioners when they were confronted by digital usage, for example a dislike of a 'digitised' appearance.

The digital experiences were based on three perspectives of the computer's impact on children's books; that of publishers, art directors and illustrators. These issues relate to

- the circumstances of the publishers following the introduction of the computer to the publishing industry
- the role of the art director using a computer since it can allow the designer to vary an image quickly and easily
- the attitudes of the illustrators when assimilating digital technologies into their working environment since it creates a dilemma between digital convenience and more traditional ways of drawing

The main themes relating to digital experiences which are considered significant in relation to these issues are further discussed in Chapter 4.

Analysis of computer use; 'working processes'

To analyse working processes, initially, nine digital processes were classified. The references of classifying the nine processes were from practitioners questions, my own experiences of using graphic programmes for drawing and professional reading (Caplin and Banks 2003; Pollard and Little 2001; Zeegen 2005a). The classified processes operated as a platform for understanding digital usage employed in children's book illustration. These are categorised according to how the graphic applications are employed. For instance, Digital Composition is a process simply using the applications for compositing elements which may be a drawn feature or a pattern, using the computer only for visualising the composition. The nine classified digital processes are shown in

Table 3.5, which are divided into either partial or entire digital processes.

Partial digital processes	Entire digital processes
(a) Digital Composition	(f) Digital Drawing/Painting
(b) Electronic Collage	(g) Digital Montage/Collage
(c) Digital Surfaces/Layers	(h) Digital Manipulation
(d) Retouching	(g) Three Dimensions
(e) Digital Integration	

Table 3.5 Classified partial and entire digital processes

After having these classified processes, I set out to identify the interviewees who worked digitally and asked them to provide images of their working procedures. The images were analysed successively according to the nine classified processes for each working procedure. For example, in Figure 3.5, BI 1 employed the working processes of (b) Electronic Collage. The explanation of the techniques of the nine classified processes and the interviewees who adopted them are discussed in Chapter 5.1 and 5.2 respectively.



Figure 3.5 Example of working processes which employ (b) Electronic Collage

Having received the images of working processes from the interviewees, the images and the transcribed data were assembled to analyse the rationale of the practitioners choosing to use the computer and adopting digital tools. The themes of adopting digital technologies were examined first from my personal experiences and then further related to the study by Melina Berkenwald (2002) whose doctoral research indicated that the reasons for artists turning to digital media included two interrelated factors. Firstly, a dissatisfaction with their existing work and the medium employed, and secondly, a spontaneous curiosity and 'playful' attitude frequently stimulated their need to try new media and materials. The study also considered a third-factor, environment or social framework, which facilitated artists to turn to digital systems, which was similar to my own experiences. Furthermore, according to the identified data and literature study (Salisbury 2004), certain styles of illustrations were considered effective in relation to this adoption because they were easier and more controllable when working digitally. The data also indicated that the flexibility and efficiency of the computer were the other key reasons for practitioners adopting a computer. The following lists the main themes of adopting digital technology:

- dissatisfaction with existing work
- characteristics of illustrators
- learning environment or social framework
- styles of illustration
- control and efficiency

Further analysis of the identified data relating to these themes is discussed in Chapter 5.3.

Analysis of visual appearance- evaluating digital form illustrations

In the context of evaluating digital illustrations, new aesthetic and simulating traditional illustration were considered as two main characteristics of digital form illustration. The analysis of the four selected books aimed to understand:

- 1) What kinds of appearance were difficult to achieve before the computer was invented?
- 2) What kinds of digitised traces could be found in illustrations which aim to simulate traditional media?
- 3) Can an entirely digital process pass off as traditional media?

During the analysis of the transcripts, the key points initially identified were those which related to digital perception. For example in the evaluation of the book (a), the interviewee BI 3 described the book thus.

“It would still be recognised to be his style. However the development, particularly with the kind of movement that you get from blurring images. Getting different combination of spreads, layers of imagery and using sort of different techniques which could be difficult to do without a computer.”

The key point of “the kind of movement that you get from blurring images...” was referring to blurred and blended effects which are difficult to achieve with drawing. Every key point was carefully considered to identify its connotation and subsequently

emerged as the main themes of digital perception in children’s book illustrations. Table 3.6 shows the themes which were derived from the data.

Characteristics of digital form illustration	The aims	The themes of digital perception
New aesthetic	What kinds of appearances are difficult to achieve before the computer invented?	Blended effect
		Translucent effect
		Transformative effect
		Cinematic effect
Simulation	What kinds of digitised traces could be found in illustrations which aim to simulate traditional media?	Perfect colouring
		Regular gradation of tone
		Regularity of line
		Repetitious pattern
		Clarity of appearance
		Fuzzy image

Table 3.6 Summary of digital perceptions under the characteristics of new aesthetic and simulation

Although using a categorisation of the themes of digital perception can make it easier to understand the interviewees’ perspectives, it is not suggested that one piece of qualitative text is only relevant to one theme of digital perception because the text is equally likely to address more than one topic or concept at a time (Mason 2002). For example, the marked text derived from the interview of BE 3:

“It has perfect lines and flat colours. If you saw Nick Sharratt’s works before he uses computer, it has the same flavour. Obviously, there would not be this mad wallpaper, it would be much simpler.”

The suggestion of this piece of text is relating to perfect colours and lines and sophisticated patterns which appear in digital form illustration when evaluating the book (c). The text therefore relates to Perfect colouring, Repetitious pattern and Clarity of appearance in the themes of digital perceptions at same time. After considering the merged themes, I provide the suggestion of definitions of those merged themes in Chapter 6.1, to give a general concept of the characteristic of new aesthetic illustration in children's book: what kinds digital effects are difficult to achieve before arrival of digital technologies, and the characteristic of simulating traditional illustration what kinds of digitised traits could be found.

The evaluation of the interviewees' digital perception also examined the book (d) extensively to achieve the aim 3) and establish if an entire digital process could 'pass-off' as traditional media. The analysis applied a quantitative method to evaluate the number of interviewees who could distinguish this or not. The statistics of their responses are presented as evidence of the capability of graphic software to simulate traditional media entirely.

Analysis of visual appearance- comparing traditional and digital illustrations

The analysis process consisted of firstly, a close examination of the data in which the digital illustrators expressed their thoughts on the differences between traditional and digital illustrations, and then to identify the key words that were significant to differentiate their appearance. For instance, the interviewee of BI 3 examined his own

works, shown in Figure 3.6, said,

“Non- digital image is softer-looking. The black charcoal line is not as dark, is more tonal and not so crisp. The colours are slightly muted and textured, and not perfectly flat like the digital image. They bleed slightly.”

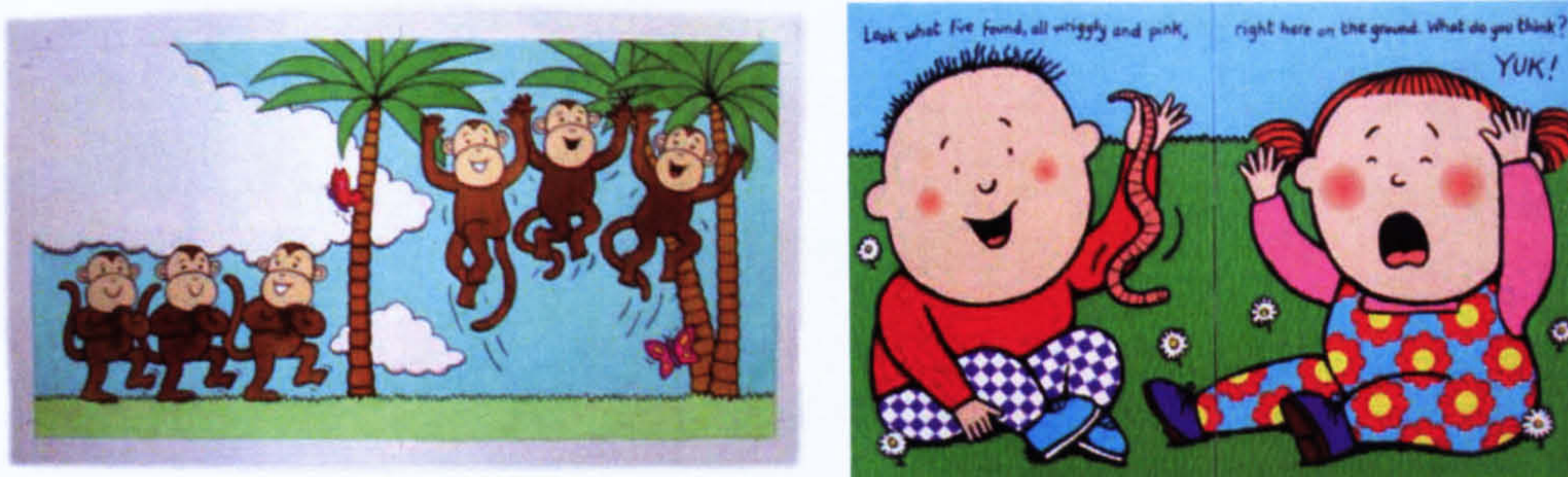


Figure 3.6 Images of traditional and digital illustration, provided by BI3

The key words of “softer-looking”, “more tonal and not so crisp”, “muted and textured”, “not perfectly flat” and “bleed slightly” are later assigned into Table 3.7 to compare the traditional and digital drawings. Alongside this, I integrated the interviewees’ analysis of their own works and included elements that the interviewees did not necessarily explicitly mention but which are considered significant in assessing the differences in the illustrations’ appearances; these elements are added during the analysis process. This could supplement the other perspectives from me, and in the hope that the examination could be more objective.

Main components of a drawing	Traditional drawing	Digital drawing
Colour and Tone	Appearing slightly muted and textured, bleed slightly, not perfect flat	
Line and Stroke	Appearing more tonal and not so crisp	
Texture		
Pattern		
Overall	Soft-looking	

Table 3.7 Example of key words comparing traditional and digital drawing

After final identification of key words completely, the key words were assigned to categories of Colour and Tone, Line and Stroke, Texture, Pattern and Overall to gain an insight into the main components of a drawing, where there are intrinsic differences between both drawing methods. These components can provide a broad picture of dissimilarities of appearance between traditional and digital drawing. Further discussion on this is conducted in Chapter 6.2.2.

3.6 Summary

This study includes an examination of the attitudes and experiences of practitioners using digital technologies and their evaluation of the visual appearance of digital form

illustration. The primary research method was that of in depth interview, the interviews were semi-structured and conducted in two phases, initial and further interviews. Purposive sampling was employed. The criteria for selection of the number interviewees were: 1) are the selected interviewees valuable to the study objective? 2) are they accessible for the researcher? and 3) are these an appropriate number of interviewees? This resulted in 14 illustrators and 6 field experts who were selected from the United Kingdom and Taiwan.

The interview questions were designed to approach two aspects of the subject: 1) digital adoption; and 2) visual perception of the illustrations produced. The questions of digital adoption were concerned with the experience of digital technologies and the working processes of the practitioners. The questions of visual perception aimed to provide an understanding of digital techniques and their effect on the appearances of their outcomes. The interviews lasted approximately one hour with digital audio recordings. The recorded interviews include both English and Chinese language. The records of English interviews were transcribed. The records of Chinese interviews were transcribed, and subsequently translated to English. Both sets of transcripts were then put together for analysis. Primary data includes audio recordings and visual examples.

The data analysis included examination of computer use and visual appearance, and began by identifying important points in the transcribed data and which were subsequently defined as common themes. The themes also referred to the literature review. Alongside this, the visual examples were provided by the researcher and the

interviewees to serve as visual evidence, which were examined during the analysis process. The following chapters of 4, 5 and 6 will examine the details of practitioners' experiences of digital technologies that they have adopted and the circumstances of children's book publication, the common working processes of digital illustration in children's books, the rationale of adopting digital technology, the visual appearance of digital illustration and the distinguishing characteristics of traditional and digital illustration.

Chapter 4 Investigating Digital Usage: Digital Experiences

In the preceding chapter I outlined the details of the research methodology and the methods of data analysis. In order to provide a detailed understanding of the practitioners' perspectives, this chapter will examine practitioners' experiences of digital technologies that they have adopted and the circumstances of children's book publication. I look separately at the arrival of digital technologies from the perspectives of publishers, art directors and illustrators. The interpretations were derived from the interviewees' own words; these have been extracted and quoted from the interview transcripts data. The interpretations were also accompanied by existing information from literature sources to further refer to the similarities and the differences between the data and the literature readings.

The advance of electronic and computer technologies has transformed many areas of human activity during the last quarter of the twentieth century. Inevitably, the majority of publishers have had to adopt digital technologies in their editorial practice since the 1990s, and those technologies were influential in a variety of practitioners' working methods. Although digital means can be used efficiently to complete certain styles of imagery, in this study the evidence has suggested that the market for children's books still prefers traditional genres of illustration, especially in picture books for ages under 8. The only area in which computer generated images are employed in greater numbers is

possibly that of textbooks and the covers of fiction titles for children. These two sorts of children's books are more inclined to use digital means and are tolerant of the computer generated appearance. One reason for this may be that fiction titles are usually for an older age group whose preferences in children's books has gradually been influenced by pervasive digital imagery, 3D animation and other characteristics of digital images. Hence, books in this area with distinguishable digital effects are not considered a threat to sales; to some extent they could appeal to the intended audiences far more than images which are drawn in conventional media (see Chapter 2.2.1). Meanwhile, the research also suggests that the use of digital technologies in editorial practice has appeared to be more significant than initially seen in illustrators' practice. A designer working in publishing would need to know-how to create a book and to utilise graphic programmes such as Adobe Photoshop and Illustrator, considered as common practical skills for designers. On the other hand, illustrators seem less likely to need knowledge of how to apply these programmes and can still survive in the competitive marketplace. These are among the many issues that are relevant when considering the influence of digital technologies within children's book publishing according to the data gathered. In Section 4.1, I will address these issues further.

The role of art directors in publishing has been significantly affected by digital methods. The evidence I have gathered suggests that certain graphic digital programmes may have contributed to the reconfiguration of designers' roles, in some cases making it less important to commission a 'trained' illustrator. Before the computer arrived in editorial practice, there were groups of specialists working in visual design: art directors, layout

artists, typeface creators. But now the advance of digital technology allows designers to merge those roles. More importantly, the facility of digital applications to effectively produce certain types of imagery can now substitute for the commissioning of illustrators; the need to use specialist illustrators seems less important. In Section 4.2, I will look closely at the changing role of the art director in publishing since the employment of graphic applications has become a required skill. Other issues have arisen from the gathered data, which are relevant to the digital impact on the practice of 'visual design', namely the conflicts between art directors and repro houses are decreased, art directors are taking on some of the roles of the illustrator, an increasing workload and anonymity when creating digital imagery.

For most illustrators a digital approach is an unnecessary part of their working process. However, since the computer has become widely available illustrators face new challenges. One issue that has often disturbed the partnership between designers and illustrators is the ownership of an actual illustration. The advent of computer technology has blurred the boundaries of ownership between illustrators and designers; this is due to the fact that technology allows designers to alter an image including an illustration. The ownership of an actual illustration is now far more ambiguous than in the pre-digital age. If designers lack respect for copyright, the computer can now help by subtly altering illustrations, without any acknowledgment to the original creator. Arguably, specialist illustrators no longer play a necessary role, as designers now have the knowledge to employ specialist graphic applications. Illustrators' attitudes towards digital technology appear ambivalent when considering the adoption of digital technologies. The flexibility

of the digital process allows artwork to be recalled and redone at any stage of the process. Illustrators can manipulate images without worry of 'muddying' the final work. These advantages are not questioned since digital technology now enables a greater control over the process of drawing. By contrast, the use of traditional media may not provide this kind of control but it can utilise the physical texture of a piece of paper and the subtle varied tones that are derived from traditional media. These qualities are significantly missed by most illustrators. Meanwhile, illustrators work in a contemporary society where children are often influenced by surrounding interactive multimedia and moving images; illustrators aim to produce narrative work with still images that can compete in this marketplace. This is still harder than multimedia products as these can integrate sound and image. To persuade an intended audience to purchase their work, some illustrators have adopted digital techniques, others insist on drawing with media that they have always used. Certainly, digital methods have influenced certain parts of the illustrators' working processes and have resulted in issues concerned with the practice. In Section 4.3, I will further examine the issues that have arisen from the data in relation to the attitudes of illustrators facing digital technologies and its impact on the illustrators' practice.

4.1 Publishers

For many interviewees, the impact of the digital revolution in children's book publication

in the early 1990s was perceived as less exciting than in other fields. For most of them, the initial reaction to digital techniques used in drawing was dominated by negative perceptions. This was described by two interviewees. One interviewee said that children's book images, especially those created for language learning in Taiwan, were using a lot of digital drawings but the images were not created thoughtfully.

“... in children's books... I didn't get any special impression from them [digital illustration]. If I got an impression that generally would be horrible...” (TE 3)

The description of a 'horrible' impression was similar to another interviewee's experiences, when he was on a panel for an illustration competition in 1993; he described the circumstances of the impact of digital technology on young students.

“...when I was on the panel for an illustration competition in Taiwan, there were perhaps 2000 or so entrants, out of which, around 1900 used a computer. And probably a thousand pieces presented were blurred and distorted images... It [the computer] was just like fast food for them.” (TI 6)

His concerns were that the computer could be employed as an instant tool and a substitute for the artist, and that the digital creators did not have proper training/skills in drawing. His experience implies that the employment of digital technology in the early years was treated with 'curiosity' rather than being regarded as a tool for improving illustration (BI 7). Due to this curiosity, the computer's creators applied drawing

techniques which were easily achieved by applying graphic software, such as 'blur' and 'distort'. Their visual appearance was clearly influenced by the capabilities of the software.

In this respect, the views of these interviewees are echoed by the arguments of Mason (2000) and Poynor (1998a; 1999) who stated that the advance of digital techniques did not contribute to creating more exciting illustrations and sometimes even detracted from the imagination of artists. In the 1990s, it seems that most of these artworks were likely to be restricted by digital technologies, and thus sometimes lost the beauty and personal characteristics of drawing. As computers became more available, artists were tempted by the technologies, so sometimes disregarded the concept of imagery. These artists were seemingly not 'creators' but 'users' (Chien 2004) (also see Chapter 2.1).

However, interviewees also stated the tendency for digital techniques to be gradually absorbed into drawing processes, and the greater use of the computer as a tool. Digital technologies became part of a drawing process that blended with traditional drawing.

"... when digital techniques were made available, lots of people tried to use computer imaging, as it was very new, fresh and trendy. However, we have been through that phase and now there are all sorts of artists using digital technology in the later stages of their career who have grown into it from different ways. (BI 7)

"... Now that gradually calms down to where the computer is used more as a tool, they get their traditional drawings and apply them

digitally.” (BE 2)

A conservative market

Although digital technologies were involved in a drawing process, the majority of interviewees thought that the children’s book market did not prefer illustration that appeared to be digitised. They felt the market had a tendency towards conservatism and seemed to prefer traditional illustration.

“Digital illustrations are not doing so well for children’s book illustrations because it seems like the traditional illustrations still communicate better to the children.” (BI 1)

An interviewee who used digital software incorporated with traditional media also claimed that there were few digitally produced children’s books and they were a minority in children’s books in comparison to other areas (BI 2). I would argue here that although the use of a computer may not be a primary tool employed in children’s book illustration, digital techniques are to a certain degree being used to simulate traditional drawing. Thus, many illustrations could not be distinguished instantly unless we know about drawing processes. The interviewees may therefore underestimate the numbers of illustrators who in fact use digital techniques. The simulation of traditional media has been increasingly used in the market and “the imagery produced seems to look similar to hand drawing” (BI 7) (TE 1).

Since the market preferred traditional illustration, it is interesting to consider the

experiences of interviewees who could employ traditional and digital techniques when they turned to using the computer. Several of my respondents initially experienced negative reactions.

“I talked with an art designer recently and said that I had some new ideas for using the computer. But he [the art designer] said ‘No, no, our boss won’t agree. You’d better use hand drawing.’” (TI 2)

“I am told publishers do not like digital works, they worry about it and they prefer traditional hand painting...” (BI 2)

The preference for drawings that appear hand crafted would seem to cut across national boundaries. Respondents from both my Taiwanese and British samples expressed this view. On the other hand, when the question was posed to art directors, their responses appeared more diplomatic. They did not take the issue of using a computer as a main concern when choosing an illustrator and were reluctant to give straightforward answers.

“As a publisher, we do not have a preference on the type of methods used to produce illustration.” (BE 1)

“I know there are a lot of publishing houses that do not like digital artwork I can understand that, but there always room for both, digital and traditional methods.” (BE 2)

These comments suggest that due to the fact that the market prefers traditional illustration, illustrators who applied digital means would tend to simulate characteristics of hand drawing, or incorporate digital techniques with traditional drawing media to give an impression of work created by conventional methods.

The influence of films and television

Undoubtedly, films and television are always described as being a major influence on children's preferences. As a survey of more than 3,000 children age 2 to 18 in the United States reveals, the average child watches 2.5 hours of television per day, and one out of every six children in this country watches more than 5 hours of television a day (cited in Strasburger and Wilson 2002). Similarly, a survey in Taiwan also shows the average child watches 2 hours of television per day and, at weekends, even reaches 5 hours per day (Wu 2002). Therefore, when publishing a new book, if it can be associated with film and television, then it could more likely be profitable.

The evidence gathered from the data shows that many interviewees had awareness of this common strategy of selling children's books, and had further established that the characteristics of these illustrations were mainly dominated by digital drawing and three dimensional images.

“When we talk about films... which computers can help with. I think eventually the films and books are really quite integrated, I do not mean it is a sort of spin off but things are being produced together.”

(BI 6)

Children's books, such as those based on *Disney*, originally used digital processes and had vast numbers of books on the market. This kind of association of films and books made it easy to employ digital techniques, because in general, the original product (film)

is a digitised image. To produce a digital form of illustration was considered a natural derivation from the films and it meant similar characteristics to the images that appeared in both media.

Although to associate film and book launches was a common strategy for promoting a book, as mentioned by most of the interviewees, a few interviewees also expressed an awareness of some illustrators benefiting by launching an animation. The illustrators may have been well-known in children's book publishing but to create an animation could certainly increase the sales and their reputation.

“... take Lucy Cousins – the role of *Maisy*, which then become *Maisy* being on TV. So it was affected in terms of success by certain children's books... The very fact that animation is a key affected her success.” (BI 4)

These children's books were originally drawn by traditional media and needed to be adapted by digital technologies to produce their animations. There were seemingly two methods of producing well-known children's books into animations. Firstly, if the styles of illustration could easily encompass digital techniques, the styles of the books may be no different from the animations. For example, in the series of books of *Maisy*, the characters were drawn in black-and-white line adding bright plain colours; a style which was perfect for employing digital technologies. Secondly, if the styles of illustration could not be easily adapted to employ digital means, the images presented in the books and the animations would be slightly different. For instance, *Miss Spider's* series of books were

created by David Kirk (see Chapter 2.2.1). The books were originally oil painted illustrations, but for their animations, the textures of glossy oil paint have been varied to appear perfectly flat coloured, in order to easily produce the animations. These illustrators/authors who may have been prominent in the children's market before coming to television, would still like to produce an animation beneficial to their books, and which could prove mutually profitable.

Moreover, an issue which has also arisen from the interviews in relation to the influence of films and television is that of special effects prevalent among films but not available in picture books. Many interviewees expressed that one effect, difficult to achieve without employing digital techniques, was integrating and collaging several photographs and then applying the special effects provided by graphic applications. The interviewees thought this kind of 'photographic drawing' was already evident in the publishing market and many image-makers followed this approach to create an image digitally.

"The movie industry using digital techniques allows us to feel a razzle-dazzle in its special effects. For example, *Lord of the Rings*, its special effects were impossible to achieve before the computer was invented. Many creators followed this kind of effects in their works.

(TI 6)

Because the effects were accessible with digital technologies, the drawings seemingly could be used in picture book illustration. However, this was described by an interviewee thus.

“At the moment, in a lot of digital works you can see the figures drawn are very photographic and use some digital effects... Although that can work for some picture books but a lot of picture books do not want that.” (BI 4)

To some extent, the techniques of photographic drawing were not expected to be largely employed in picture book illustration; this may be due to the intended audiences’ interpretation of the drawing as a digitised image. In other word, the photographic drawing is thought to appeal to an older audience than drawings in traditional media. The use of techniques of the photographic drawing can be seen more in the covers of children’s fiction, but less in picture books for age under 8.

Digital illustration prevails among fiction covers and textbooks

Regardless of the children’s book market’s preference for traditional illustration, fiction covers and textbooks would use more digital illustrations in comparison with other types of children’s books, as described by the interviewees. An interviewee, who is an art director and has experience of executing children’s book design, observed that digital techniques were employed much more in fiction titles. This was due to the fact that the time frame for creating fiction design was not as long as for executing a children’s picture book. This interviewee described her experience of creating fiction covers utilising more digital techniques.

“Fiction is using more digital artwork now, and I think this might be

down to marketing or current trends. In fiction covers there is such a quick turn. If we work on a picture book, we work a year ahead before publishing. On a fiction title, you actually work on a cover that has been published in 6 months. Thus, they do not want to hire people who are using oil painting, which can take a week to dry.” (BE 3)

Publishers do not want to commission illustrators as it takes time to communicate with, and then wait for finished artworks from those illustrators. The other possible factor influencing the use of more digital imagery for the cover of fiction is its intended audiences are generally older than for those for picture books. The audiences have gradually been influenced by mass media as children have grown up. These audiences are responsive to digital technologies, since they have been surrounded by a range of digital imagery, in particular the images of animation. Their favourite images would be largely influenced by those animations and other digital imagery. Thus, for the marketing and convenience of schedule control, employing digital techniques in fiction design and drawing was considered a primary choice for publishers.

Meanwhile, a greater number of digital illustrations have also been considered for children’s textbooks as described by interviewees, since images appearing in textbooks require a clarity and flawlessness of drawing styles.

“...clear and flawless...this kind of genre was largely influenced by digital techniques in textbooks, but for picture books weren’t...” (TI 5)

Similar to fiction, controlling the time schedule is an essential issue for designing a

textbook in Taiwan, as the book needs to be submitted to the National Institute for Compilation and Translation, in order to scrutinise whether the book is suitable for publishing. The time control is therefore highly important for a textbook designer. There are only two periods of time provided for art directors within a year to submit designed textbooks (National Institute for Compilation and Translation 2006). It was also why the designers preferred to use digital drawing in a textbook's illustration, which was considered to be more manageable for dealing with their projects, and speeding up the whole design process.

Editorial practice employs greater digital techniques than illustration in children's books

In publishing, most interviewees said that in the editorial phase the computer was essential for composition and layout before handing it to repro houses, and the editorial process was nearly entirely electronic. Interviewees also stated that a greater number of digital technologies were utilised in editorial work than in illustration practice. For instance, in the research questions (Appendix A), the researcher posed two sub-questions: 1) how do interviewees perceive the influence of digital technologies on interviewees' own working processes? and 2) how do interviewees perceive this influence on editorial practice? The questions were also presented with tables in which interviewees could indicate how strongly they felt digital technologies influenced both.

Question 1) was only applied to interviewees whose backgrounds were as illustrators. Due to the interviewees' practices employing both traditional and digital methods, the

answers seem unsurprising in that they were selecting strengths of digital technologies affecting their own working processes in accordance to their practices. For instance, the illustrators who selected the strengths of using digital technology in None and Weak were all traditional illustrators, those who selected Moderate and Strong were mostly digital illustrators. The selection of the strengths is summarised as follows.

The illustrators	None	Weak	Moderate	Strong
British	3	0	1	3
Taiwanese	1	1	4	1

Table 4.1 Summary of strengths of digital technologies influenced on illustrators' working processes

On the other hand, every interviewee was also asked through question 2) to indicate what role digital technologies served in editorial practice. The responses strongly show that they had a significant influence on editorial practice and reproduction.

“From my experience, there was less using the computer for creating an illustration but employed more in editorial and the repro house.”
(TI 4)

“... the influence of the computer... when the work is submitted to an art designer and goes to reproduction, it will be moderate and strong because publishers use digital technologies for scanning an image, composing a book and finally printing out a proof.” (TI 6)

Table 4.2 shows that all interviewees agreed that digital technologies had a profound influence on the practice of editorial work, since the selection was only on Moderate and

Strong.

The interviewees	None	Weak	Moderate	Strong
British	0	0	3	7
Taiwanese	0	0	2	8

Table 4.2 Summary of strengths of digital technologies influenced on editorial practice

From this, therefore, one could infer that the influence of digital technologies on editorial practice is greater than on illustration in children's books. This may also relate to the market preferences and the need for investment in digital equipment by illustrators themselves. The market preferred traditional illustration and this impacted on the illustrators who were reluctant to learn digital techniques, especially those illustrators who trained before the use of the computer. Alongside this, investment in digital equipment and training courses was seen as a burden to an in-house illustrator. This echoes the notion from Zeegen (2005b) that because of the need for personal financial outlay, illustrators were generally less advanced than art designers in joining the digital design revolution.

Summary of findings

- Due to the fact that the market preferred traditional illustration, illustrators would tend to employ digital techniques to simulate hand drawing or incorporate it with traditional drawing media.

- The influence of films and television suggests that the association of film launching and simultaneous book publishing was a common strategy, and these images were mainly dominated by digital forms. Many successful illustrators benefited from launching animations.
- The characteristics of digital photographic drawing did not prevail in children's books, which is perhaps also in relation to its appearance being identified as digitally generated images and having a grown-up perception.
- Children's fiction covers and textbooks employed more digital illustration in their production in comparison with picture book illustration, possibly because of requirements from the market, as well as for controlling and accelerating a design schedule.
- Editorial practice employs more digital technologies than illustration. In children's books this may relate to the market's preference for traditional illustration and the need for investment in technology by illustrators themselves.

4.2 Art Directors

The role of art directors has always combined aspects of design, liaising with other

partners - the marketing manager, editor and author, gaining the best from others involved in the chain - illustrators, photographers and other designers - and adding a final touch of design to the repro house. This is a complex role involving the skills of communication, creativity of visual design in partnership with the illustrator, and the knowledge of digital processes in editorial practice.

As digital software has altered the way designers work, many interviewees expressed the view that after digital equipment was installed at publishers, there were gradually decreasing numbers of conflicts between art directors and repro houses. Before digital technologies were available, most conflicts derived from who should take responsibility for rejecting a printing-proof, and if it was necessary to make another proof, whether that would result in a loss of finance and of time. The conflicts occurred as a result of the designer and printer accusing each other of the need to take the responsibility. Meanwhile, the issue of the role of art directors was also of concern for many interviewees. Art directors seemingly have extended their roles, not only as designers but also as layout artists and sometimes typeface creators. They increasingly have taken more responsibility for the entire process and have even taken over some of the roles which originally may have belonged to illustrators.

Although the advance of digital technologies could facilitate a graphic design process, many interviewees were aware that the technologies did not really ease the designers' workload. On the contrary, art directors have had an increasing workload on their shoulders. The increasing work load may relate to the expectation that graphic

applications could produce any kind of effects, and a conceived graphic effect could be achieved instantly using digital techniques. Therefore when executing a book, its visual design became more demanding. Art directors were apparently carrying out more roles at the same time and the designed books were scrutinised by other partners or their directors.

The conflicts between art directors and repro houses are decreased

Most interviewees believed that the conflicts between art designers and printers have decreased. Before digital technologies were widely utilised in publishing, many arguments resulted-because of art directors' attempts to design a certain effect which could not be achieved in the printing process of colour separation. Both accused each other, the designers criticised the capability of the printers and the printers blamed the designers for being too imaginative. One interviewee described this as:

“In the past, the art director and editor all had very good imaginations. They often blamed the printer who didn't do the right job but you know the printer can't do that, and then the arguments... now, they are less than before because of the computer.” (TE 2)

Digital technologies certainly have solved the problems that could not be visualised before a completed design was handed over to a repro house. Prior to the digital era, the designer needed to use CMYK (cyan, magenta, yellow and black) to indicate the colours and the effects such as colour gradients. This was a task requiring experience and imagination, and if the final print out did not match designer's expectations, conflicts

occurred. However, as the computer was available to visualise a designed image, the image was almost the same as the image printed in the book. Although, some argued that there were differences, in particular the colours in a monitor were brighter than those printed on paper (TE 2).

The conflicts between designers and repro houses largely stem from the printing-proofs because they cost money. In the traditional CMYK process, the proofs required time and labour to separate cyan, magenta, yellow and black, four colours from the original image and subsequently produce halftone screens for further plate making. Once having completed the plates, the printer could begin to print a hard proof for publishers. Therefore, to produce another proof, it would require knowledge as to who had made the mistakes, whether it was the designer or the printer. If the mistakes were the designers, then the publisher needed to be charged for taking another proof. When mistakes like these happened, the situation could become awkward for art directors.

“In the past, if the boss wasn’t happy with the colours and returned the proof, and then... she [the art designer] would be blamed for making another proof because it cost money...” (TI 4)

Therefore, when the problems arose, the issue of who should take the responsibility would result in conflicts. Today with the advance of digital printing technologies the designer can access an instant visual proof on a monitor or a hard proof printed out from a printer, and because of this, less conflict has occurred.

An art director partly becomes an illustrator

As with the conflicts with repro houses, art directors were now also accused by illustrators of taking over part of their roles. For general publication, this was a particular problem; however, children's books preferred traditional drawing. Therefore, if the intended images could be achieved by art directors themselves using digital techniques, the first choice for them would be to employ digital techniques rather than commission a drawing from an illustrator. This was described by an interviewee in the context of designers taking over parts of illustrators' roles.

“... illustrators seem to be unneeded because designers thought they could possibly complete the job themselves by using digital technology. A lot of illustrators found their work disappearing because there was a lot of digital work in magazines... and more designers were producing illustrations because illustration now seemed to be less about drawing.” (BI 7)

A current phenomenon seems to be that there are fewer drawings produced through traditional media appearing in publications. Under digital influences, the designers opportunistically used graphic software instead of a drawing which before may have been created by illustrators. Heller (2000b) (see Chapter 2.1.1) observed that Photoshop in particular has allowed this to become a common practice. Prior to Photoshop, collage and montage were alternatives to painting and drawing, but some graphic designers used their own a collage and montage to bypass illustrators and relied on digital techniques. The designers gathered elements via a scanner or a photograph and, collage and montage of the elements could be quickly arranged on a monitor, rather than asking

illustrators for their permission.

Whilst the designers were bypassing illustrators to design or draw themselves, two interviewees also perceived that art directors have extended their roles becoming designers, layout artists and typeface creators at the same time.

“... the art directors or anybody on the project happened to do more jobs. They become the designer, layout artist, typeface creator; the jobs are done solely by one person whereas it might consist of some other people’s job in the past.” (BE 2)

“I think the difference is before, there might be several people working on a job; however, with the introduction of computers, several jobs can be done by one person.” (BE 1)

The designers have expanded their roles as the computer allowing them to combine the roles which before belonged to different practitioners. In addition, if the artwork was not satisfactory, generally responsibility for the correction would be in the publishers’ hands, by their designers, even if some of the work belonged to the illustrators.

“If the artwork that came in was not satisfactory, we would have a lot of work to do because we have to do most of the correction in house.”
(BE 3)

Some of the interviewees are also art directors. For them, however, the nature of their roles had not changed, when they evaluated their role after the advent of digital technology became available.

"I do not think the computer changes the nature of my job. However, it makes things more quick and flexible, performing trial and errors, experimenting with more options. Younger designers are now coming straight into the company and being trained to use the computer, they can do more sophisticated computer work, such as montage. That is a change because the art designer is now becoming part illustrator. This however, does not necessarily make it easier or harder." (BE 2)

"It does not really change the nature of my job because I would always go through the rough phase. I will work on the layout, the balance, page spread of the artwork. That is nothing to do with computer..." (BE 3)

For these interviewees, the nature of their design needs, working through the rough, layout and completing phases did not apparently vary. The change was only that the sophisticated graphic software allowed art designers to make the images more flexible and perform the process more quickly. The other change was, as mentioned previously, that the designer was becoming partly an illustrator. The software was available for them to manipulate creations that in the past would belong to illustrators, especially the younger designers who were now already trained and knowledgeable about how to use those graphic applications.

Although art directors in editorial departments have extended their roles, these art directors also face the danger of possibly being replaced by art designers who work in the repro house. Nowadays, many repro houses also have their own designers to continue the work received from publishers, and these designers could also produce a

catalogue of published books and the designs that could not be dealt with by publishers. This subtle relationship was evidently noticed by an interviewee who was a chief editor of a publisher.

“... in the past, repro houses were always blamed by art directors at publishers... However, the thing seems slightly changed now, the art directors at a publisher may be substituted by the designers who are working in repro. Because now by continuing the jobs from the publishers some repro houses also have their own designers, for the jobs that the publishers couldn't deal with.” (TE 2)

An increasing workload

With the advance of digital technologies it could be assumed that art directors would be better placed to conceive a design. However, many interviewees expressed the view that in the context of working for a publisher, digital technologies were not necessary beneficial. Interviewees from Taiwan in particular, emphasised that art directors were increasingly working overnight because their directors thought the computer could accelerate working processes.

“Art directors are under pressure because the bosses thought the computer could quickly complete a job. The designers therefore were waiting for my illustration and then worked overnight. Why? With the advance of the computer, art designers now were conversely busier than before... I think it might be our subconscious thinking that the computer could do things instantly; therefore we have a greater workload than before... I often heard of designers working overnight...” (TI 2)

This was verified by an interviewee who is a head director and chief editor of a Taiwanese publisher.

“... comparing the times of before and after the computer was installed in our company. I think the working time of art designers maybe longer than before. (TE 1)

The other significant fact in relation to an increasing working load was that visual design has become more demanding. Particularly, with graphic software, many effects that previously could not be achieved or even conceived of, are now considered available. Art directors therefore need to consider varied techniques that are available and achievable during their design processes. On the other hand, working partners such as marketing managers, editors and authors, would also sometimes require other design possibilities using digital techniques, as they may think that new possibilities are achievable and therefore be interested in experimenting. Subconsciously, those partners feel that with the availability of digital technology, a design could be altered quickly at the touch of a finger.

“As now we have more tools and techniques that mean we could have many opportunities to think about if we need to have other digital effects in books. In the past, you didn’t have to consider that because it wasn’t achievable. But now you do know about those effects, you will think would we need to try. Is that better? ... I mean for designers, they would now have more things that might be judged, but before I don’t think that was the case.” (TE 1)

The digital technologies available for art directors apparently were not always positive in their effect. The designers had an increasing workload that derived from the nature of competition; visual design became more demanding as digital technologies became easier. This may be also relevant to the expectations of the working partners; people thought that using graphic applications could correct images instantly. Art directors were likely to be in a working context that concealed the advantage of digital technologies resulting in prolonged working hours and placing more demands on them.

Anonymity when creating digital imagery

With digital tools on hand, art directors did not actually benefit from digital technologies in editorial practice, even if digital images were created by designers. As mentioned previously, designers sometimes bypassed illustrators to draw or collage images by themselves; the created images however were generally anonymous. The images would be likely to be created without the characteristic style of a designer's personal drawing, intended to produce an image with no distinguishing features in its production. An interviewee observed this interesting phenomenon.

“... digital illustration software used for editorial work is too sophisticated and slightly anonymous. Much is deliberately created to be anonymous, they are not created to have character.” (BI 4)

Arguably, graphic applications could contribute to a similarity of genre, which for designers means they can be used as a facilitating tool for developing digital images that apparently do not possess any characteristics of a personal aesthetic. To some extent, the

designers have opportunities to bypass illustrators and draw by themselves, which, it seems, could showcase their drawing capability. But in fact they do not benefit from having their titles on books since ironically they would need to strive to have a uniformity of style, producing an image that could be blended into the books.

Summary of findings

- There are two main facts that have been the cause of a decreasing conflict between art directors and repro houses. Firstly, a pre-visualisation of the final product; a screen or a hard print provides an opportunity to thoroughly view designs before submitting them to a repro house. Secondly, this also provides an almost costless way to produce another proof; the proof can be easily reproduced and altered since digital printing technologies have allowed this to become a less laborious process.

- There has been a tendency for art directors to bypass illustrators and to illustrate by themselves. In particular, graphic software such as Photoshop has allowed this to become a common practice and designers used their own collage and montage via digital processes without asking for a commission.

- The circumstances of art directors in publishing have been varied. The advance of digital technologies, on the one hand, has extended designers' roles that may have previously belonged to several practitioners before the digital era. On the other hand, the art directors in publishers have sometimes been substituted by the designers who worked in repro houses, as they could complete the work that could not be dealt with by

the publishers.

- Art directors working in publishers have had an increasing workload since the computer was introduced in their work setting. The reasons may relate to their working partners subconsciously thinking the computer could accelerate working processes, therefore art directors have had to produce more books in the same time frame. Meanwhile, generated images have given an impression that they were easy to alter; this could also result in prolonged working hours.

- A digital illustration created by an art director would be almost anonymous. The illustrations have been presented as a non-personal drawing aesthetic, in the hope the produced illustration could be integrated into the concept of the entire design.

4.3 Illustrators

Since applications have been available for illustrators to draw via digital access, this has raised the question of what is a good illustration? In particular, when digital tools are available for creating an image, artworks seemingly can be rapidly completed without the need for commissioning an illustrator. Illustrators have appeared unnecessary unless they could produce an artwork that was worth commissioning. Therefore, whilst digital technologies were being introduced into the publishing industry, the issue of changes to

the illustrators' working context and the circumstances that illustrators were confronting have affected the attitudes of illustrators. These issues have been commented on by many practitioners.

From the data gathered, six significant themes have emerged and implied that digital technologies have influenced illustrators and their practices. The first theme is the misuse of digital technologies. This was regarded as an issue that concerned most interviewees, including those who were mainly using digital and traditional methods. However, the traditional media users seemed more aware of this misuse than digital users and expressed disapproval of graphic effects being overused on certain pieces of artwork which were very popular in the market. The second theme that pertained to digital influence was an ambivalence about missing the physical texture and disliking a digitised appearance. For the practitioners, sometimes they may have considered adopting digital techniques, however when the time came to make a decision, they appeared to be reluctant to lose traditional methods that could be physically touched and have a tangible quality during the drawing process. These were sentimental concerns by many interviewees, if they decided to adopt digital techniques. Meanwhile, an ambivalence to illustration with a digital appearance, whether by traditional or digital illustrators, was noted by most of the interviewees who preferred their works to be perceived as a drawing that used traditional media. Even some interviewees who used to draw digitally would still prefer to be distinguished as not employing the computer. Both feelings have somehow disturbed practitioners who wished to participate in the digital revolution.

The third theme that related to digital influence was a variable working environment. According to the data, there were two main kinds of work settings which digital illustrators now preferred to work in, domestic and public settings. In the past, some illustrators may have worked in a studio context but now numbers of illustrators would work from their homes as the computer allowed them to achieve tasks that previously may not have been done without the use of equipment belonging to a studio or college. Although most interviewees preferred working in a private environment, some interviewees admit that a portable laptop provided them with an option to work in public settings; this especially appeared in the practice of Taiwanese illustrators. The fourth theme is related to the ownership of the illustration between illustrators and art directors as digital technologies provided the capability to easily alter images. Designers could change an illustration when it was digitised. Many interviewees have had a bad experience of 'digital abuse', and this ambiguous issue has remained problematic.

In terms of finance, a declining number of commissions can be seen as the fifth theme that mostly concerned illustrators. Many interviewees, particularly traditional illustrators, believed that graphic software contributed to the low quality of illustration prevalent in the children's book market, as they supposed that digital imagery was comparatively easier to produce. They thought that this was associated with declining commissions. Last but not least was a theme that related to the exhibition of original drawings. Some interviewees were aware of a shortage of exhibitions as a result of the increasing number of digital illustrations. The general public would not appreciate an exhibition if its

artwork did not present the perception of an original drawing, because a digital illustration was similar, or exactly the same as that in the printed book. These aforementioned themes will be further discussed in this section.

Misusing the computer

Generally speaking, the greatest concern of the digital impact on illustrators, from the viewpoint of the interviewees, was the misuse of digital technologies. In particular, it was mentioned by Taiwanese interviewees that in the early 1990s Photoshop teachers were not experts at drawing; they simply taught learners to use the software to montage, or to create an image using graphic effects which were available in an application package, without any further aesthetics of drawing.

“Maybe it was because the teachers who were teaching digital drawing hadn’t art backgrounds, and they therefore couldn’t demonstrate in depth the aesthetic of drawing. The students only learnt how to apply digital techniques, using montage and everybody got a similarity of style. Ultimately, digital illustrations seemed of no value at all.” (TI 5)

A fear that graphic software could lead to a mechanical and glossy appearance, and only montaged gathered images, without the need for proper drawing skills, was a deep concern for most interviewees who were using traditional methods. One of these interviewees even exaggeratedly expressed that “If my friends told me they have changed to use the computer, my instinctive feeling would be, it’s over!” (TI 6) The negative perspective of misusing digital technologies was endemic in the minds of

conventional illustrators. This perspective may imply that digital techniques are easy to access, which contributes to an illustrator's lack of thought when creating a digital image.

"In that case the computer kind of makes you lazy because if you are not thinking about it beforehand, it becomes an afterthought because the computer is so easily accessed." (BI 6)

On the other hand, interviewees who employed digital tools were also aware of indulging themselves in easily accessible graphic effects and they deliberately moved towards digital methods. They were also afraid of being associated with simply using digital techniques without carefully considering the conception of a drawing.

"... I think I have to use it with care. You have to be vigilant, not too excited, or use the computer just for the sake of the technology, a technical wizard without a brain." (BI 2)

Interestingly, when the benefits of digital techniques for creating an illustration emerged, the illustrators were also subconsciously concerned about being labelled for using too many digital effects, or for their work appearing as mechanically generated images, particularly in children's book illustration. The consideration of the need to cooperate with digital methods was no different from that of traditional illustrators. To summarise, misusing the computer from the interviewees' perspective meant that illustrators only considered digital use for convenience and flexibility, and used the digital effects throughout the artwork. The result of the effects could apparently be seen to have little connection with the aesthetic appearance (TI 1). The awareness of misuse existed in the

minds of both traditional and digital users.

Ambivalence-missing the physical texture and disliking a digitised appearance

Even though the advance of digital techniques could sometimes be beneficial for speeding up drawing processes and being flexible during a creative procedure, the interviewees noted its ambivalence when they considered adopting digital techniques. Firstly, the ambivalence of missing the physical texture of traditional methods was regarded as a key concern of traditional illustrators. An interviewee who was using traditional methods expressed the notion that they could not fully engage in a process without handling and touching a physical texture.

“I really have a problem understanding how other people can get genuinely involved in illustration without actually touching the piece of paper that they were working on or cutting out and using glue or making a mess here and there. I find it difficult to understand but I am sure other people don't have such a problem.” (BI 6)

For digital illustrators, missing the physical texture was similar to traditional illustrators, even if they had been adopting digital techniques. They still cherished traditional drawing which had a physical touch through pigments and brushes.

“... there are things that I missed when I use a computer, such as textural things or perhaps a sweet little paint brush.” (BI 4)

Most interviewees agreed that physical texture was one of their greatest concerns when they thought of adopting digital techniques. Secondly, the ambivalence of illustrators

disliking the digitised appearance was possibly relative to the market preferences and the illustrators' personal aesthetic. The interviewees who have moved from traditional to digital methods said that if their artwork was overshadowed by digital techniques and distinguished as generated images, they would be concerned.

“If your work is well recognisable because it is so digital, I do not think this is what everybody wants. I would hate it if it happened to me.” (BI 3)

“I have not moved completely to computers because I was worried about the kind of mark the computer generated.” (BI 2)

This ambivalence highlights a strategy used by illustrators for survival in a competitive market where hand crafted imagery and the naive appearance of a child like drawing was preferred above the digital effects in children's book illustration. A personal preference for a non-digitally generated appearance in this market saw illustrators choosing a hand drawn aesthetic to persuade young children to purchase their products.

Varied working environments

Since the computer is available for illustrators to utilise graphic software for creating digital imagery, the working environment of illustrators seems to have been altered. In particular, the illustrators' working domain has relatively more choices, practitioners could now work out of a studio context and illustrate in a domestic environment (BI 2). They could work in their own house from conceptual ideas to completing and printing out a whole set of drawings and designs, and even send the images to publishers without

using facilities that may belong to a college or having these facilities in their studios.

“It means all of those who study in college or those who are in this discipline but do not have access to college facilities anymore could start using the computer for doing that.” (BI 2)

Digital technology provides the possibility of simply working on a computer and work could be completed, which may have required access to different equipment before, thus working in a domestic environment became much more practical after digital technology was available.

Although some of the interviewees expressed the view that they liked staying in a domestic environment, others said the computer allowed them to work out of a private setting and this was significant for Taiwanese illustrators. Two interviewees described how they enjoyed drawing in various places.

“Sometimes, I will have my laptop with me and go to the café shop near by the seaside; there I work with my laptop without disturbance from others. That is a kind of freedom you don’t get in your office and having a beautiful view in front of you. You could go somewhere and then draw over there...” (TI 2)

“... the laptop allows me to work in various places which I feel wonderful...” (TI 3)

The use of a portable laptop in different settings was more likely to appear in the Taiwanese interviews. British interviewees did not celebrate the idea of working out of a

domestic setting; they still preferred working in a private environment. This may relate to two facts. Firstly, the differences in climate between the two countries, the climate in Britain is colder than Taiwan which means the harsh weather has largely suppressed the willingness of Britain interviewees to work out of a domestic setting. Secondly, the density of population, Taiwan has the second highest population density in the world (Tang 2006), therefore illustrators' working spaces are comparatively smaller than British illustrators' studios. In other words, if Taiwanese illustrators are working in their houses, they may sometimes be disturbed by other family members as they have smaller living areas. People are more easily interrupted by surrounding relatives and noise. To work out of a domestic context seems an alternative option for illustrators who use digital tools. More importantly, the computer allowed practitioners to draw without carrying paints and brushes, providing a further motivation to work away from private settings.

As digital technologies allow illustrators to work in different places, the other key benefit from the technologies mentioned by most interviewees was communication with publishers/clients. This can be due to illustrators working in public settings or working in places at some distance away from publishers. Before digital technology was available, communication or completed artwork was sent via post or carrier, but now digital files can be transmitted instantly, significantly closing the distance between clients and illustrators and accelerating the pace of communication.

"It [the computer] does not change my artworks, it only improves the communication between the editorial team and myself. It can be more

effective, such as when they are in the UK and I am in Taiwan, or they are in Taipei and I am in Kaohsiung” (TI 4)

This beneficial impact is verified in a survey by AOI in 1999 (Davies 1999), questioning 34 illustrators and 9 agents. The results indicated that the major impact of digital technologies for practitioners is “... sending work to clients... communicating with clients and other illustrators...” (p. 7). The technologies have definitely accelerated the communicational pace and reduced the distance between people, whilst retaining the quality of imagery delivered.

“The delivery of illustration these days will always be in good condition, because you can just stick it on a disc, knowing it would be perfectly detailed enough to go to be published.” (BI 6)

Ambiguous ownership

The ownership of artwork has been always a contentious issue between art directors and illustrators since digital technology became available. The AOI survey (Davies 1999) also revealed a negative perception arising from digital influence; that of ‘digital abuse’: “increasingly professional designers and the general public fly in the face of copyright law through the digital manipulation of illustrators’ imagery.” (p. 7) The abuse could be seen in many interviewees’ experiences and it seems universal, regardless of nationality.

A British interviewee described his experience.

“I have had an experience where the middle section of my illustration colour was changed by the designer because they wanted to fit the

illustration to the colour used by their cover. It is difficult to claim ownership of the work produced.” (BI 7)

Taiwanese interviewees have also had problems with designers, in particular the question of the right of illustrators when artwork is submitted to publishers. How far should designers alter an illustrator’s creation? The ownership issues between designers and illustrators are even more ambiguous and serious in Taiwan.

“I had an experience with Yushan publisher; an external graphic designer who worked for the publisher thought my work was very dull and unexciting. He used the idea and totally changed the appearance of my drawings according to his design aesthetic. I was extremely afraid of this and ended changing the publisher. You could see people think that they can change anything with the computer on hand...” (TI 6)

“... if a book design went to external graphic designers, then the problems occur as they would insist what was designed by them cannot be changed. The external graphic designers do not wish things to be changed because they feel that was their design and creation. If I say I don’t want that typeface, they would say it is part of the design. As an author and creator, I could accept some ideas and alter part of my artworks. But it is ridiculous that the designers think they are the creators...” (TI 4)

Excessive over working on an illustrators’ creation with regard to copyright law was not generally acknowledged in Taiwan because people have not responded to the copyright law with the same respect as in Western countries. This phenomenon may have been influenced by the cultural context of Taiwan, which does not have the same appreciation

of original creators. Particularly, regarding the matter of ownership of an image between illustrators and designers when it has been produced through a digital process, it is difficult to judge where the artwork has been excessively changed. The complaints from illustrators will continue to occur in this area as this remains an ambiguous issue. For illustrators, a certain degree of abuse is made easy by digital software and will remain a major source of conflict between illustrators and designers in the future.

Declining commissions

Regardless of nationality, declining commissions in illustration seems a universal phenomenon. Graphic applications have arguably contributed to ease in varying an image and the low quality of drawing, and this was indeed perceived by interviewees who were using conventional media. Declining commissions were seen by them as a response to the low quality of digital drawing to a certain extent.

“I think in certain areas of the market, the computer does make a lot of difference... Maybe the main difference would be a cheaper approach to the market that is why the bookshops are now full of low quality illustrated books.” (BI 6)

The general public may not perceive that digital techniques contribute to a less considered approach to creating imagery, but certainly the public would assume that digital images can be easily varied. In reality altering a digital image may not be quite as rapid as supposed; the public do not always have sufficient insight into how practitioners' work. For example, considering the programmes, Photoshop and

Illustrator, they generally have the function of 'layers' for creating elements in different ways which could be facilitated and visualised when layers are superimposed. However, when creating a piece of artwork, it may be necessary to produce not only one layer but sometimes up to a hundred layers to create a single image. Therefore, to require modification, the numbers of layers in the image will have to be varied. This situation was clearly described by an interviewee who used digital methods.

"People think if the artwork is in the computer, they can always change it in 2 minutes and that would not be a problem. However they do not realise to actually do it well, if you have image with maybe 40 layers, if you are making changes you have to double check these layers which will be time consuming because you are going to work in pixel sizes to make sure not one little dot is in the wrong place." (BI 2)

Declining commissions, sometimes allied with the expectation that digital images can be more easily varied, suggests that illustrators are not satisfied that the computer has become part of the drawing process. Similarly, illustrators in Taiwan have also suffered from fewer commissions, possibly even more seriously than in the United Kingdom. As the United Kingdom was an exporter of children's books, its market was comparatively bigger than that of Taiwan's. Taiwanese illustrators within a small market still need to face the other two competitive forces within the children's book market, namely students and illustrators from mainland China.

"... for [Taiwanese] illustrators, the digital influence means declining commissions. The circumstance of publishers now is not very healthy,

a declining budget and the price of an illustration is not good as before. Besides, students and the illustrators from China joining in the market have badly disturbed the commissions.” (TI 5)

Generally, students are not concerned about the monetary value of commissions as long as their artwork is seen in public. And as newcomers, they do not require a large commission, for them it is more important to establish their experience and reputation. The other significant effect on declining commission rates was a vast number of illustrators from mainland China. They were considered cheaper than the illustrators in Taiwan. Many publishers thus went to China to recruit new illustrators, a so called ‘mainland fever’ (Lai 2002). The ‘fever’ has led to an increasing number of illustrations coming from China, which has seriously impacted on illustrators already struggling in the small market of children’s book illustration.

No more exhibitions of original drawing

To hold an exhibition of professional illustrations was an important activity for people who admire art as well as for illustrators themselves; however once images are electronically produced, it means the physical artwork no longer exists. Therefore, many people would question whether an artwork using pixels to simulate a visual representation can be defined as original drawing, and can a virtual simulation of tangible object be counted as an original art? These questions have been raised in the area of illustration (Heller and Fernandes 1995), in particular when considering exhibitions of original drawings; should the image digitised and printed from a computer be included in an exhibition? More importantly, there is the issue of whether the general public

appreciates this mimicking of tangible textures which can then be printed out hundreds of times, framed and hung on the wall. Where is the value of the exhibition? This has been discussed by an interviewee, who is an expert in promoting children's books in Taiwan, and exhibiting original drawings.

“... it will be impossible to hold an exhibition of original drawing in the future. If I go to see an exhibition, I want to see physical materials on canvas that will have a tangible sense of drawing. Otherwise, I could only look at books because print out drawings are the same as in books. We don't need to see the exhibition...” (TE 3)

The main value of the exhibition is that the details of physical textures could be examined and even the essence of artists' control of a brush against paper could be appreciated. But, with the advent of computer generated artwork, this could be diluted; exhibitions may no longer be appreciated in the same way. It is possible there will be fewer exhibitions as the number of digital illustrations in children's books increases.

Summary of findings

- The awareness of misusing digital technology in producing children's book illustration exists in the minds of both traditional and digital illustrators.
- Two main issues concerning illustrators seeking to adopt digital means are: the absence of physical textures of traditional media and the dislike of the digital appearance in relation to market tastes, and a preference for personal aesthetics. Personal approaches involve illustrators who tend to develop the styles that could fit in with the market.

- The availability of digital technologies has allowed illustrators to work in various environments. The practitioners now can work out of a studio context or illustrate in a domestic environment. However, some digital illustrators prefer drawing in public places even if they could only work in domestic settings. This phenomenon has significantly appeared in Taiwan, which may relate to the density population and a warmer climate.

- Two main benefits of digital technologies for illustrators are communicating with publishers and closing the distance between different places and people, and has accelerated the pace of communication.

- The questionable ownership issue between art directors and illustrators now seems universally acknowledged, but 'digital abuse' is apparently more serious in Taiwan due to copyright law being less appreciated in general.

- Declining commission rates have been a universal phenomenon, and as graphic software became available the general public expected digital images to be produced more easily and quickly. This arguably has contributed to the low quality of images in the market.

- Declining commission rates are similar in the United Kingdom and Taiwan, but in Taiwan it is seemingly more serious than in the United Kingdom due to Taiwan having a

comparatively smaller children's book market. The illustrators need to survive in the small marketplace, and alongside increasing numbers of students and illustrators from mainland China who have joined the marketplace.

- It is now probable that we will have few exhibitions of original drawings in the future if there are increasing numbers of digital illustrations in the children's book market.

4.4 Conclusions

In the children's book industry, the market seems to cut across national boundaries and the characteristics of traditional illustration prevail. As a result of this, most children's book illustrators who employ digital methods tend to assimilate these into their drawing processes, integrating them alongside traditional media to present characteristics of traditional drawing.

Generally speaking, art directors and illustrators working for publishers have a close partnership; they should have similar situations in confronting digital technologies. However, both groups have had several distinct responses to this change as discussed in the analysis of the data. Firstly, the need to apply digital technologies is different; art directors need to learn graphic software as it is a required skill. Illustrators, by contrast, do not necessarily need to learn digital means, as the market still prefers an appearance

of traditional drawing. In other words, this could explain why art directors familiar with editorial methods employ more graphic applications than illustrators do. Secondly, through the reconfiguration of roles, the role of art directors has been extended to include that of a designer, layout artist and typeface creator, because the applications provide better tools to execute these roles and can be controlled by one person. In addition, art directors have sometimes further extended their role to take on illustration via digital methods. Illustrators, therefore, have had to incorporate characteristics of illustration that designers could not manipulate through graphic software or have become specialists in certain types of digital imagery that designers might have great difficulty producing. Not only have the roles of art directors been reconfigured, but illustrators could also crossover into the field of designing due to digital technologies. To a certain degree, the computer now provides easy access for both designer and illustrator, expanding their roles from illustrating/drawing to completing a whole book design. Traditionally, the distinct working responsibilities for art directors and illustrators in children's book publishing are now considered vaguer than in the pre-digital era and both sets of practitioners sometimes crossover to carry out roles that conventionally did not belong to them.

Thirdly, the infringement of 'professional knowledge' which was traditionally preserved for art directors and illustrators combines with a subconscious notion that the image can now be easily altered and reformed. This would suggest that digital technologies have not encouraged the development of working partnerships between art directors and illustrators, a demand for altering images and for a certain degree of disrespect for the

professional knowledge which traditionally was reserved for practitioners. For art directors the demand for the changing of a design may come from the marketing manager, editor and author, but for illustrators the demand could be from the art directors. The last distinct difference between art directors and illustrators is the need for a unique drawing style. Illustrations which have been produced by art directors commonly demonstrate little characteristic style of a designer's personal drawing in order to be integrated into a book. The computer has provided a considerable ability in creating imagery that is considered uniform in style. Generally for illustrators however, the main concern for their creations is how to distinguish them in a vast publishing world. Therefore a well developed individual drawing style is considered essential for illustrators to survive in the children's book industry.

Although the market tends to be international, practitioners who work in the context of Britain and Taiwan still have several dissimilarities which have been suggested by my data. There are the themes of the working environment, work load, ownership of the artwork and declining commissions. Regarding the varied working situations, digital technologies allow illustrators to flexibly shift in different working environments. This has significantly appeared in Taiwan so that some illustrators began to work in a public setting, which may relate to the illustrators commonly owning only a small working space in Taiwan. On the other hand, the British illustrators unlike Taiwanese illustrators mostly enjoy drawing in a domestic environment which, also due to the computer, allows certain visual effects that before may have needed a studio context but now could be produced simply on a computer. Owing to the cultural aspect of working in its social

context, the other themes, working load and ownership of artwork, have become relatively serious issues in Taiwan. Commonly working hours in Asia are comparatively longer than European countries. The arrival of digital technologies has been attributed to prolonging the working hours, especially in the Taiwanese working culture and its practitioners sometimes even work overnight. The advance of digital technologies has seriously increased working burdens on Taiwanese practitioners. In addition, as the capability of graphic programmes can easily alter or duplicate an image, the ownership of artwork has become more blurred than in the pre-digital era, in particular the boundaries between designers and illustrators. In Taiwan, the acknowledgement of ownership of illustrations was considered with less respect in a cultural context compared to that of Britain. This may relate to the implementation of education which did not profoundly educate the general public to appreciate original creators; and also that digital methods offer an easier way of accessing and changing an original creation.

Furthermore, the notion of a declining number of commissions was also considered to have a noticeable impact on digital technologies and this phenomenon has significantly appeared in Taiwanese practice. The main reason for this is due to the fact that Britain is a country that exports children's books which means its publishing is comparatively more prosperous than in Taiwan. On the contrary, Taiwan is a country that imports children's books; the imported books include buying books from foreign publishers which are mainly English or buying copyright from abroad and then translating books to Chinese. Thus, the declining number of commissions is more apparent to Taiwanese than British illustrators. To summarise, the circumstances of both countries' practitioners can

be interpreted as, they are all working in the competitive societies and their competition is not only in their own countries but international. However, Taiwanese practitioners have seemingly become more entangled with the aforementioned issues that have affected their working circumstances, and the practitioners are struggling to survive in a smaller market.

Chapter 5 Investigating Digital Usage: Working Processes

In the previous chapter, I have discussed the influence of digital technologies on the working environment of practitioners and their attitudes toward digital technologies through three perspectives, publishers, art directors and illustrators. In this chapter I will explore the common working processes of digital illustration through an analysis of the evidence the interviewees provided, and further discuss the rationale of illustrators adopting digital methods.

At first sight, it is not easy to understand why some illustrators select one medium over another. Nor is it easy to identify the way in which illustrators engage with materials and processes to produce works of illustration. Audiences often see the finished illustration but not the many sketches and the work in progress that was transformed, changed and altered along the way. These processes, before graphic programmes were developed for creating imagery, were generally seen as a linear process which means it is not possible to go back in time to make corrections. It is possible to correct mistakes in other ways but not by tracking backwards. However, the evidence I have gathered suggests that, through employing digital methods, the processes are no longer linear and their practitioners can be considered more relaxed when compared to the characteristics of practitioners working with traditional media (Berkenwald 2002). This is in part because the use of digital methods means that their work's history can be saved at any point such

as in Photoshop a programme which provides a 'history' function for memorising the working processes.

There are no obvious differences between 'general' illustrators and 'children's book' illustrators, in terms of the use of digital methods. A possible difference could be the preference for illustrations which give the appearance of a traditional hand drawing, in the children's book market, for children aged 8 and under. Therefore technically children's book illustrators would use the computer to create an image as if drawn by traditional means. Often, when creating certain parts of a drawing, children's book illustrators would integrate traditional drawing into digital processes, because this would be a less laborious procedure. Artwork produced by digital processes, can be produced on a small-scale by initially using traditional hand drawing and then the drawing can be enlarged in a computer in order to manipulate it with other pictures found from sources such as digital image libraries. These processes are a combination of traditional and digital methods, thus there are many ways in which traditional methods can be combined with digital means within a creative process when working on a computer. Digital technologies have the potential to enhance drawings. To gain an insight into digital working processes, I will firstly interpret the nine digital working processes which have been classified in Chapter 3.5, to provide a platform for understanding the digital processes that are commonly employed in children's book illustration. Secondly, from the evidence of working processes provided by the interviewees, I will examine in detail each practitioner's drawing processes to explore the changes since the introduction of the use of a computer. The details of interpreting

commonly employed digital processes and examining the practitioners' working processes will be described in Sections 5.1 and 5.2 respectively.

Although, some illustrators insist on using traditional media, others may prefer to adopt a tool that could be more flexible and efficient during a drawing process. The illustrators who decided to use a digital tool may have first considered if their artwork could deliver the required aesthetic when employing digital tools. Thus, certain styles of illustrations may be more commonly used when using the computer, as graphic software allows particular visual effects to be produced. For instance, the characteristic of plain coloured imagery prevalent among children's books is produced because Adobe Illustrator can facilitate this drawing procedure. Other possible reasons why illustrators consider adopting digital techniques relate to the learning environment or the social framework, providing a motivation for practitioners to join in the digital revolution. Nowadays there are an increasing number of practitioners who train at universities or colleges, and this provides them with specialised equipment and training. The practitioners, in particular the new generation, who studied at universities since the 1990s, consider the computer to be a tool within their choice of drawing media, without questioning why it is used. On the other hand those older illustrators, who use traditional media, may need to determine the reasons for adopting digital means, in terms of what benefits could be gained from changing media. Furthermore, the particular personality of an illustrator may also affect how they evaluate digital approaches and the imagery it produces and, later, if they choose digital tools to be part of their working approach. There are many contributing factors behind the rationale for adopting digital technologies. In Section 5.3,

I will discuss the rationale of the practitioners who have adopted digital technologies. The interpretation is based on merging the main themes (see Chapter 3) and seeks to explain the reasons behind this application of digital methods.

5.1 Partial and Entire Digital Processes

In the context of digital drawing, the following processes were considered which employed digital techniques either partially or entirely. The following exemplify the nine drawing processes that provide a basic understanding of how the computer can be incorporated into a creative process.

Partial digital processes

(a) Digital Composition

Digital Composition is a digital process which involves the use of a computer at the beginning or during a drawing procedure. Visual elements are imported for the purposes of monitoring and composing a harmonious presentation of artwork, such as a main character and background. Artists subsequently respond to the composed image on the monitor, by then drawing using traditional media. The end result is commonly produced on a piece of paper.

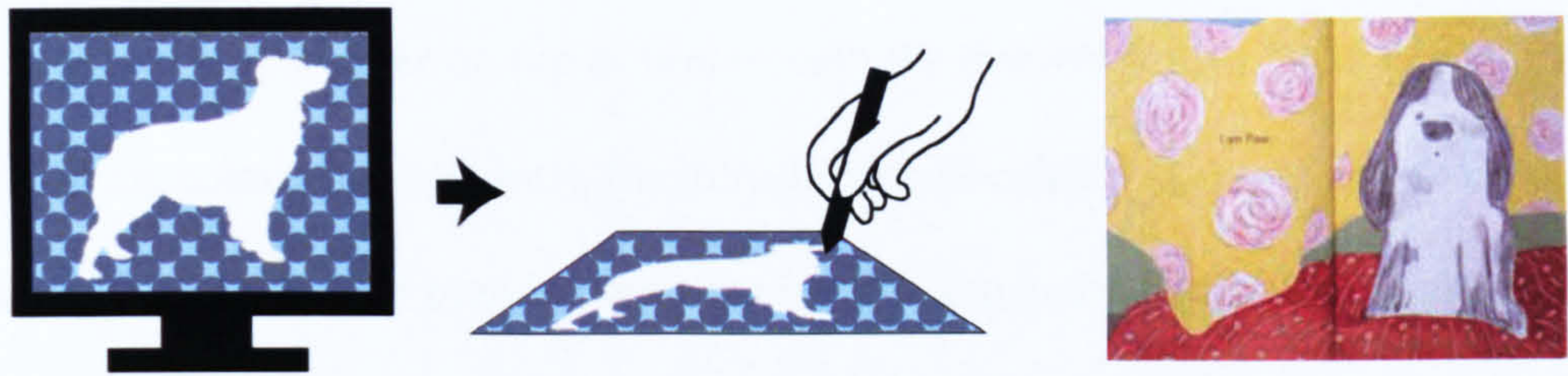


Figure 5.1 Process and example of Digital Composition, illustrated by Chinlun Lee

(b) Electronic Collage

Electronic Collage is a work made from an assemblage of different forms, thus creating a new whole. An electronic collage image may include hand drawn figures by the artist, photographs and textures, all of which are subsequently imported into a computer for assembling and creating a new meaning. The end result is generally presented in an electronic format.

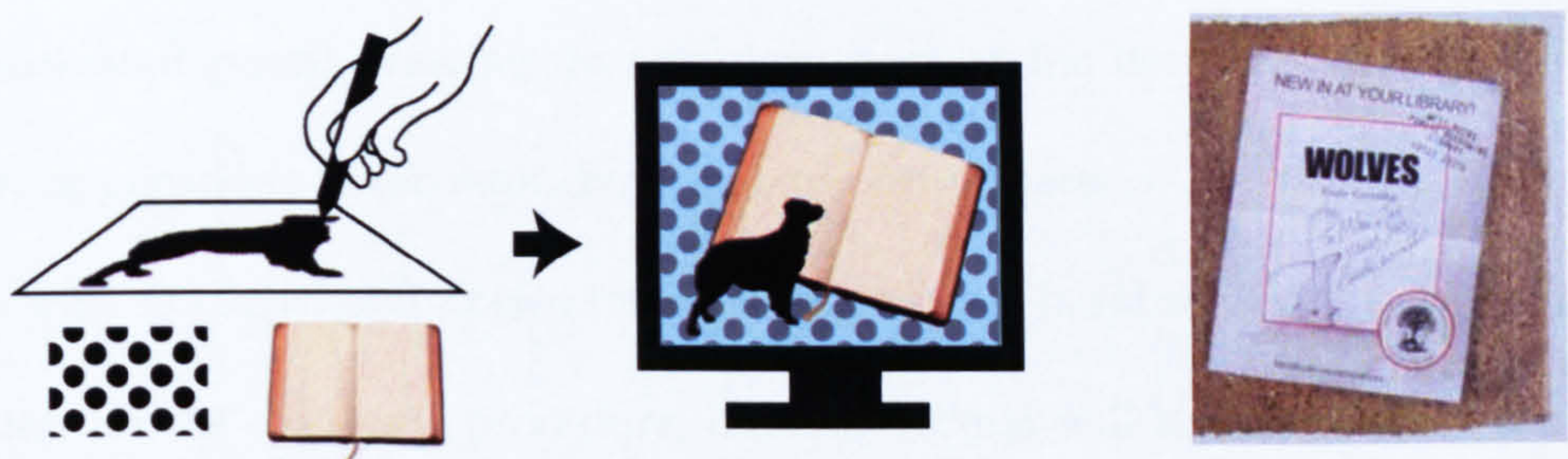


Figure 5.2 Process and example of Electronic Collage, illustrated by Emily Gravett

(c) Digital Surfaces/Layers

Digital Surface/Layers is a technique that describes artwork made from a hand drawing in which different layers of colour are added digitally. The process starts with a piece of hand made line-work which is later scanned into the computer for colouring. Colours are

introduced in layers either on top or underneath the line-work; this facilitates visualising and selecting colours. Importantly, the introduction of colours is staged in separate layers that are not 'mixed up' or blended with the layer of the line-work, therefore changing the colours would not affect the line-work. The end result will be in a digital format.

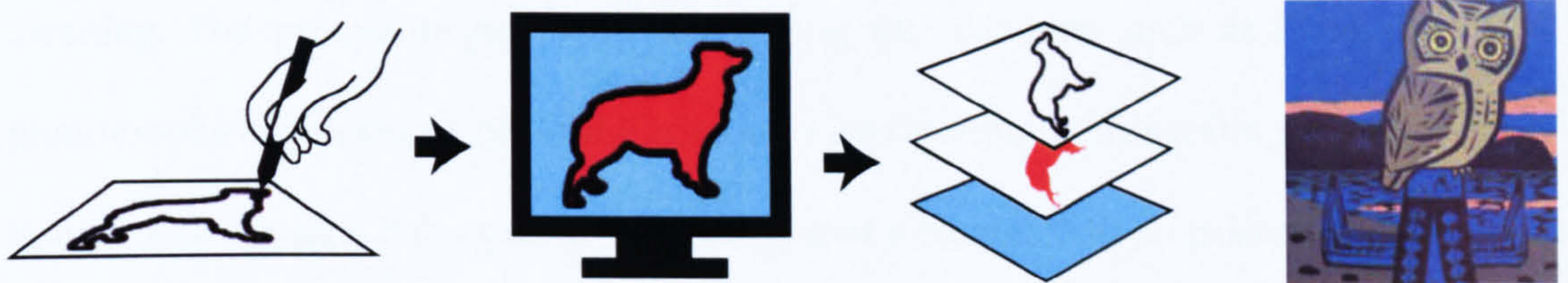


Figure 5.3 Process and example of Digital Surfaces/Layers, illustrated by Huaren He

(d) Retouching

Artwork made by Retouching was the means of traditional media such as the use of mono-coloured pencil drawing, to complete most of the details. The only use of the graphic applications is for retouching and colouring parts of the artwork. The process begins with a purely hand drawn image and the image is subsequently scanned into the computer for the electronic procedure; the final format will be presented as a digitised image.



Figure 5.4 Process and example of Retouching, illustrated by Ian Andrew

(e) Digital Integration

A piece of artwork made by Digital Integration appears more sophisticated than that produced by the other partial processes using digital techniques. The process interchanges traditional with digital processes several times to derive a new creative meaning. The process begins with assembling the elements such as hand drawings, photographs and textures on to the computer and gradually integrating these elements into a creative piece. Subsequently, the integrated elements will be printed out as a hard copy for the later adaptation of artistic effects using traditional media. After the hand manipulating process, the artwork will be scanned again into the computer. The whole process may be repeated several times, using both traditional and digital means, to create the intended visual appearance. The end creation is possible in both formats.

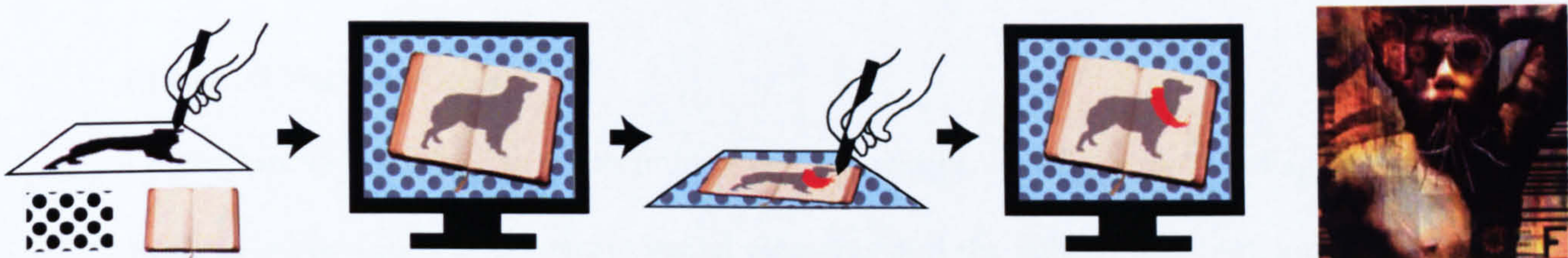


Figure 5.5 Process and example of Digital Integration, illustrated by Richard Halsey

Entire digital processes

(f) Digital Drawing/Painting

Digital Drawing/Painting is regarded as a form of artwork which employs computer applications that mimic traditional media such as watercolour and oil paintings, yet the

whole drawing process is carried out on a computer. The graphic programme best-known and used in this simulation is Corel Painter. It specialises in simulating many traditional media, particularly imitating watercolours that provide 'wet' watercolour layers, on which successive strokes can be left to run and bleed together during painting. There are other general-purpose bitmap editors, such as Photoshop, which offer brushes that can be used and edited creatively. Even if the same quality cannot be achieved such as when using Painter, impressive results can still be obtained (Caplin and Banks 2003).



Figure 5.6 Process and example of Digital Drawing/Painting, illustrated by Paolo D'Altan

(i) Digital Montage/Collage

Digital Montage/Collage is the technique of employing computer tools in collage creation, to allow associations of disparate visual elements and the subsequent transformation of the visual results through the use of electronic media. The only difference to Electronic Collage is that the collaged elements are all presented in digital format at the beginning of the drawing process, without employing traditional media.



Figure 5.7 Process and example of Digital Montage/Collage, illustrated by David Ellwand

(h) Digital Manipulation

Digital Manipulation is the altering of an image using computer program tools and software to produce a contrived image. It involves already existing imagery, such as photographs, that are subsequently worked on in a number of possible ways. Generally, images are modified or retouched by computer software such as Photoshop so that it is almost impossible to determine if the resulting photographs have been manipulated.



Figure 5.8 Process and example of Digital Manipulation, published by Macmillan

(g) Three Dimensions

Three Dimensions has been seen as a prevalent genre in children's publications, which may be associated with the popularity of 3D animation. Artists have traditionally created

the impression of 3D by painting highlights and shadows. Software packages provide various features to automate the process, which can be used very effectively to simulate two-and-a-half-dimensional or bas-relief materials and objects. However, some practitioners might prefer to create a 3D impression by hand, as they like their artwork to possess a 3D aesthetic quality that differentiates it from that produced through software packages.



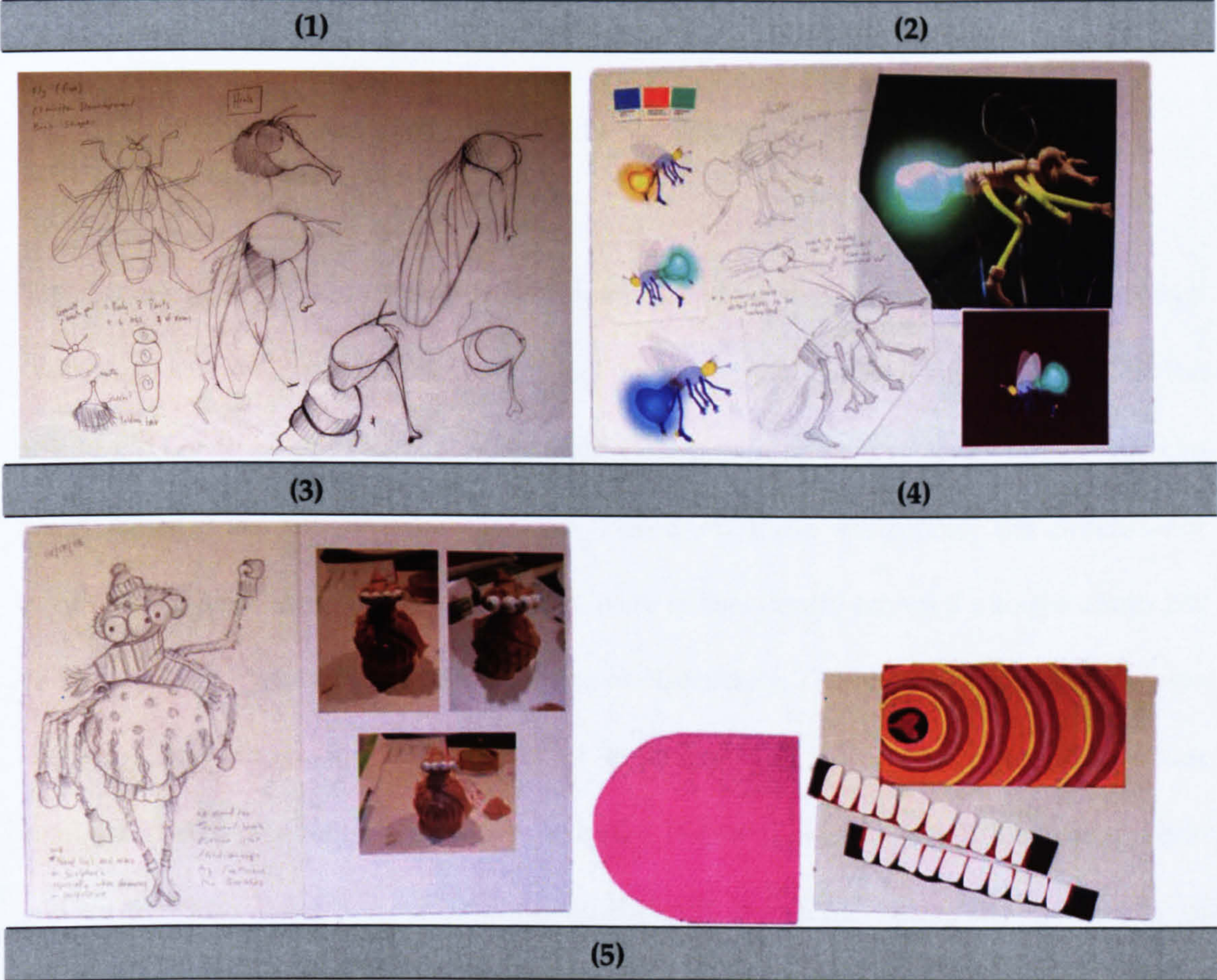
Figure 5.9 Process and example of Three Dimensions, illustrated by Shane McG

5.2 Examining the Digital Processes of the Interviewees

The process of creating images is a complex and personal journey for every individual illustrator. Often seemingly simple images can belie both the craft of the image-maker and the journey that an illustrator may have undertaken throughout previous years in order to reach a point where creating work becomes ‘second-nature’. Many illustrators have a favourite range of materials that they would like to work with. In the following section, I will further examine the drawing procedures used by my sample of

interviewees/illustrators and how the materials and media of traditional drawing are integrated with digital processes or drawn entirely in a computer. For ease of understanding what kind of processes have been employed within the interviewees' practice, the following interpretations of them are described in terms of the previously defined nine digital working processes. The examination accompanies visual and text explanations; the texts have been extracted and quoted from the interviewees' own words as they explained their drawing procedures. This examination will be treated as part of the evidence that offers explanations of why practitioners may turn to digital methods.

BI 1: (b) Electronic Collage



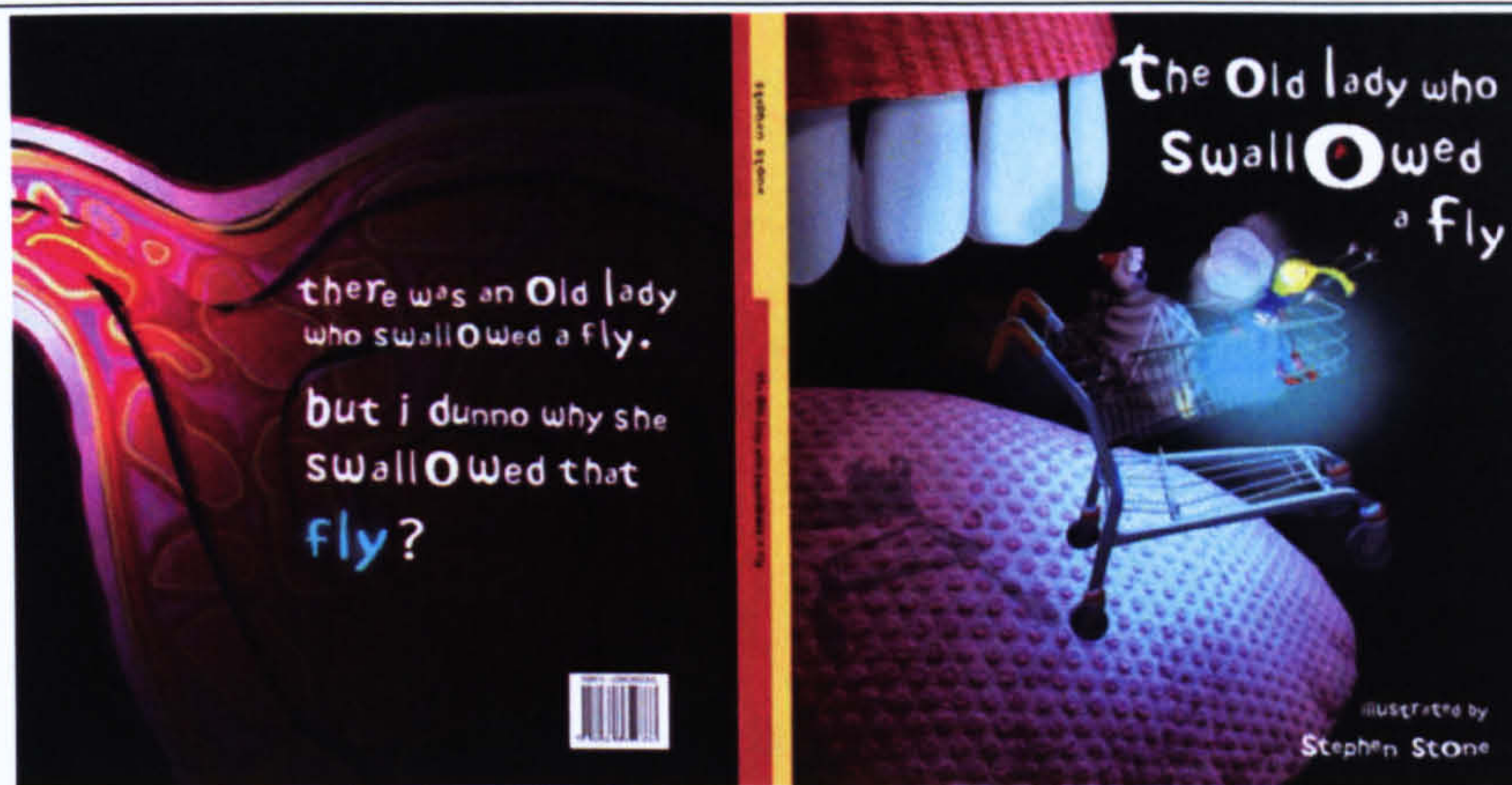


Figure 5.10 The process of practising work using Electronic Collage, provided by BI 1

“Initially I sketch the character ideas from my imagination and then I produce small rough sculptures from ceramic soft clay which can be re-worked easily. Then I position the characters in poses that are determined by a storyboard of the book. I then produce graphite drawings of which I scan in, then begin the process of colouring them in digitally and adding light etc. I scale and reposition the characters until I get what I like.” (BI 1)

The images (1) to (3) are created from conceptual ideas that involve producing a rough version of the main characters, beginning with imagination and later resulting in the production of small sculptures. These small sculptures represent realistic models that can be sketched from different perspectives. Based on these sculptures, the practitioner produced outline drawings. The drawings were subsequently scanned into the computer to begin the process of producing a collage electronically. The textures shown in (4) were designed for image (5) that consists of a tongue and teeth; the pink texture was manipulated to resemble a tongue’s taste buds. The final piece of artwork is presented in a style that may have been comparatively difficult to execute before the availability of

digital design.

This practitioner is a relatively young illustrator who learnt digital methods at his university. His style of drawing shows a preference for dark/light in his drawing. He described how he has been influenced by Lane Smith and David Mckean and he is still experimenting. "I am very experimental; I use different mediums to produce the illustration. I enjoyed using mixed media. I still explore the various media available before I use one medium." In comparison to other interviewees, he did not have a strong resistance to utilising digital technologies, as the university where he trained supplied digital equipment. For him the use of the computer for drawing was like a traditional tool that he instinctively used from his tool box.

The advantage of using digital techniques for this practitioner meant that the computer allowed him to assemble various forms, thus creating a new visual meaning. As the image showed in (4), the pink paper was designed to be like a tongue, although before the availability of digital design, illustrators could produce a similar appearance, but relied on help from photographers or the reproduction process to gain the effect of lighting and reshaping. Computer applications therefore can enhance the process of an assemblage of different forms, reshaping this into another appearance. The practitioner explained how the process worked "I used a computer for enlarging, and composition in order that I can use scale to reduce the size easily. I used computers for the collage of different forms as with the teeth, I only stuck down several small pieces of paper then scanned them into the computer and then resized them to reassemble real teeth in a

mouth." The two rows of small white pieces of paper in image (4) were indicated by the practitioner to show how he had used Electronic Collage, transforming the original appearance.

Generally speaking, Electronic Collage has characteristics that are often used in children's book illustrations and different practitioners use Electronic Collage to achieve various assemblages. Some illustrators only arrange the materials for a collage but do not vary the appearance of the original materials. Others collage materials and then change/transform the materials' appearances into other forms, so that it is hard to distinguish what the original materials were.

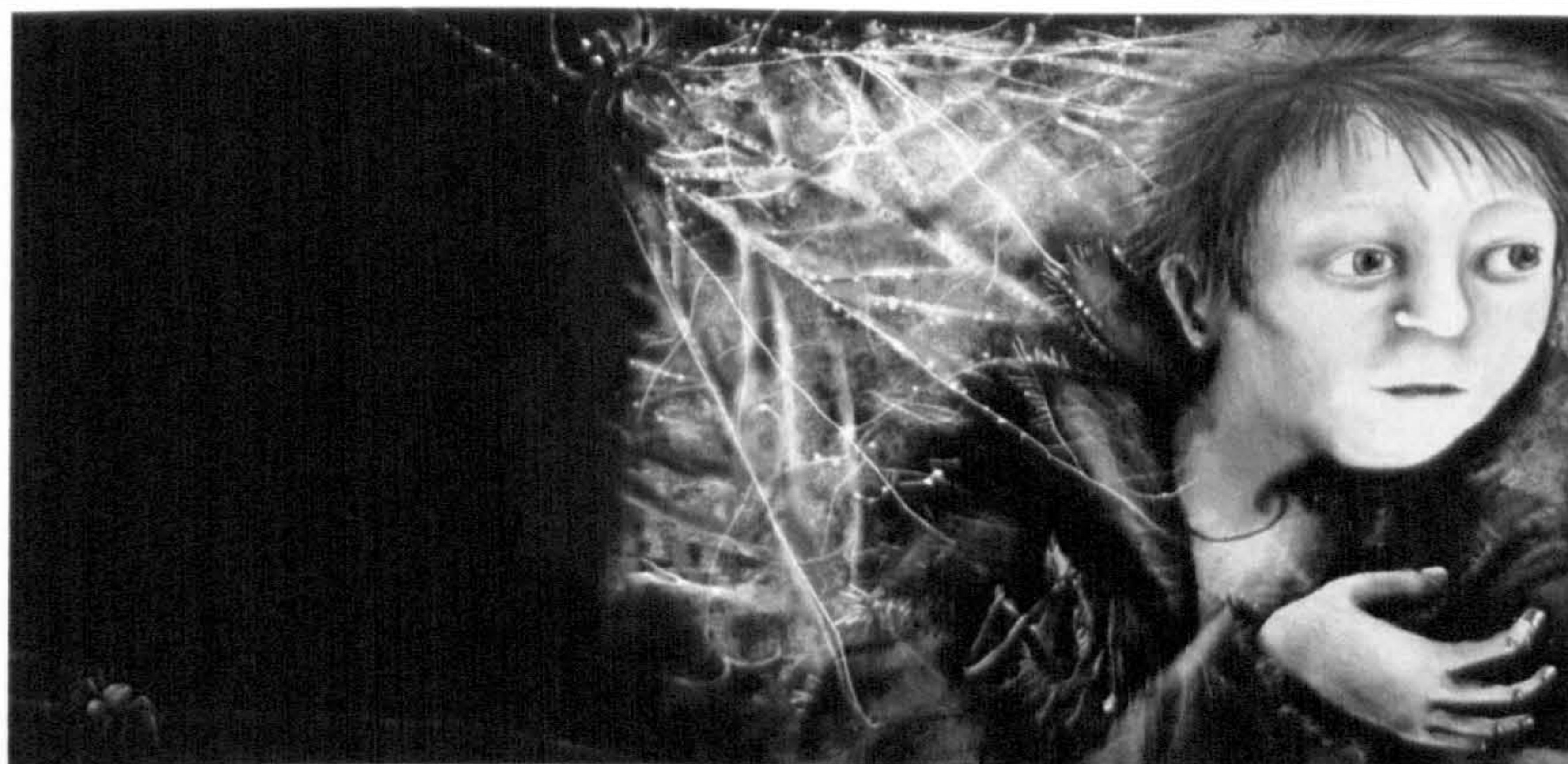
BI 2: (b) Electronic Collage

(1)

(2)



(3)



(4)

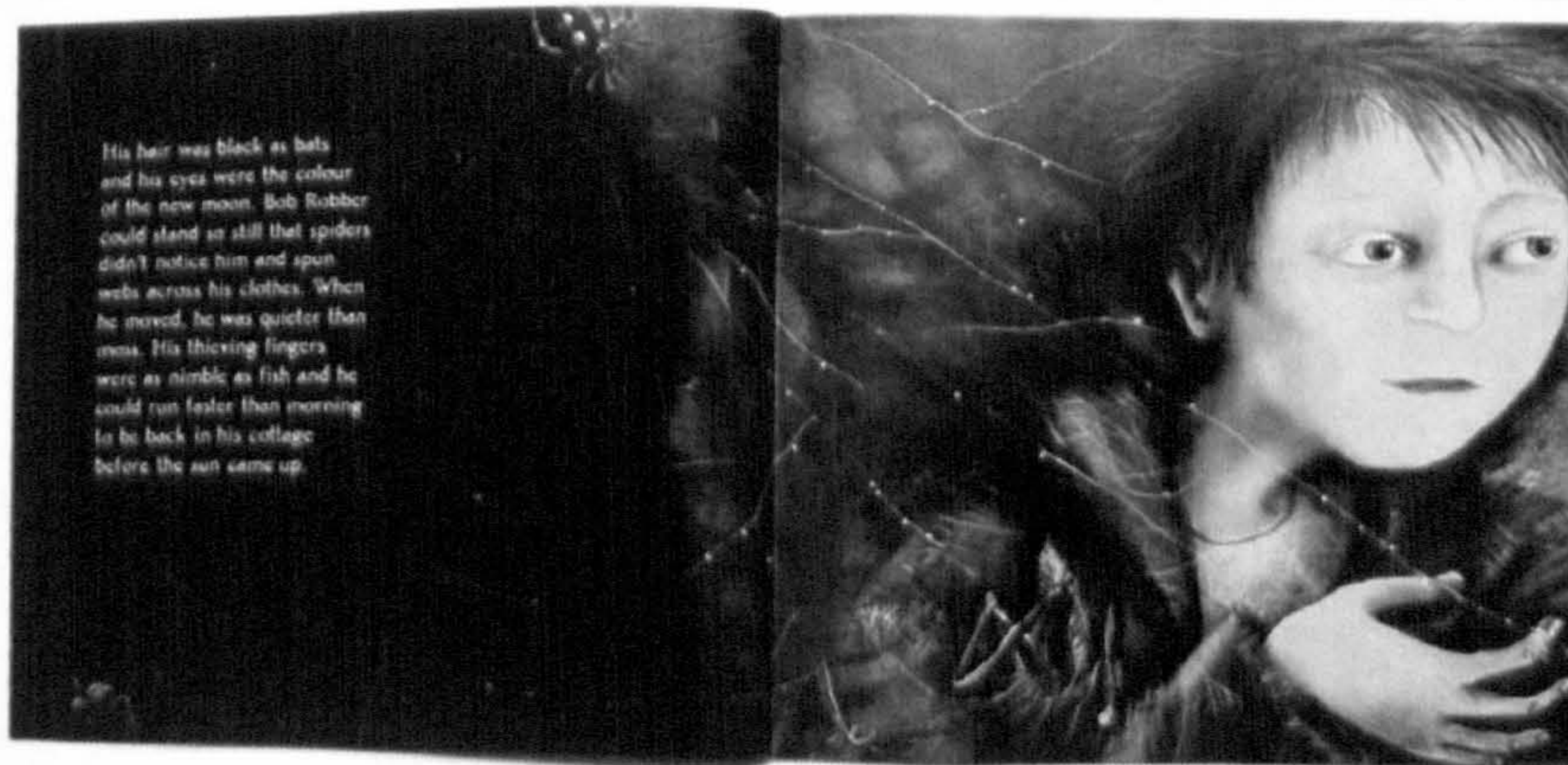


Figure 5.11 The process of practising work using Electronic Collage, provided by BI 2

“I get the layout and general space needed for text, then I do a storyboard for the whole book and once I have got the right flow and emphasis throughout, I do individual more detailed roughs for each spread. Once black and white roughs are approved, I do the colour artwork and scan in different bits which in effect are collaged together.” (BI 2)

The image (2) is hand painted using various traditional media such as pencil, paint, wax, pastel, acrylic and ink. The practitioner carefully drew the main character and spider's web and simply left the background empty. The painting was subsequently developed on a computer. Image (3) shows the practitioner gradually adding the background details and transforming the background into a dark atmosphere. Meanwhile, in image (3), the green pattern underneath the web was initially drawn on a small scale by using traditional media, and then scanned onto the computer, and was enlarged and manipulated in order to be part of the background. Finally, the practitioner adjusted and added more details to the painting to compose the text. The final piece is shown in image (4), achieving a gloomy appearance.

For this interviewee, the initial intention to adopt digital technologies was because of a limitation when using traditional media, in this case pastel, which requires enough space when drawing the details of a main character. The use of fingers is important with pastels for blending and smudging colours, which means the size of the character should be relatively large to allow the fingers space in which to manipulate the colours. Meanwhile, to match the character with that of the background, its background must be large enough to compose both together. The use of a traditional drawing relies on a certain degree of

scale. The interviewee explained why she decided to incorporate digital tools, "I thought there is no point doing a background because I haven't the time to work this big and the people I draw have to be large enough for me to work the faces. So I need to blow it up to make it big and it's all going to be too hard." Since the practitioner had decided to employ digital techniques, she further described the way she draws a comparatively smaller scale of the images. "I tend to draw on a small scale and then scan it into the computer using a high resolution and then enlarging it. The quality of line still looks the same." Meanwhile, using paper collaged together, she also found "you will see the edge of the paper" because of the thickness of the paper when overlaying them the shadows are still visible. When employing digital applications, this could be erased, as it is in a digital format.

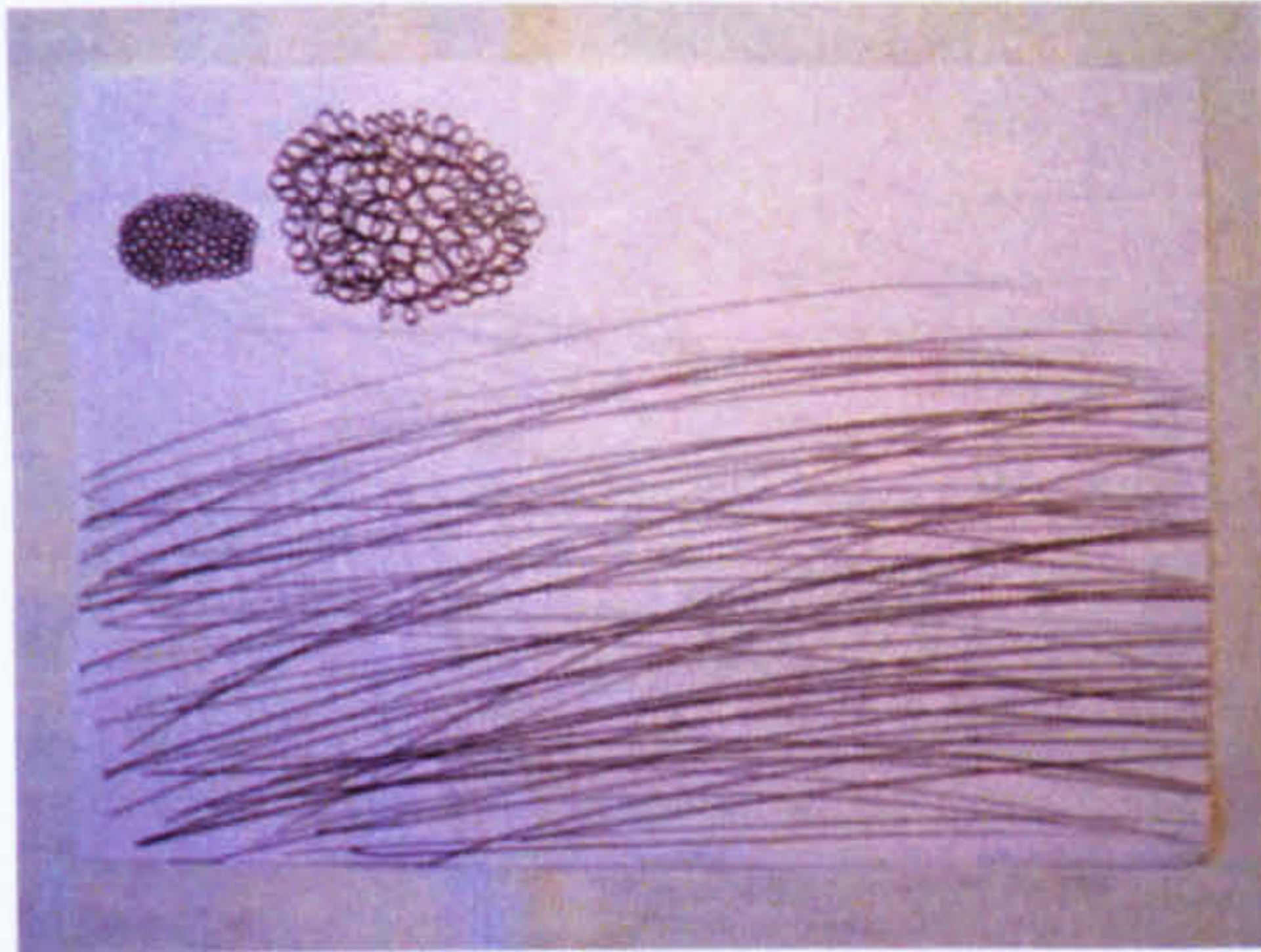
Due to the demands of the market, this practitioner preferred her digital artwork to be viewed in a similar way to her previous work, which had not employed digital technology. She had been used to placing hand drawn strokes or marks from the hand drawings into the computer to give an impression that these strokes were inherent in her digital creation. "... where the ink has made its own shape... I can cut it out and scan it into the computer to make sure it stays there, to pretend it was there..." To create an impression of an image drawn entirely by traditional methods, digital technology is used to collage hand drawn strokes and integrate them into the image to enhance its 'artistic quality'. In this way it provides a very practical solution for practitioners to somehow create the perception that hand rendered strokes or marks are inherent in an artwork, when they have actually been drawn on paper. This is a common technique for collage

practitioners who present their work as having employed entirely conventional media.

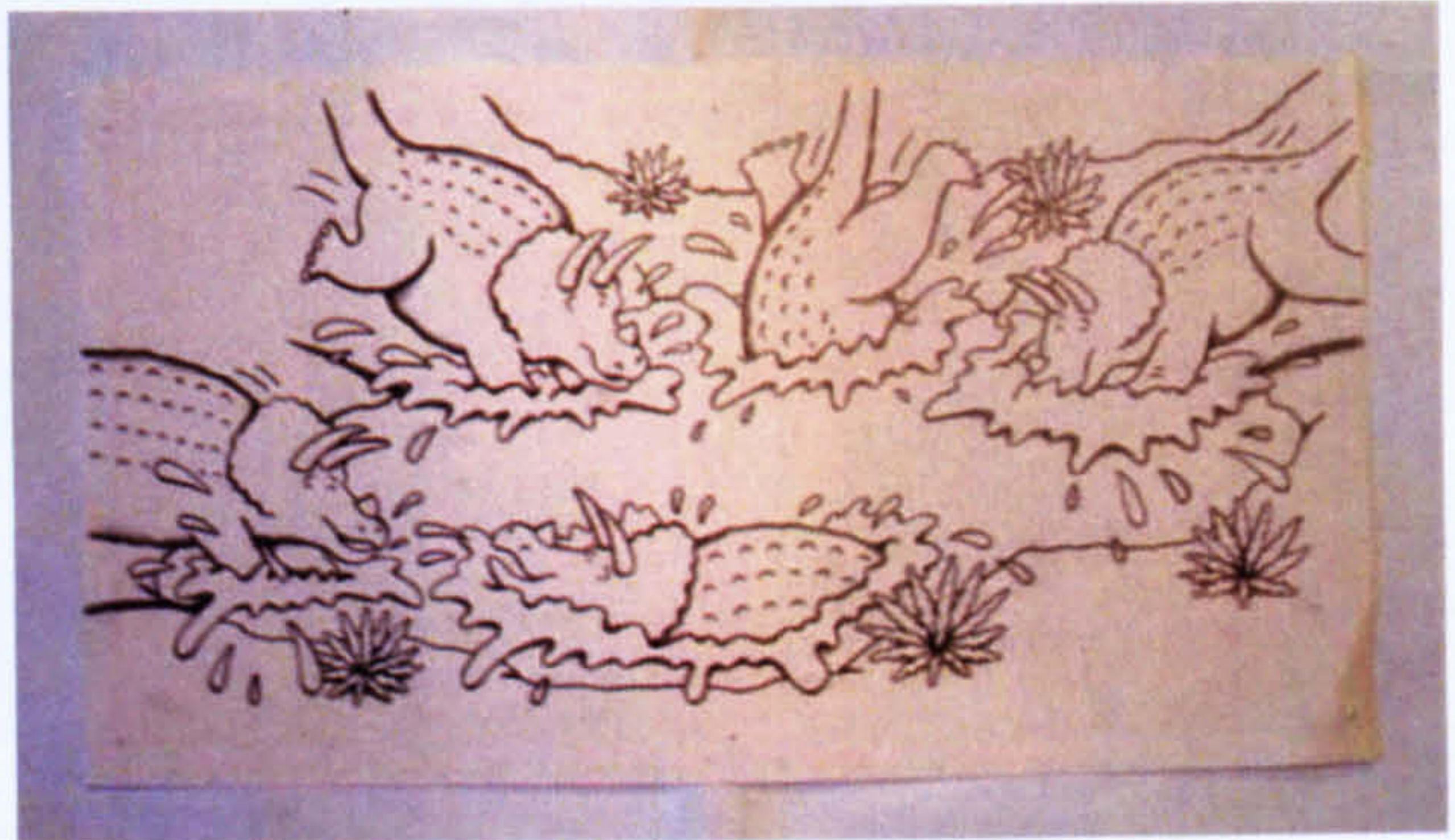
The use of digital tools means that many practitioners, in particular children's book illustrators, are focused on the appearance of the artwork which could have been created by employing traditional media, as well as benefiting from the efficiency of the electronic process. From a practical perspective, drawing on a small scale with traditional means, then scanning this into a computer using high resolution and enlarging drawings seemingly offers a good solution for illustrators to save time. The production of background details by traditional methods can be time-consuming. In addition, in order to demonstrate the characteristics of hand drawing by using traditional-media, some strokes and marks are taken from other hand rendered drawings and then scanned into the computer to give the impression of a-natural appearance in the artwork; this is a commonly applied skill in collage illustration.

BI 3: (c) Digital Surfaces/Layers and (b) Electronic Collage

(1)



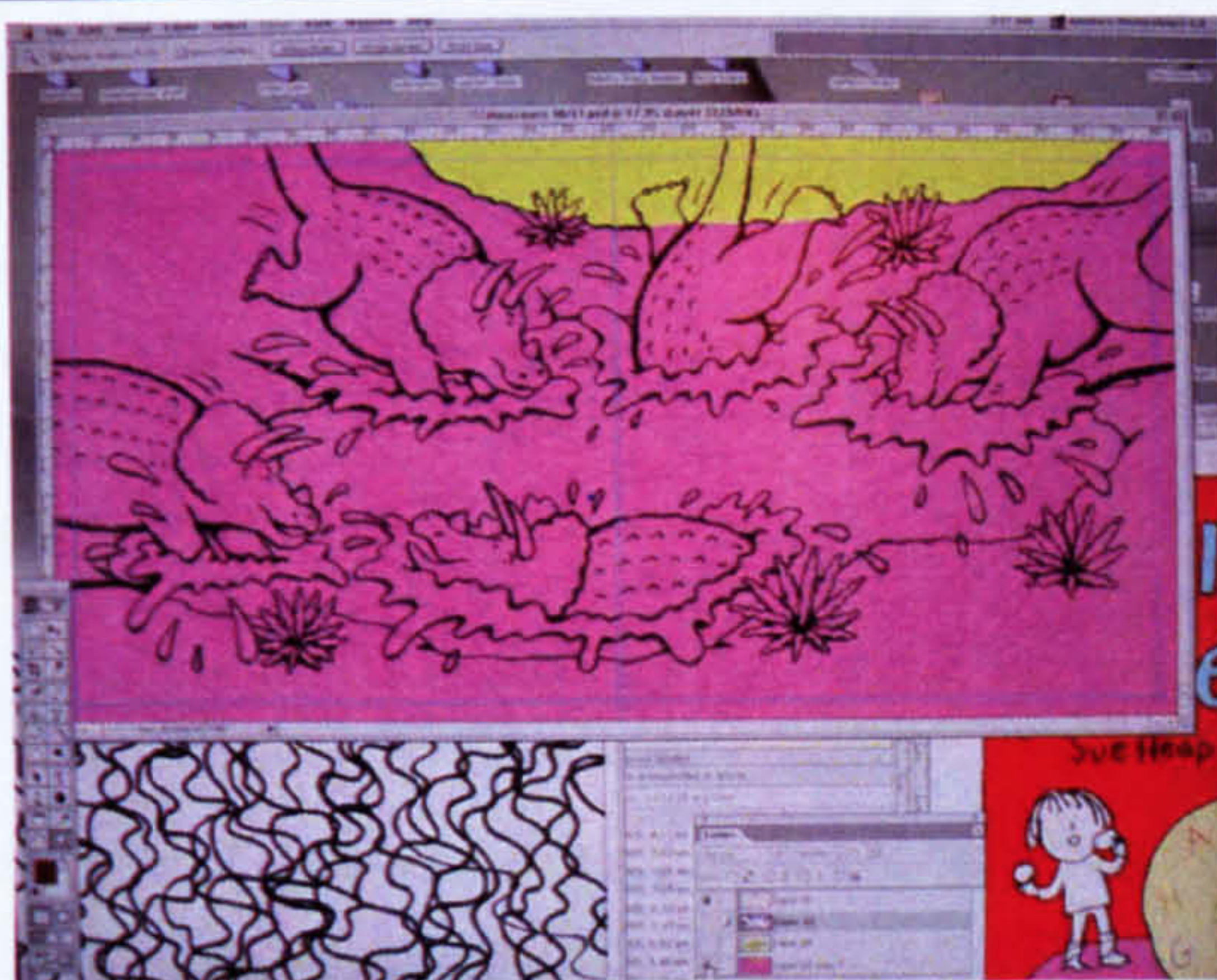
(2)



(3)



(4)



(5)

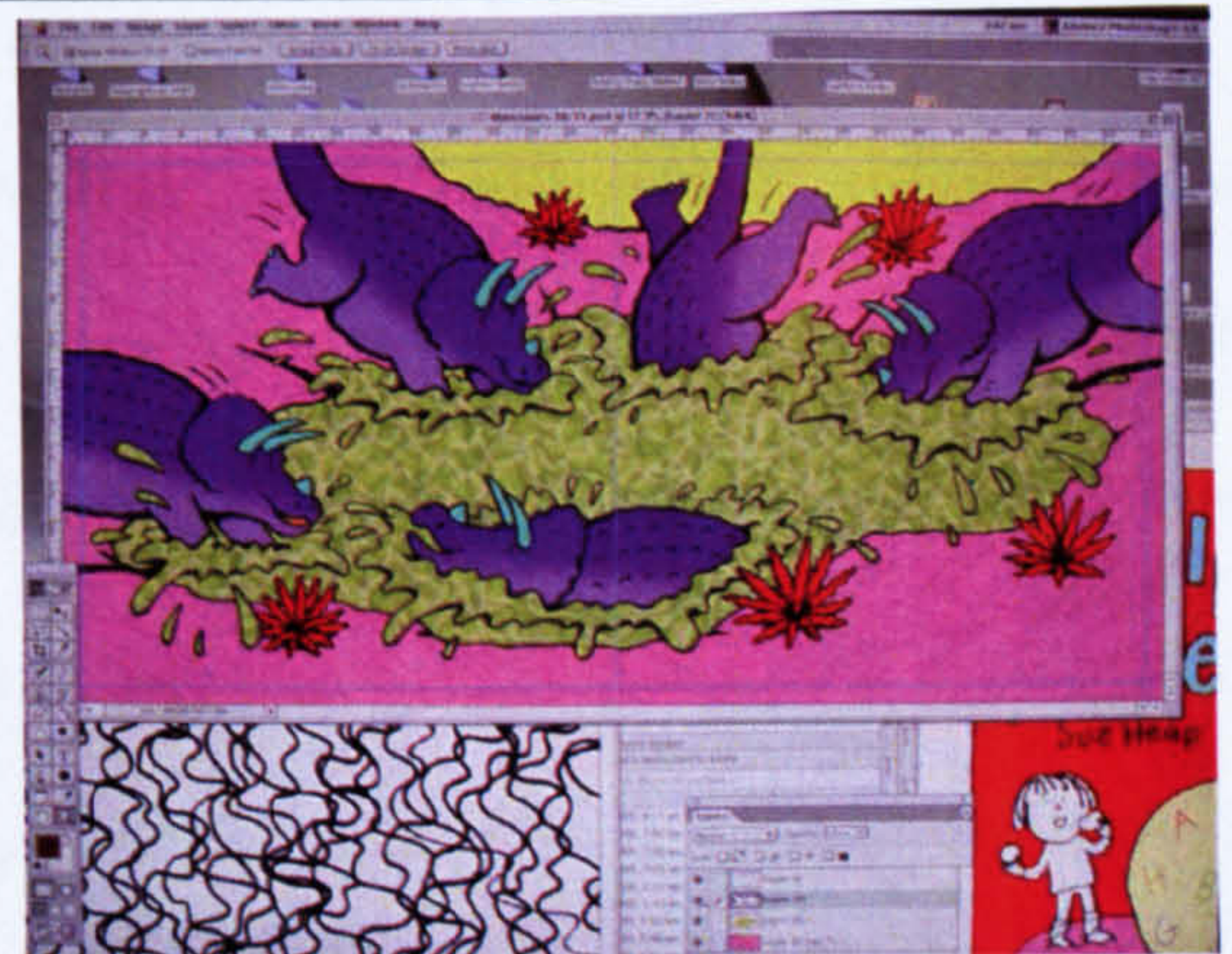




Figure 5.12 The process of practising work using Digital Surfaces/Layers and Electronic Collage, provided by BI 3

“The process used is: firstly, a pencil rough, working out how to combine text and illustration and deciding on how the image will look drawn at 100% printed size. Secondly, the line artwork is drawn in 6B pencil. Approximately 50% printed size. Thirdly, additional texture to be digitally added in colour to the dinosaur skin, plants etc. drawn in 6B pencil. Fourthly, scanned-in artwork, enlarged to 100% printed size, at an early stage of colouring, done in Photoshop, 300 dpi CMYK. Fifthly, completed digital a/w with all patterns and textures added. Finally, the printed book.” (BI 3)

The images (1) and (2), were drawn with a 6B pencil and intended to present a broad black-and-white line work and these line works were included according to the composition sample which is shown in image (3). After that the line work (2) was scanned to add colours using the Digital Surfaces/Layers technique, fitting in colours on different layers. Patterns were gradually placed into the collage from the image (1). Particularly in image (5), the pattern in the green grass was derived from the free lines

that are in the bottom of the image (1) and the lines were later distorted and waved in Photoshop. In the final procedure, the creator, in accordance with the initial concept, arranged various weights and angles of the text that curve in a dynamic appearance. The printed page is shown in image (6), illustrating some colourful artwork in harmony with the flowing text.

This is a characteristic of illustration that has been commonly adopted using digital techniques. The practitioner previously used to cut and paste sketches where appropriate. He described the changes before and after employing digital tools. "I used to draw loose drawings and as I developed the character, it was then photocopied in all different sizes because I needed a guide to have all sorts of characteristics. This was to make sure I had the right size character to suit the book. Therefore, I used to have lots of photocopies in different sizes with me. Now I put one key drawing onto the computer and resize it according to the layout of the book ..." The function of the computer does not seem very complicated for the practitioner; he used Photoshop as a substitute photocopier to produce characters for resizing and inserting them to suit the composition.

The change also appeared when using different types of traditional tools. "I do not have to do charcoal anymore, it is very messy and it is horrible... Now I just draw it with a 6B pencil and scan it in." As graphic software has provided a multitude of possible ways to reproduce the line work of pencil to appear as a charcoal drawing, this practitioner thus used soft pencil instead of charcoal and enlarged the line work on the computer. The

result shows a similar quality to charcoal and the artwork is less messy when colouring it.

Moreover, the change of the appearance of more complex patterns post digital technology was described by the practitioner. "Before I just did something which I could manage, I just drew a simple pattern but now I can draw the complex patterns. That is something I love about computers. It really aids me in doing things I would not be able to do previously, such as the patterns." The patterns in the practitioner's work could be seen as more complicated than before he adopted digital techniques. Due to the computer facilitating the process of duplicating patterns, patterns can be reproduced as many as users required. In the meantime, if it is necessary, those reproduced patterns can be used as another basic pattern and be rendered again. Thus when some practitioners use the computer their patterns often become more sophisticated than with the use of traditional methods.

BI 4: (g) Digital Montage/Collage

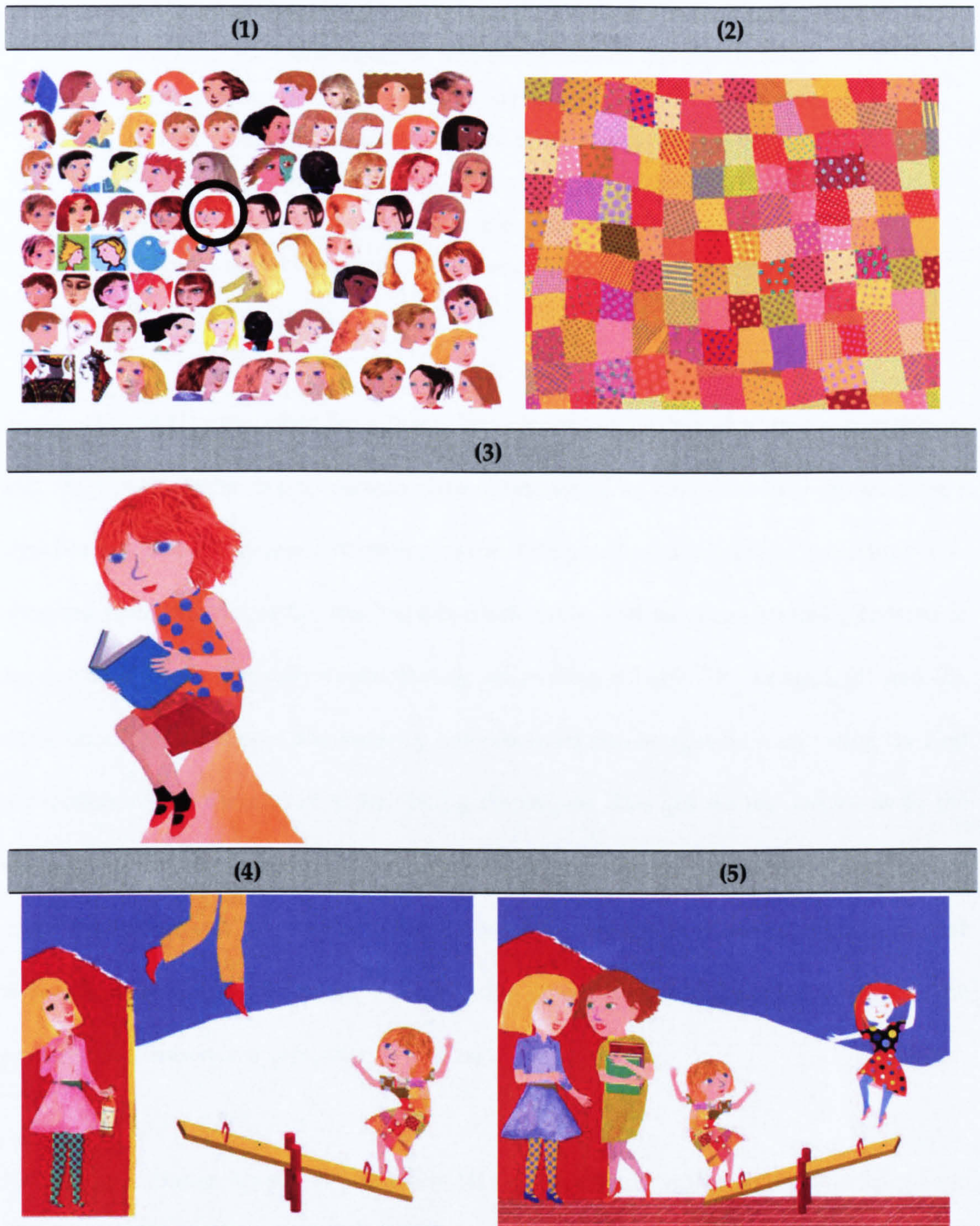


Figure 5.13 The process of practising work using Digital Montage/Collage, provided by BI 4

“The heads are character studies partly collected from earlier images, partly created specifically. As it happens I have just been making a new book and I selected one of the heads shown on this page to be the chief character in the book. The patchwork of spot patterns was created for the pattern of a character’s dress. I wanted the dress to be the same but different every time we saw the character so I pasted different parts of the pattern into the dress on different pages. The seesaw image is a montage of various elements from other pictures.”

(BI 4)

Images (1) and (2) were taken from image libraries initially established by the practitioner, and the various features and patterns have been saved as resources for later creating a new book or piece of artwork. Referring to the little girl shown in image (3), her head was obtained from the library (1), the head in black circle, and has been carefully twisted to appear as if she is naturally concentrating on reading a book. The images, (4) and (5), show how the practitioner alternatively has produced two images for monitoring the best expression whilst the narrative was being developed. The girl on the seesaw with the dress wears clothes pieced together; her dress is also derived from the library (2). The colourful background highlights the well composed figures in which the figures appear to be drawn by acrylic; therefore, it has become more difficult to distinguish whether the artwork was drawn in a computer or by hand.

For this practitioner, his pre-digital work did not necessarily appear as a colourful collage with mixed media. “During the time before ‘digital’, I started working more with collage i.e. putting things together.” He explained and thought “If I work like that, the computer is not far away from the way I work. It is in some ways similar to print making, where I

am building and putting things together. It is just a slightly different way but it allows a degree of flexibility." To adopt digital techniques, the practitioner felt that the computer provided possibilities for composition, which could not be achieved through using traditional methods. This flexibility was particularly valued when the illustrator shifted to the use of various digital applications, to create the quality of artwork which can only be produced through a considerable range of printing equipment.

For some but not all practitioners, they like to establish image libraries. This practitioner admitted that he preferred to use an image library as part of his working procedure and choose features from it. "As I was creating an illustration for my book, I would establish the image libraries. I search for images from the Internet and change colour using Painter. I would scan in sketches to the computer to colour, then use the computer. When the illustration needed a head I would search in the libraries, finding any suitable images or heads." The use of personal image libraries has been regarded as a resource for many digital practitioners when later producing new books and piece of artwork. Images from the libraries could be repeatedly used in different projects, resulting in the production of illustrations with consistent features and the features that exist in the libraries are efficiently recreated.

TI 1: (f) Digital Drawing/Painting



Figure 5.14 The process of practising work using Digital Drawing/Painting, provided by TI 1

“Initially, I did a rough pencil drawing until I felt it was right, then I drew black and white lines, marked the colours for further scanning to

the computer. On the computer, I began the process of redrawing the line work and colouring, adjusting tones using Photoshop. Since it looked good for me, I added shadows on different layers. At the end, the layers were merged together that was about 10-20 layers altogether, and then I would do some of the final touching.” (TI 1)

The images of (1) and (2) are hand drawn sketches and roughly indicate what colours would be applied in the image. The sketch was subsequently scanned in to the computer and the lines were traced to produce the same depth, since the lines in a computer appear neater than the lines of a hand sketch. Once having the digital outlines, the practitioner increasingly added the colours, showed in image (3) in which a blank white heart was left where text would later be included. The final artwork appears with a clarity of line contour, with the inclusion of various accessories spreading through out the image. This artwork was only one page of the book; the book was designed and completed by the creator before submission to the publisher.

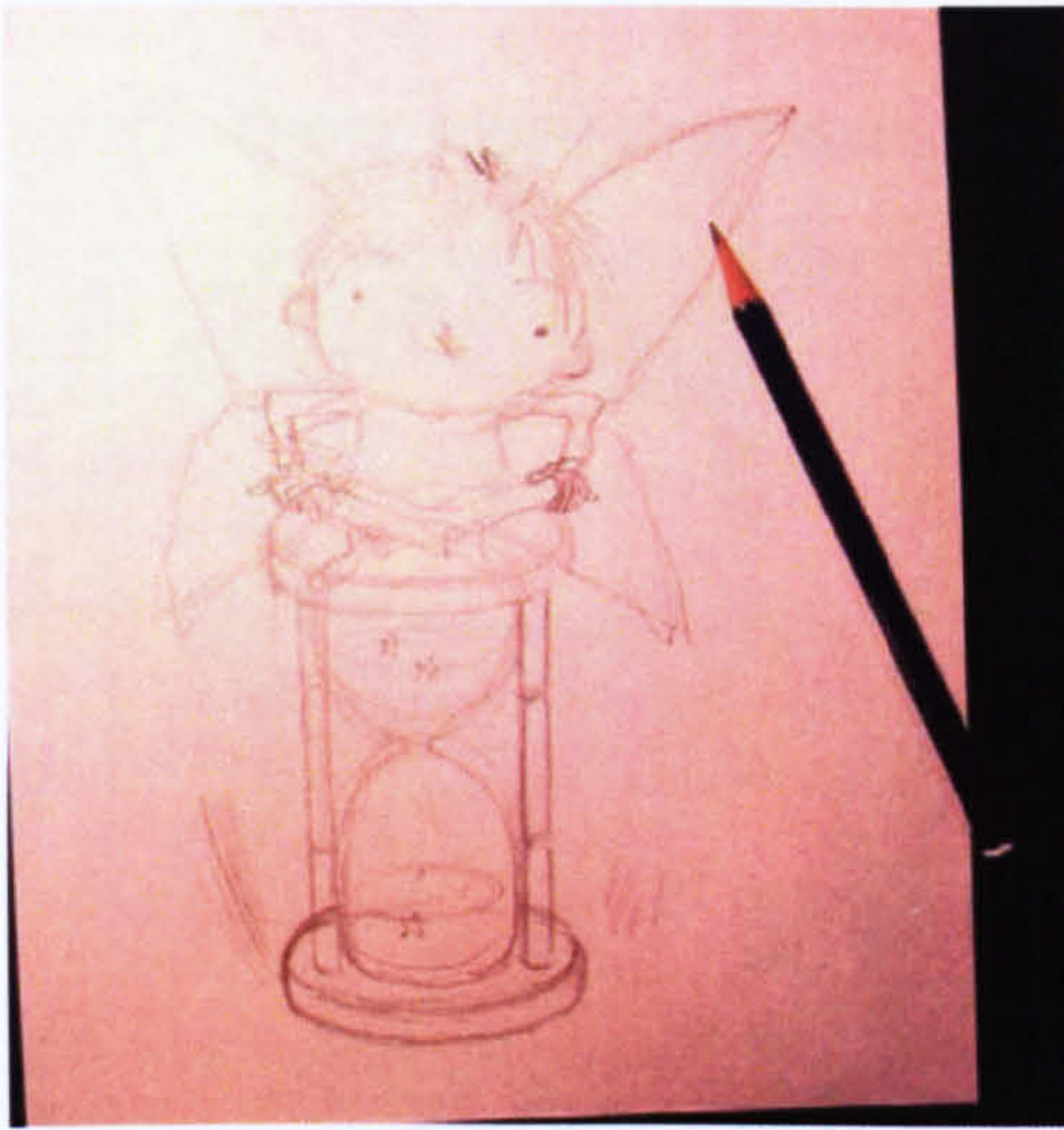
There are two possible ways of commissioning illustrators. One is art directors already have a rough layout for a whole book design, illustrators thus follow the indication that art directors give and draw in a certain space of a book. This kind of book design generally includes several illustrators in one book; therefore the art director may need to design a spread page where illustrations may be included from a commissioned illustrator. The other way of commissioning is for illustrators to have control of the design and illustration entirely, regarding the work of design as part of the commission, without help from designers at the publishers. In this type of commission, the creator

typically is both an author and illustrator at the same time.

To some extent, illustrators prefer to include the design and layout when creating a children's book, in particular a picture book. Graphic applications seem beneficial to the illustrators who intend to illustrate and design the book as a whole. This was expressed by the practitioner who created the above work, he said "if somebody submits illustrations to publishers and then their art directors design covers for them, in my case I would prefer to do it by myself. I think I could easily include illustration and design in one without asking designers. I hope I have control over all things up until it is given to printers." There is no doubt that digital technologies have facilitated a design process and this may therefore mean that some illustrators are more willing to include design as part of a commission. However, this could be interpreted that even though their commissioners may welcome this development, the authority of designing a book still remains in the publishers' hand. This can be seen from the response of a chief editor of a Taiwanese publisher, "I know some illustrators that after they adopted the computer, they may include texts and whole design, but we would still need to examine and do some altering on the design" (TE 2).

TI 2: (f) Digital Drawing/Painting

(1)



(2)



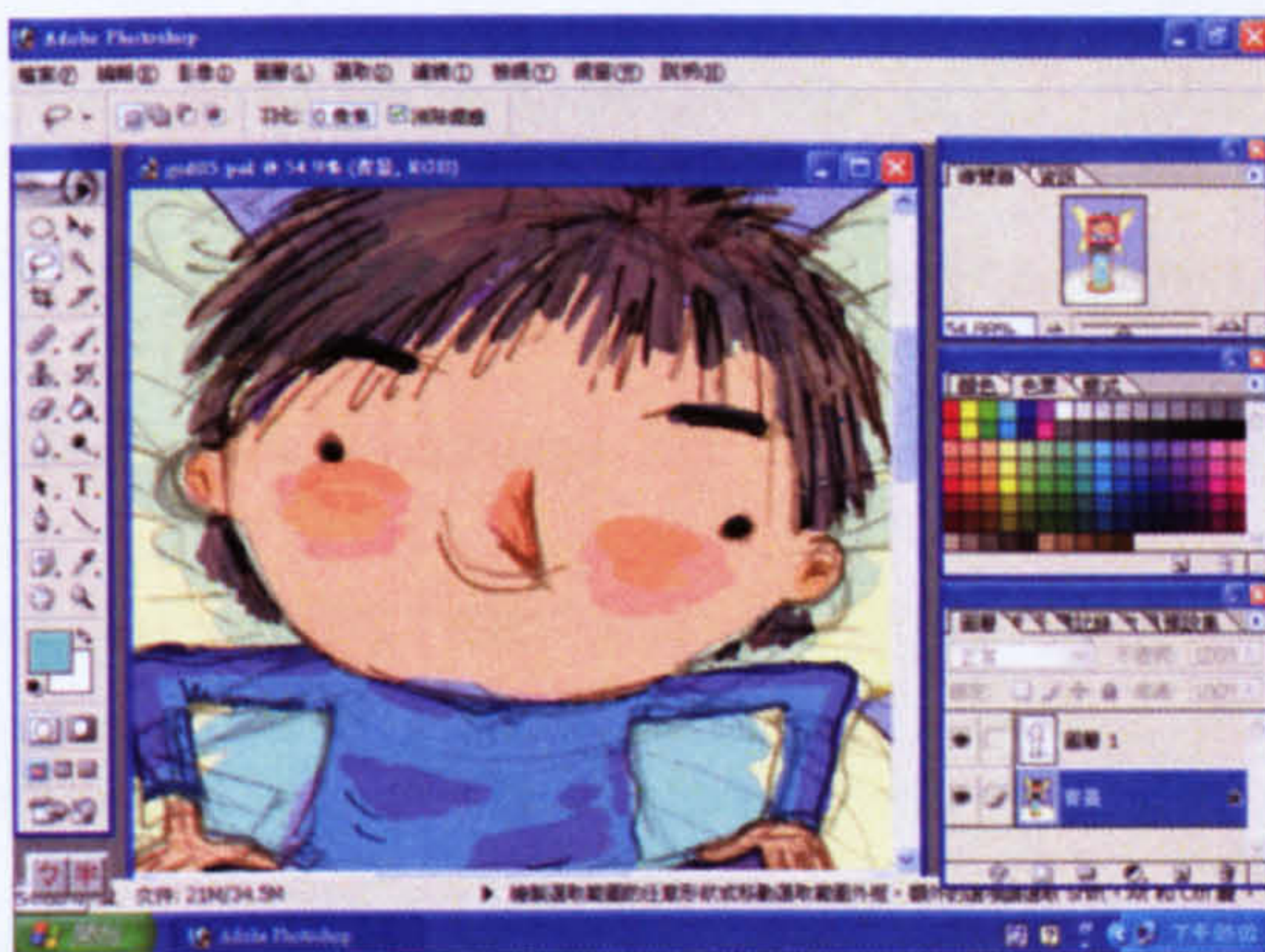
(3)



(4)



(5)



(6)



(7)

(8)



Figure 5.15 The process of practising work using Digital Drawing/Painting, provided by TI 2

“The initial concept came from the requirement of the client. I started doing roughs. Once a rough was approved, I drew black-and-white line work and scanned it to the computer. The line work was translucent on the top layer and the colouring process was executed in several layers, under the top layer. Colouring the image began with fitting in base colours to gradually add details, adjust lights and tones, until the atmosphere was what I felt was right.” (TI 2)

The above images demonstrate an entire digital procedure, from a rough sketch to the final print out. The first sketch is shown in image (1) and is gradually defined with a black pen in image (2) which is later scanned into the computer. Plain colours were subsequently fitted into the digitised sketch shown in image (3) as the base colours of the illustration. With the base colours, the practitioner increasingly added details of the butterfly boy. The images (4) to (7) display a progress of painting in Photoshop in which

gradually detailed tones on the boy were added and the background was lightened until the practitioner was satisfied.

Even though this practitioner entirely adopted the computer in his working procedure, he explained he still liked using hand rendered sketches. "I like to do sketches that still need to be on a piece of paper because if I use the computer to sketch I will feel very strange. Generally, sketching with a pencil feels freer and quicker than with a mouse."

But the practitioner admitted that sometimes he would sketch on a computer particularly the commissions related to mechanical and scientific subjects. "... depends on the nature of commission, if it is about scientific illustration I probably will draw directly on the computer and if it is about a humanistic story I will most likely sketch using a pencil."

For this digital illustrator, the decision to sketch on a computer may be linked to the topic of a commission and the scale of a drawing. If a commission relates to a mechanical theme or a drawing possesses a relatively simple one to produce on a small scale, then these could possibly be sketched directly onto a computer. As the practitioner considered that digital sketching seemed more efficient than a rough pencilled version, which later needs to be scanned to the computer for the generating process. Sketching directly onto a computer can avoid the process of scanning hand sketches. With a small scale commission and a low commission fee, most practitioners generally would be concerned with how efficiently the work can be completed; directly sketching on the computer could be one of their efficient choices.

However, the use of sketching on a monitor directly is also related to two facts, a

willingness to sketch digitally and well-equipped computer devices. If practitioners have comparatively good knowledge of applying graphic programmes and particularly if they feel controlling digital devices is no different to handling a pen, then they may have a greater willingness to sketch on a monitor directly. And if they have digital devices such as a tablet and a pressure-sensitive pen, these could help digital illustrators to produce rough work straight away without pencil on paper. In general for illustrators, either traditional or digital users, the preference of using a pencil rather than sketching on a computer does not seem to change.

TI 3: (f) Digital Drawing/Painting

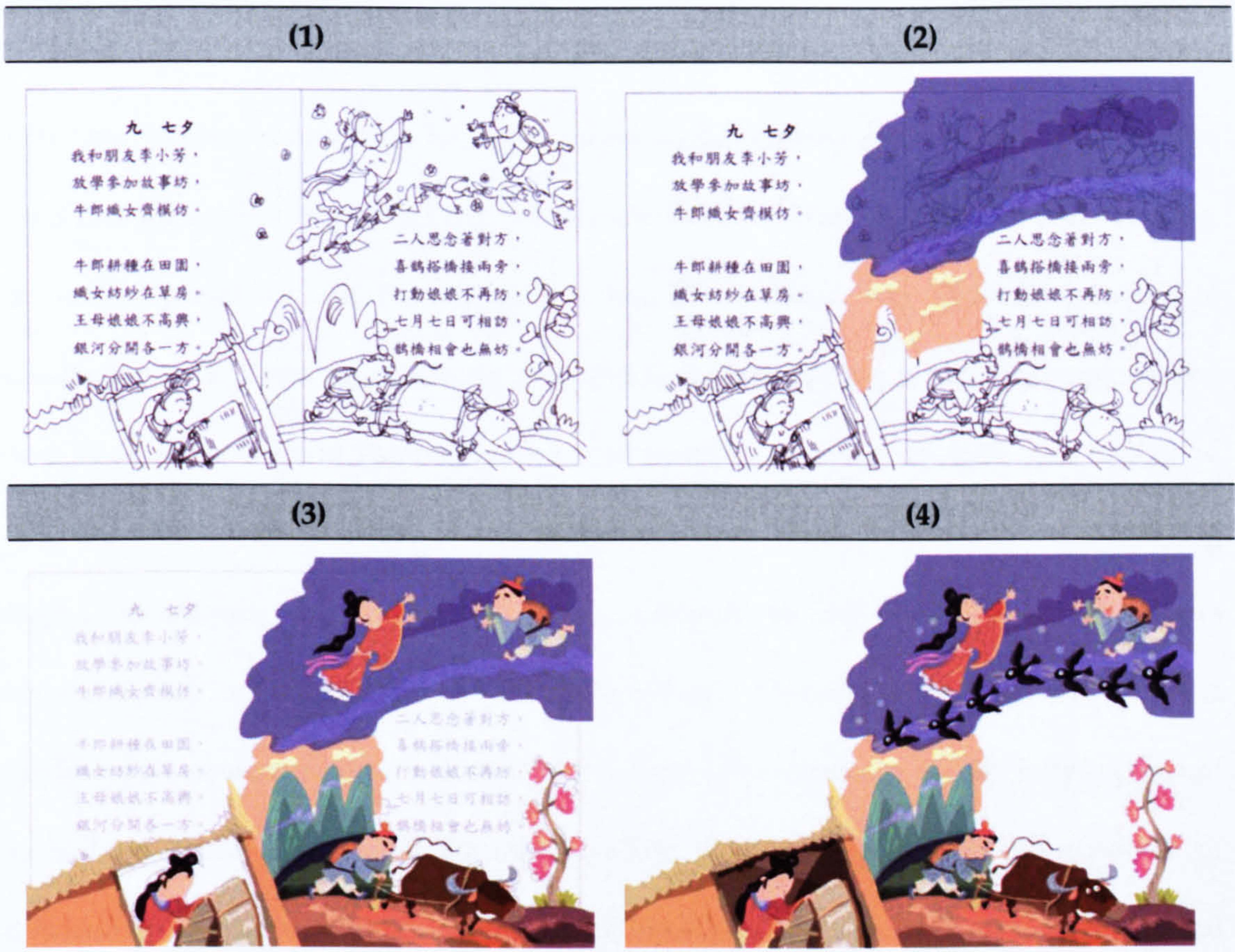


Figure 5.16 The process of practising work using Digital Drawing/Painting, provided by TI 3

“I create the layout first and then left spaces for the text. Later on, I began to draw roughs and put them in the position where I thought it was appropriate. When the roughs were approved, I then traced the lines of the roughs and fitted in plain colours. The colouring was more than ten layers.” (TI 3)

This process was entirely based on a computer but was developed from an initial composition of texts and sketches. Images (2) and (3) show the progress of adding details of colour until the practitioner was satisfied. Image (4) showed the final piece of work

without text.

This practitioner admitted he has been increasingly working on a computer and often used Photoshop. But he noticed that when he wanted to create the effect of watercolours, he would prefer to use Painter rather than Photoshop. "My previous process of illustrating was based on sketching the lines first then adding liquid watercolour, but now I add the colours in Painter which could simulate the effect by 80%." He explained that the dissipation of watercolours was considered unsatisfactory when employing digital techniques to simulate. "...it is difficult to achieve dissipative colours spontaneously as with hand drawn watercolour." Despite the advance of graphic applications, some subtle variations of the natural effects can not still be fully replicated as that produced by hand. Practitioners would need to be aware of the expertise of different graphic applications in order to choose the one that best mimics traditional media.

TI 4: (a) Digital Composition



Figure 5.17 The process of practising work using Digital Composition, provided by TI 4

“I began with conceptual ideas, and then I did a rough storyboard for the whole book. I scanned some elements which may be a hand drawn dog or gathered patterns, monitoring where and which were better for my image. When the composition seemed satisfactory, then I would

look at the screen and use traditional media to draw and produce a collage, after that the hand made artwork was submitted to the publishers” (TI 4)

This practitioner only employed Photoshop in the initial stage for monitoring which composition was more effective in presenting the artistic qualities or features. The first row of images (1) to (3) shows the development of the main character, a dog, against a background of colourful squared patterns. The second row, (4) to (6) is another composition, that of the dog against the background of flower patterns. Since monitoring the screen, the practitioner subsequently chose one of them to be a ‘visual’ for a later drawing, using traditional media only. Image (7) shows a printed inner spread page that followed image (6) and was drawn with traditional means.

This practitioner described how she used the computer as another tool for visualising composition. “The significance of computers for me is like another tool for visualising composition, but after that I still prefer to draw with traditional means until drawing is finished.” Digital technologies in this case were used simply as a means of visualising some of the existing elements of the layouts on which combinations could be further developed through a hand drawing. It was difficult to distinguish whether digital means had been employed. Interestingly, most of the practitioners did not consider that their artwork was related to digital illustration because they felt that their work had not been fully produced through digital means. The definition of using digital method for them was related to the use of graphic software to actually draw and manipulate an image. But when creating a Digital Composition, the artists felt they only look at the composition on

a monitor and follow the composition to draw which meant that they did not fully use digital means to produce an image. Noticeably, this may relate to concern over how the quality of an image produced with digital means may be considered inferior, in comparison with that produced through traditional media. However, Digital Composition is a method commonly employed in illustrators' works and including those who have declared they are practitioners who only utilise traditional media.

Summary of findings

Through the previous examination, the interviewees have raised several practical issues in relation to the changes in their practice they have introduced since they have begun to employ the computer. These issues are summarised as follows.

- It is possible to have two ways of sketching associated with the digital means. Firstly, sketches from observation or imagination are subsequently scanned into the computer. Secondly, elements are collected and composed on a monitor as a visual example, and then artists use the example to sketch from manually. When following the sketches on a monitor, the computer could be used to quickly compose various elements and show these combinations; artists thus could observe which combination could be further developed into a final sketch.
- The change of possibly drawing on a small scale background. Computer applications allow practitioners to draw on a considerably smaller scale drawing using traditional means initially, and then to scan a drawing into the computer using a high resolution and

to enlarge the drawing to compose the main characters. This practical method is seemingly a good solution for practitioners to avoid over consumption of time when detailing some of the background drawings. These may need to have considerably larger scale drawings, as the size of a background needs to compete with its main characters when they are composed in a piece of artwork.

- The chance of having a greater opportunity to use strokes and marks derived from other drawings or a mark that is accidentally created on paper and later blended into the intended creation. It is a common technique for collage practitioners to present their work employing entirely conventional media. The digital process copies hand-drawn marks and manipulates them to give an impression that the marks were initially present in the hand drawn artwork. The graphic applications allow this process to be controlled whilst strokes and marks are merged that may not originally belong to the artwork.

- The use of different types of traditional drawing tools. Due to practical reasons, some practitioners have used other traditional tools instead of the drawing tool that was favoured pre-digitally, such as a soft pencil instead of a charcoal. The decision stems from how practitioners can employ new techniques that are now more easily applied. Using the computer can now simulate the appearance of the approaches which used in pre-digital era and yet images of a similar quality can still be produced.

- The appearance of complex patterns. Some practitioners' illustrations have reflected the use of more complicated patterns since adopting digital tools. This may relate to graphic

programmes providing a multitude of possible ways for repeating patterns and creating multiplex pattern shapes.

- The appearance of more collaged imagery. It is beneficial for practitioners to quickly and easily assemble different forms of material. There are two possible ways to be considered when producing collage artwork. One way is the collaging of different materials without changing their appearances; the other way is the use of collage materials that are further transformed into a new appearance with a new meaning.

- A wish to establish digital image libraries. Many practitioners preferred to establish digital image libraries before creating a new book. The library functions as an image resource that can be used for later artwork.

- A willingness to incorporate design and illustration as a whole. Some practitioners are willing to include design in their actual commission and this willingness is related to digital technology that facilitates a design process; the practitioners therefore can access the process easily as a designer. However, this willingness may not be applicable to the practitioners who may not have the authority to include design as well as illustration, if the publishers have not given permission.

Synthesising, the changes of practitioners since adopting digital processes have suggested that these changes involve three aspects of alteration. Firstly, the alteration of working processes; practitioners use computers as a convenient tool to substitute certain

processes that were difficult to achieve or were time consuming when manipulated through traditional media. The other alteration is in relation to visual appearances, certain characteristics of imagery have become increasingly seen in some practitioners' artwork since employing digital processes, because the computer has facilitated its procedure as well as speeded up its process; these characteristics refer to complex patterns and collage. Meanwhile, the alteration of having a greater intention of doing things which before the digital era were comparatively difficult. To a certain degree, the computer has compelled practitioners to be willing to establish a digital image library and create illustration and design as a whole, and those intentions are now seen as part of the in illustrators' practice.

5.3 Rationale of Adopting Digital Technology

Whilst illustrators considered adopting digital processes, the traditional media that could not be fully substituted by the use of a computer for the majority of the practitioners were the physical textures and the feel of brush against paper that caused spontaneous marks. The findings in Chapter 4.1 have suggested that the illustrators mainly preferred their works to be perceived as drawn by a traditional medium, which also involved fulfilling the market and personal preferences. Although children's book illustration is often presented as drawn by conventional means, it was a dilemma for practitioners as they knew that the advantages of applying graphic programmes meant a greater control

over a working process and the use of the programmes was able to mimic traditional imagery. Therefore, integrating digital methods as part of drawing processes should be a more effective way of producing an illustration rather than only applying traditional media. Many illustrators still work with traditional methods but others have changed to adopt digital technologies. So, why did these illustrators turn to digital means? And what were the reasons that persuaded these illustrators to adopt digital technologies?

From the transcribed data, I identified that several factors may have encouraged the practitioners to adopt digital methods. In this section, I aim to examine the possible causes in relation to the rationale behind the decision. The rationale of adopting digital technology is discussed as follows.

Dissatisfaction with existing work

As illustrators have enjoyed a long career, sometimes they may feel dissatisfaction with their drawings. Computer graphic programmes provide an alternative with varieties of visual effects. In particular, some illustrators who have been trying to establish their own artistic style through traditional media find their creations have not always been as successful as hoped for. Digital applications represent another option for these illustrators, one which they can switch to from using traditional media and adopt the computer and the effects that were considered difficult to achieve in the pre-digital era.

The gathered data has shown this dissatisfaction can also relate to those illustrators who experimented with a variety of genres. "I don't like my drawing to always look the same

and it seems as if it has never changed. For example, if I look at my previous work in the bookshops I can be ashamed of it. People are progressing all the time, I don't want to stick to one style and not change" (TI 2). The dissatisfaction with existing work and a preference to explore various genres could be considered as motivating factors for practitioners who wish to adopt digital means in their professional careers. More importantly, these illustrators are interested in learning new technologies as well as developing their working procedures through applying new methods. Some hand drawn techniques could be complex to produce or there may be difficulty executing artwork when employing traditional media. Thus, adopting digital technologies could be a potential means to overcome these difficulties. In this study, most of the interviewees preferred presenting artwork as hand drawn illustrations. But for some others digital technology meant in practice that there was a flexibility to recall any stage of the drawing process and have better control over the final creation; these advantages if coupled with the dislike of their existing work and alongside a wish to experiment with other possibilities, meant that the adoption of digital means became an ever stronger possibility.

Characteristics of illustrators

Every illustrator has their own manner of creating illustration, some prefer to develop in the same genre but others might like to change from time to time. The styles of illustrators are considered to have an important role in the decision to adopt digital technologies. There are several interlocking characteristics for joining in the digital revolution. One is the curiosity of new techniques; most of the interviewees using digital

means described how they felt when the computer first appeared on the scene. Their first idea of it was typically based on what kind of imagery it could produce and whether this could be achieved using a hand drawn image. There was curiosity about digital abilities, "I was addicted to the computer because I am a person who really likes to experiment with new things" (TI 2). "... using the computer to simulate traditional drawing is fun" (TI 3). For the interviewees, digital technologies captured their attention because of their curiosity which later became an enthusiasm about the graphic applications. Illustrators who were most likely to experiment with new techniques stimulated by curiosity, could initiate the need to try digital methods in producing their artwork.

The other possible characteristic is a 'playful' attitude. As the computer can provide various possibilities during a creative procedure, so the process of creation can be stored, as it has a systematic 'history' function in Photoshop that enables artists to draw and then return to any of the stages they would like to redraw. Artists' concerns about damaging their artwork can be alleviated using this method and artists can move forward and backwards, switching to different stages of the process. In particular, artists are given greater flexibility through experimenting with and merging different layers, in which the merged layers may almost accidentally appear in a variety of ways. "... my ideas seemed to come to me through happy accidents when I am working on a collage on the computer" (BI 3). The computer provides opportunities of merging and manipulating layers in different orders and of using effects, which can give its imagery an unintended appearance. With this variable function, artists who enjoyed less constraint in the drawing process preferred using digital technologies. In this respect, this 'playful'

attitude was echoed by the study of Berkenwald (2002) who has indicated that practitioners, whose attitude towards 'playfulness' and an interest in experimenting with novel means would amplify the determination to use digital media.

In addition, the personality who likes their final work to be perfectly completed can be called a 'perfectionist' or 'cleanist'. With the digital process the final print out could be on a sheet of paper or stored in a digital format, in which the final work can be presented very neatly and without the additional of extra textures glued onto paper, in the case of a collage. Having a tidy and polished image for those illustrators who like their finished work to have a fine surface quality, the computer could seem a better choice than traditional media. In other words, 'perfectionists' generally do not like work to be seen as messily coloured or glued with many cut out sheets of paper. They aim to produce an image completed on paper without any attachments to other elements, as these elements should already have been scanned into the computer. A perfect, clean print out of work is what the perfectionists aim to produce.

Learning environment or social framework

To some extent, the 'learning environment' has had a profound influence on illustrators' knowledge of how to apply graphic applications. The younger generation has generally been trained in art and design institutions since the 1990s, with full access to specialised digital equipment and an understanding how to utilise graphic applications seemingly naturally for later employment in the publishing industry. By contrast, the older illustrators, who trained before 1990, may have not learnt these skills during their

education and have had no time to learn these when busy in commissions. "I think the illustrators who are currently working with publishers won't have had much time to learn how to apply the graphic software whilst they are busy with their commissions" (TE 2). This observation was from a head editor. For older illustrators, they have practised drawing techniques which they have repeatedly employed in their work. To now adopt digital technologies could be challenging unless they have recognised using digital methods could effectively help them to achieve the work and maintain the quality which they had intended (TI 7). More importantly, the older illustrators show no urge to change their drawing media through which they have already established their own styles and are well-known by the general public. Suddenly altering the appearance of their work as a result of the effects of electronic techniques, could lead to the possibility of losing existing audiences.

Another reason why older illustrators tended to keep to conventional media could be the working environment of illustrators, which is a comparatively lonely and independent studio environment. In general illustrators draw in their own spaces which means it can be difficult for illustrators to participate in training sessions without support by a company/publisher. Joining the sessions would require payment by themselves and this becomes an extra outlay. An interviewee who used traditional media agreed that if someone could teach her how to apply graphic applications, she would be glad to consider working with digital means. "I would be happy if something needed adjusting or somebody sat beside me and directed me" (BI 6). The independent working environment means to a certain extent illustrators must learn the applications by

themselves or access training through other means if they had not been trained earlier. Thus the prior learning context of illustrators has effectively influenced whether they choose to use digital means or traditional methods.

Not only has the learning environment influenced this adaptation, but also the social framework has impelled some specialists to employ digital means. Digital methods are no longer unusual as society increasingly uses computers in daily life. Nowadays children are greatly influenced by mass media and a range of genres of imagery would be required to keep abreast of the changing trends of children's preferences for books. Therefore illustrators who have created well-known characters may now need to follow the main-stream market preferences and learn how to draw digitally. An example was shown in an interview which described how the illustrator who illustrated Thomas the Tank Engine was required to employ digital means, since society has gradually embraced digital technologies.

"... the illustrator who produces Thomas the Tank Engine used to produce his work traditionally. However, with the introduction of computer, everything is now being produced and edited using computer. He worked with a well-established character, and he always has a huge amount of work to do. For years, he has done them traditionally with paint, pencil and paper. Then slowly he produced his work bit by bit using the computer and then to such an extent where he produces all his work through the computer." (BI 5)

For the younger generation of practitioners, knowledge of digital means is regarded as a 'natural pencil in their pencil case', but for some older illustrators adopting digital

methods has resulted from commissioning requirements. As our social contexts have gradually acclimatised to the digital media around us, the social framework has driven the older illustrators to practise and adopt it further in their drawing processes.

Styles of illustration

Graphic software such as Photoshop and Illustrator have helped establish certain styles of work since these two applications have been employed and have become very popular in editorial practice. Therefore, whilst practitioners possess certain styles that can easily be adopted for digital techniques, generally they will be much more willing to utilise the computer. What kind of work would those illustrators seek to use digital methods for? The following suggests four styles that were preferred instead of utilising digital techniques. The first characteristic of illustration appeared as a photographic manipulation; illustration may be integrated with several photos as translucent, blurring and blending within certain parts of the image to create a new meaning overall. This kind of photographic illustration is not difficult to manipulate as Photoshop was initially designed for retouching photographs; it mimics the processes that would traditionally be carried out in a darkroom or during the reproduction process. This characteristic of illustration was largely employed in other fields of publication but not as much in the area of children's books (BI4).

The second characteristic is the appearance of an image with perfect and flat colours. In other words, the image demonstrates a simplicity of outline drawing either drawn digitally or traditionally, and later plain colours or repetitious patterns are added. The

advantage of colouring in the graphic applications is that artists can view from a menu of colours without first having to mix them. This is most commonly used by children's book illustrators especially if the line work is drawn by hand, then flat colours are added digitally (Salisbury 2004). The interviewee BI 3 is regarded as having this characteristic in his artwork (see Chapter 5.2, BI 3). "The main reason I choose to work digitally is because... I can get the perfect flat colours or the very crisp patterns that complement my style of drawing." Illustrators whose styles possess this characteristic often adopt digital means, as the computer can undoubtedly create an image that is perfectly flat in colour and an image with repetitious patterns can be easily applied.

The third characteristic of illustrator's preference for the use of digital means is artwork that is assembled with an artist's own drawings along with a range of 'found' materials. Often the found materials may also include collected ephemera, as well as photographic images. "I have noticed that an increasing number of illustrations use mixed media and collage. The collage includes all sorts of textures and photos ..." (TE 3). As graphic software has facilitated the process that often needs to be cut and pasted into new positions, the availability of digital manipulation has ensured that this entire process is somewhat smoother. Digital technology allows collage to be more easily accessed using digital methods that do not have to physically do the cutting out or gluing of images together by hand. Illustrations using collaged methods have largely been produced in the children's book market. Imported hand drawn images are incorporated into digital processes; these illustrations can be perceived as rendered using a traditional method.

The fourth characteristic of illustration that can be perfectly produced in digital applications is 3D illustrations. Considerably influenced by the film industry, 3D images are now prevalent among children's books, especially images that appear with glossy and perfect textures (even though some of 3D animations have recently been developed with furry and fibered textures). Practitioners, who originally drew simulations of 3D work by painting highlights and shadows, now prefer to adopt digital techniques. In particular, owing to the influence of 3D animation, the market has followed this fashion in the production of some children's illustrations. Practitioners therefore whose previous work not only possessed three dimensional qualities, as well as those whose work previously did not possess this quality would be willing to employ a digital means, when considering creating a 3D image.

Control and efficiency

Using traditional media to produce an image risks the impossibility of correcting technical mistakes, because it is not possible to go back and fix errors. It is possible to correct mistakes in other ways but not by 'going backwards'. By contrast, digital media seems to play with time and enables greater control over the work, because any stage in the making of the image can be recalled, redone or undone. The work's history can be stored at any point and when the image needs to be returned to a previous stage, the digital method provides a non-linear process. Such greater control over a drawing process was admired by some illustrators when they recounted the merit of digital technologies.

"I like the control it gives me. I do feel though that it can take the 'instant creation' out of the equation..." (BI 1)

"The main reason I choose to work digitally is because I like the complete control it gives that I can't attain with manual artwork." (BI 3)

"I can also zoom in and work in tiny areas of eyes and faces for example, which I had less control over using the mixed media..." (BI 2)

This element of control can be identified in illustrators' practice, such as control over composition, typeface and visualisation during the working process. Working with the digital process, illustrators can view the composition of images and texts, and have flexibility in dragging around the texts to where is appropriate. "So to me the computer feels like a very natural tool and one that gives me far greater ability to play with the possibilities of composition and arrangement" (BI 4). Another possibility of composition also allows artists to change variations in sizes of typeface instantly which in the pre-digital arena was considered a laborious and intensive job. In particular, this would mean that during the process of reproduction considerable time would be needed to set type in the right position. However, with digital technologies this does not seem the case for current practitioners. More importantly, they thought that without the typeface within the artwork, it would be difficult to measure how the typeface fits within the images.

“Using the computer I could choose my typeface when I do a children’s book. I include the type mainly because I know how it would feel. Does it fit within the images? If I design it without type, I couldn’t visualise the entire composition of the work which for me is a risk...” (BI 4)

The control also relates to how a merged composition could be visualised on a computer and how colours are later fitted in. This visualisation is essential for practitioners to evaluate the aesthetic of their creation. In addition, there is control over ‘layers’, with the digital process; there is flexibility when merging different layers, which sometimes may appear as a ‘happy accident’. The digital processes allow a certain degree of flexibility when managing layers and each layer contains its own images which can be altered by both ‘mask’ and ‘style’ in software such as Photoshop. Before layers are merged, their order can be rearranged, therefore a different order of layers merged together will have various appearances; thus sometimes a merged image may be created that could not have previously been imagined. However, a study into art and technology conducted by Candy and Edmonds (2002, p. 69) has revealed that for most artists, whilst they collaborated with digital technologies, they thought the most important aspect of “using and having access to expert technological knowledge cannot be over emphasised.” Otherwise, the creation can be perceived as an outcome apparently resulting from unnecessary digital effects, having lost the initial conceptual idea.

The other main cause driving practitioners to adopt digital technologies is the efficiency of its process. The efficiency is mostly related to speeding up communication and

delivery; artists can instantly transfer digital files to publishers without waiting for carriers to deliver a completed illustration. "I think it speeds things up and also gives the illustrator a chance to have a wider range of alternatives ..." (BI 6). Nowadays, the social context drives people to learn how to apply digital equipment in their daily routine; artists who do not use the computer in their practice certainly would also have opportunities to deliver the files via digital technologies. The efficiency not only accelerates communication to some extent, it also efficiently addresses issues in the working process which if without using the computer would be considered labour intensive, such as "Text, setting. Type is one of the most labour intensive and frustrating jobs in publishing..." (BI 6). Digital technology however could accelerate certain parts of the working procedure and altering and adjusting typeface is just a push of a button. Meanwhile, in the long term, it could save expenditure on repeated photocopies used in the traditional way of collage. "In a way, using a computer is cheaper because the colour copier can be very expensive" (BI 4).

Most interviewees, when describing the experiences of why they adopted digital technologies, were likely to express the terms 'controllable' and 'flexible' in connection with digital means and, these represented an overriding force for them to gradually participate in the digital revolution. However one factor alone was not enough to lead those practitioners to join in the revolution, it was the intertwining of several factors that was important. Practitioners may have felt dissatisfied with their existing work, and have been willing to experiment with novel techniques. They have even considered that the quality of their artwork could be developed whilst generating digital processes and to

some extent this has not affected their reputations. Practitioners have also been compelled by the learning environment and the social framework as now the use of digital methods is no longer unusual, it is a current practice in children's book publishing. Meanwhile, practitioners who possess certain styles would be much more willing to use the computer, such as the work using a photographic manipulation and collage, appearing with perfect and flat colours and 3D images. Those factors I have mentioned in this section have essentially inspired practitioners to be involved in the mainstream of digital technology.

Summary of findings

The reason for practitioners especially illustrators, turning to the use of digital methods has been triggered by several factors. Why illustrators adopt digital technologies could not be determined by a single factor, it has occurred simultaneously with other factors. Thus, the summary below could not be treated as isolated reasons behind the use of digital technology.

- The adoption of digital means can be due to dissatisfaction with existing work. For practitioners who are not satisfied with their existing work, the digital means has provided another approach to their artwork accompanied by better control and flexibility over the drawing process. This dislike has been possibly accelerated by the preference for various genres; illustrators do not consistently use only one style during their professional careers, therefore adopting digital means is considered a practical alternative.

- The adoption is because of the nature of illustrators. Three characteristics have been suggested as leading to motivation in adopting digital technology: curiosity, a playful approach to creating images and a desire to produce a perfect piece of artwork. These characteristics are interwoven; the curiosity of new technology has interacted with a playful attitude, stimulating a need to use digital tools. The desire of wishing to produce a perfect piece of work has further accelerated the willingness to adopt digital means.

- The adoption has also been influenced by the learning environment. The young generation has been trained in their education to use both traditional and digital methods to create illustrations; the technology is no longer new to them. The use of certain graphic programmes is becoming 'second nature' for these younger illustrators.

- The digital adoption is also because of a social framework which has driven some of the older illustrators to gradually move towards digital methods. Due to a development of the society, which has encompassed digital imagery, some well-established book 'characters' now need to be created using digital means, in order for the presentation to have a contemporary look. Those older illustrators have trained themselves to adopt digital tools.

- The adoption is due to certain styles of illustrations that are easier to create with digital methods. There are four styles that are regarded as having advantages when creating processes using graphic programmes; the styles which appeared as photographic

manipulation, flat colour fitting and repetitive patterns, collage and 3D illustrations.

- The technological adoption derives from control, consistency and efficiency of digital technologies. The control of digital methods is mainly appropriate for composition, typeface and visualisation, which can be seen as a key reason to explain the reasons behind illustrators' use of digital tools. Meanwhile, the efficiency of the working process that deals with laborious intensive tasks such as type setting and image colouring; this could also be a benefit from adopting digital methods.

5.4 Conclusions

The digital processes which are employed in children's book practice do not differ significantly between British and Taiwanese illustrators' practice; this can suggest that the way of applying digital technologies in publishing can cut across national boundaries, without fundamental differences in either countries. Illustrators who have adopted digital means are mainly concerned with the convenience of producing the images, and through digital practice their illustrations can even be improved in terms of their aesthetics in comparison with work produced through traditional methods. The rationale for illustrators using digital technologies has occurred partly because of illustrators' dissatisfaction with their existing work. At the same time some of the illustrators may prefer experimenting with new techniques; both of these issues may act as a stimulus for

practitioners to adopt digital means.

Through an examination of digital working processes, it has been noted that a partial digital process in which integration occurs with traditional drawing has become the primary choice for children's book practitioners, who have utilised digital technology. For illustrations created by partial processes, it is usually difficult to distinguish whether they have been produced in combination with digital methods because they show similarities with traditional drawing. My research suggests that if practitioners combine traditional and digital means, it can be difficult to identify whether digital techniques have been involved. Those images produced by such hybrid processes generally can benefit from graphic programmes that mimic the appearance of traditional media, in order to fulfil personal preferences as well as those of the market.

Due to the examination of the practitioners' working processes in Section 5.2, there are two key aspects of change that have emerged since illustrators adopted digital technologies. Firstly, the change to the use of digital methods has represented a substitution of a traditional tool with a computerised one; in particular the achievement of certain effects may be seen as an obstacle, in achieving certain effects or seen as time consuming as a process, the substitution of one traditional tool with another or using the computer. For instance, the practitioner BI 3 initially drew with line work using black charcoal, after adopting digital methods the line work is now drawn by a soft pencil. The practitioner BI 2 painted small scale backgrounds, instead of a background that may require a particular larger size. Secondly, the visual appearance has been changed by

graphic programmes; some illustrators' work has appeared differently since adopting digital processes. This work may be presented using a great number of repetitious and complex patterns and perfect colouring.

As interpreted in Section 5.3, the learning environment and the social framework are both considered one of the important factors why practitioners now use digital means. However, Taiwan and Britain have slight differences which have been suggested in my data, the differences appear within the social context of the two countries and how the requirement of digital knowledge has been further emphasised by the education sector. The need for digital knowledge in Taiwan is considered more important than in Britain, which has been influenced by the education sector in Taiwanese society, emphasising the importance of technological knowledge rather than its artistic ability. For this reason, it has appeared that Taiwan has comparatively greater knowledge of applying digital software in general. Because of this emphasis on digital technology, therefore employing digital means in drawing is commonly considered the first choice for Taiwanese practitioners. Practitioners choosing digital tools consider them an essential part of drawing but at the same time drawing with traditional media is comparatively less popular. Britain, however, does not practise digital means as the first choice and sometimes has been criticised for this, "This is due to the culture of 'watercolour artwork' that is still very popular among children's book illustrations " (BI 4).

Chapter 6 Investigating Visual Appearance

In the previous chapter, I examined the common working processes of digital illustration and discussed the reasons behind illustrators adoption of digital means. This chapter aims to examine the visual appearance of digital illustration and further discuss the distinguishing characteristics of traditional and digital illustration, in order to understand the impact of digital technology on its appearance.

To evaluate an illustration which was created by digital methods is never a simple task. Its consideration may be influenced both by personal experiences with digital processes and prior knowledge of digital technologies. The use of graphic software to mimic the style of traditional drawing makes it particularly difficult for the general public to know exactly where and how it has been manipulated by an electronic process. Meanwhile, the majority of digital illustrations in children's books are shown to reproduce conventional media, thus it is considered more difficult to interpret the distinctive influences of digital effects on the overall visual appearance. Although the investigation has its difficulties and complexities, in this chapter, I will strive to investigate digital appearances in two parts, relying on data from the interviews and the relevant publications.

The first part of this visual investigation examines the four selected books which have significantly represented two main characteristics of digital illustration in children's book

publishing, namely the 'new aesthetic' and the simulation of traditional illustration. As discussed in Chapter 3.3 the new aesthetic is considered to be illustrations that have been produced utilising digital means and would therefore appear varied. Simulations use computers largely for convenience and flexibility purposes and the produced illustrations are similar to the images drawn by traditional media. These digital samples allowed the interviewees to evaluate where they believed the images had been influenced by the process of digital generation. The examination of the four books suggests answers to some of the following research questions:

- 1) What kinds of appearance were difficult to achieve before the computer was invented?
- 2) What kinds of digitised traces can be found in illustrations which aim to simulate traditional media?
- 3) Can an entirely digital process 'pass off' as traditional media?

The significance of this investigation lies in how it can develop an understanding of the effects of digital technology on children's book illustrations which have been published. The details of this examination will be further discussed in Section 6.1.

Older illustrators adopting digital methods often hope a continuity can be achieved through digital artwork, showing characteristics of their traditional drawing. However, in truth many practitioners note that after using graphic software their work has been affected by the software in various degrees. The second part of the investigation closely examines the practitioners who have adopted digital means, examining both their traditional and digital illustrations. To compare the visual samples and analyse the distinctive differences between both methods of illustrations is an attempt to gain an in

depth understanding of visual changes by an individual illustrator before and after utilising digital means. According to the comparison of the samples, the research will subsequently provide a possible summary of the nuances/variations of visual appearance in the construction of a drawing: colour, tone, line, stroke, texture and pattern. Further analysis will be discussed in Section 6.2, taking passages from the interviews to explain the practitioners' opinions of these differences in their methods of work. In the absence of any direct opinions expressed during the interviews, my perspectives will be presented concerning the distinction between traditional and digital illustrations.

6.1 Evaluating Digital Illustration

Before examining the four selected books, I should emphasise two factors that may have influenced the opinion of the interviewees whilst examining them. The first influential factor is their pre-conception with generated images; before examining the books the interviewees perceived digital illustration in different ways. In general, however they thought digitised images would appear comparatively flatter and crisper than an image coloured by a traditional method, although one interviewee strongly argued "I do not agree that a flat form is necessarily the fate of working on a computer" (BI 4). It is, however, a general opinion that digital effects are more or less perceived as 'flat'. This may relate to the images produced in the early 1990s, which were constrained by the capability of digital technologies and the knowledge of utilising graphic programmes.

The impression of digitised imagery as glossy and perfectly flat remained dominant in the majority of the interviewees' minds. Meanwhile, the interviewees also thought strokes on a painting, if employing digital means, would be perceived slightly differently to traditional hand painting on paper; in particular a brush stroke on a tangible sheet of paper on which the stroke is seen can have a depth of colours and thickness of pigments. "... you could see the strokes that weren't using traditional media because of the texture of strokes and colours" (TE 2). Textural strokes convey subtle characteristics that differentiate them from the use of pixels imitating a physical stroke. Thus, to some extent, assumptions of generated imagery may have been prevalent in the interviewees' perceptions before they began to evaluate the samples.

The other possible influence might stem from the knowledge of graphic programmes. Nearly half of the illustrators I interviewed employed traditional media; these illustrators generally had difficulty distinguishing the samples that had utilised digital techniques. "The differences between computer generated and traditional illustration is not visual to me, so I find it is difficult to differentiate, unless I have been told if it has been done using the computer" (BI 6). To a certain extent, individual knowledge of applying graphic software influenced the opinions of traditional illustrators, whilst they were describing where the samples had been influenced by digital usage. Although the practitioners who employ digital methods had greater computer knowledge than the traditional illustrators, they demonstrated various degrees of knowledge regarding graphic programmes which were used in editorial practice. For instance, with book (d) *Marmalade and the Magic Birds*, most interviewees could not distinguish that it was a

computer generated image at first glance, only a few of them after extensive examination realised that the samples had been generated and indicated a few places that had seemingly been developed through digital means. It is the knowledge of graphic software and of its usage in editorial practice that influenced their examinations which I may need to take account of when quoting from the transcribed data. Hence, the following examination will consider those influences before analysing the books to acquire a better understanding of what lies behind the influence of digital effects on the visual appearance of illustration.

6.1.1 Examining the Four Books

New aesthetic illustration:

Book (a); *The Wolves in the Walls*

This book partially employs a digital process. The illustrator, Dave McKean, created collages using a range of resources from charcoal illustrations to photographs of bits/sections of maps, to make the images appear as photographic/cinematic drawings. The majority of interviewees shared the opinion that its intended audience was older children (TE 2) (TI 2) (BI 1) and even for those whose backgrounds were related to art and design. "... you could actually put it up on the wall or appreciate it in the gallery. Each page is a piece of art. I love this book" (BI 1). "The book sold because it is like a design book not a children's book (TE 3). Although the general view was that the book was not aimed at young children, this particular characteristic of artwork has appeared in other fields of illustration. The book delivers an atmosphere of darkness and fear,

parts of the images were superimposed in several layers, blending together to present a drawing technique that without digital means could have been perceived differently. However, Mckean's hallmark of illustrations still remains unchanged even when he worked with new technologies.

When book (a) was presented to the interviewees, the majority could immediately distinguish that this was a book employing digital means and often indicated that the tuba, the cloud and the fire were integrated with several photographs which fade out into the sky, and were representative of digital effects. For instance, in Figure 6.1, the tuba is manipulated and superimposed to appear as gigantic intersecting pieces of a horn which, as many interviewees pointed out, would be difficult to achieve using traditional methods. Obviously, this effect can be noticed as having generated processes in which the different angles of the tuba horn are overlaid in order to create a natural 'blend' effect. This merging of elements is different to that achieved in traditional collage, it lacks the sharp edges produced by cutting out the shape of the tuba; instead the tuba horn remains naturally translucent, blending with several photographs. If this merging of elements used a traditional collage approach, it would have resulted in the thickness of the edge of paper being superimposed; this would have made the tuba horn appear as a separate entity rather than subtly fading out.



Figure 6.1 Part of inside page from *The Wolves in the Walls*

The other image the interviewees identified as having used digital effects is an image showing the movement of clouds Figure 6.2. Apparently, the twisted clouds that thickly spread over the grey sky do not appear as natural cloud forms; the white clouds must have been manipulated to create this exaggerated style. If Mckean had worked with traditional hand drawing "I do not think he would get the same effect with the cloud..." (BI 1). To create the effect of the cloud curling translucently over the tree using traditional methods, an illustrator may need to work in a darkroom, and the process would take a considerable amount of time, whilst the outcome could not be a guaranteed certainty.



Figure 6.2 Part of inside page from *The Wolves in the Walls*

In addition, the magical version of fire, shown in Figure 6.3, was also highlighted by some interviewees, with the camp fire appearing to have curved flames. It is very different to a hand drawn and photographed fire. This working process has been revealed by Mckean; he used photographs of patterned metal sheet windows that he had on file. "I overlaid them a few times and then put flames through and then changed it a bit further..." (Gibson 2004a). Evidently, the original source of fire was not even a real fire; it was made using the images of metal sheet windows to simulate the atmosphere of a camp fire. The computer, in this image, is used for instance in reshaping and transforming the image of the metal sheet window into a version of fire that belongs to Mckean's style.



Figure 6.3 Inside page from *The Wolves in the Walls*

Moreover, digital technologies have helped to integrate photographs within illustrations. Many interviewees also commented that if Mckean had not used the computer he would not have been able to include as many photographs in this book, which helps create a cinematic feeling. "If he did not use the computer to illustrate, he might not have been able to include photographs in the illustrations or it would have taken a longer time to do so..." (BI 6). For instance, in Figure 6.4, the image shows a transition from realistic photography to artistic painting; the pillow and the hair taken from photographs gradually blend with the hand painted face which emerges in a cinematic scenario. The computer enhances the image to create a dramatic effect, in particular interplaying paintings and photographs to compose Mckean's illustrations, travelling between reality and illusion in a sophisticated way.



Figure 6.4 Part of inside page from *The Wolves in the Walls*

One interviewee admitted that the sophisticated detail could only have been manipulated and achieved by computers, “then I would say he has done a very good job because it is impossible to achieve this effect using traditional methods” (TI 4). Although, Mckean’s pre-digital work shared similar characteristics, the computer has further developed his illustrations to encompass a surreal atmosphere. It is obvious that without employing digital means, his artwork would have been less exciting than the way his photographs are blended, the superimposing of elements and the transforming of sources.

Simulating traditional illustration:

Book (b); *I Will not Ever Never Eat a Tomato*

The partial digital process, Electronic Collage, has been applied in the book to create illustrations which could appear as a child’s drawing. The author/illustrator, Lauren

Child, draws using naïve line work, creates collages with various collected patterns and sometimes adds hand colouring spontaneously as if coloured by a child. Many interviewees thought that the graphic software had only been utilised in a very basic sense in the book and that this digital technique is currently used by many illustrators (TI 6). The computer, to a certain extent, acts as a photocopier allowing Child to enlarge, reduce and reproduce the patterns which she has collected. The digital method Child employed is similar to the traditional method, simply cutting-and-pasting elements to create an image. Therefore, most interviewees thought that even if Child had not used digital means, the images would possibly appear similar (BI 1) (BI 7).

One factor, which would indicate that this book has possibly employed digital processes are the collages with various patterns and drawings in its illustrations. Although a hand made collage could obtain the same result, the computer certainly has encouraged illustrators to create an illustration with a variety of textures and photographs comprised of drawn figurative elements. Thus, if an illustration appeared with a number of textured and photographic collages in it, there is a good possibility that digital processes were employed in its creation. As Child likes her style of drawing to be perceived as unaffected by digital technologies and to retain hand drawing in a large part of her working process, her works are therefore not perceived as obviously digital. Therefore, only a few interviewees indicated that if she had used digital methods to trim the drawn figures, the shadow of the cut out figure would look flatter than a traditional collage. For instance, in Figure 6.5, the figure of the girl superimposed over the background of wallpaper retains a natural depth of shadow. If it had been changed to digital processes,

the shadow could have been lost and careful manipulation of it would have relied on graphic software, such as Photoshop, to imitate the effect of shadow. Its result, however, would be noticeably different compared with the use of traditional methods.

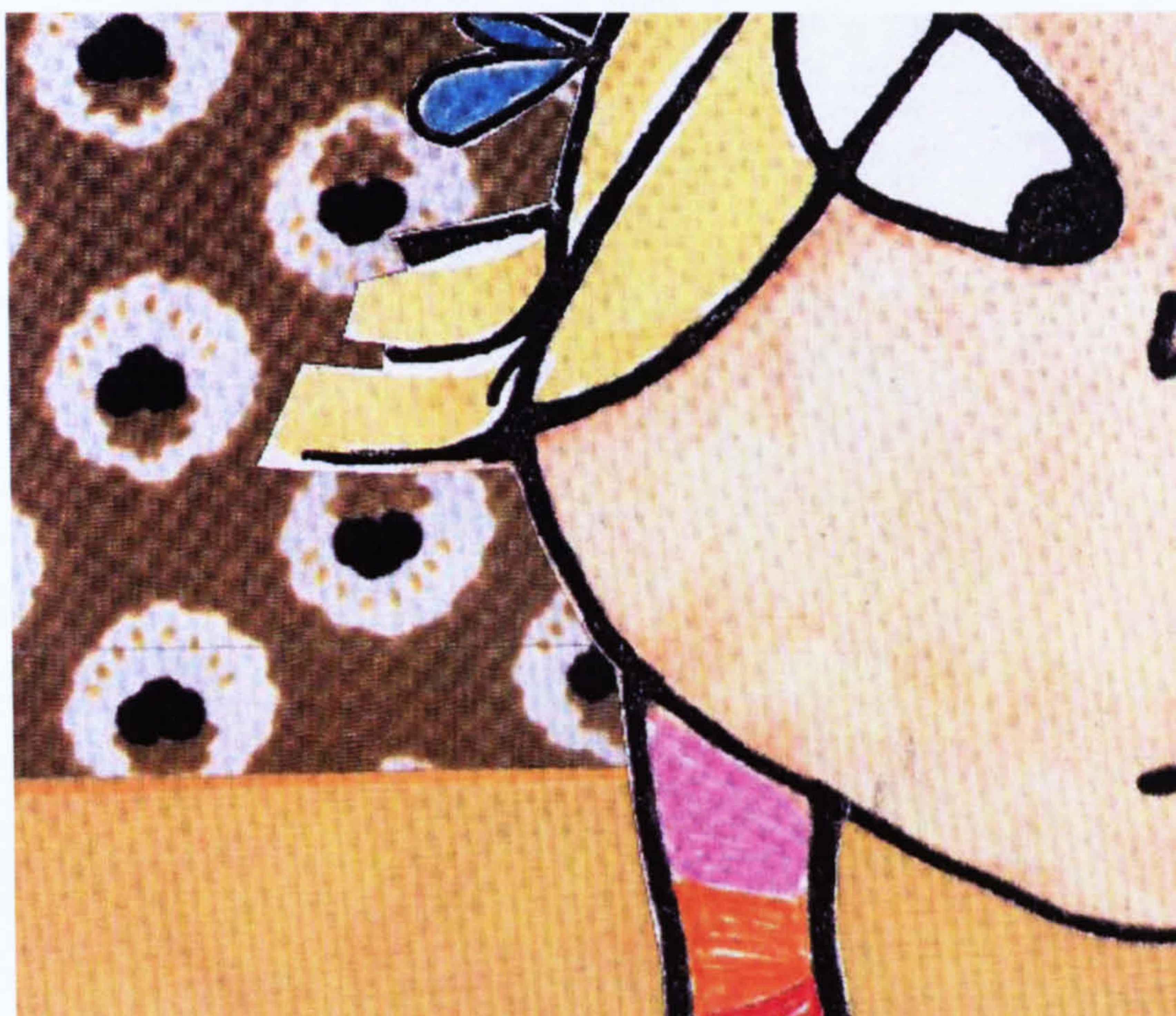


Figure 6.5 Part of inside page from *I Will not Ever Never Eat a Tomato*

The other point of interest that was noticed by one interviewee is that even the digital processes contributing to Child's work appears traditionally made. "In a way, it [the computer] helps it feel more hand crafted rather than digitally made, with the rough edges, some lines are thicker than the others..." (BE 2). It is unexpected, as the common perception of digitalised imagery is one of perfect colours and flawless lines. In this book, Child deliberately manipulates her collected photographs to appear to be of a low quality,

as shown in Figure 6.6, to help her to form a hand crafted impression. Those low quality and unfocused photographs have been harmonised with her hand drawn figures to persuade the readers that the images have been not affected by a mechanical process.

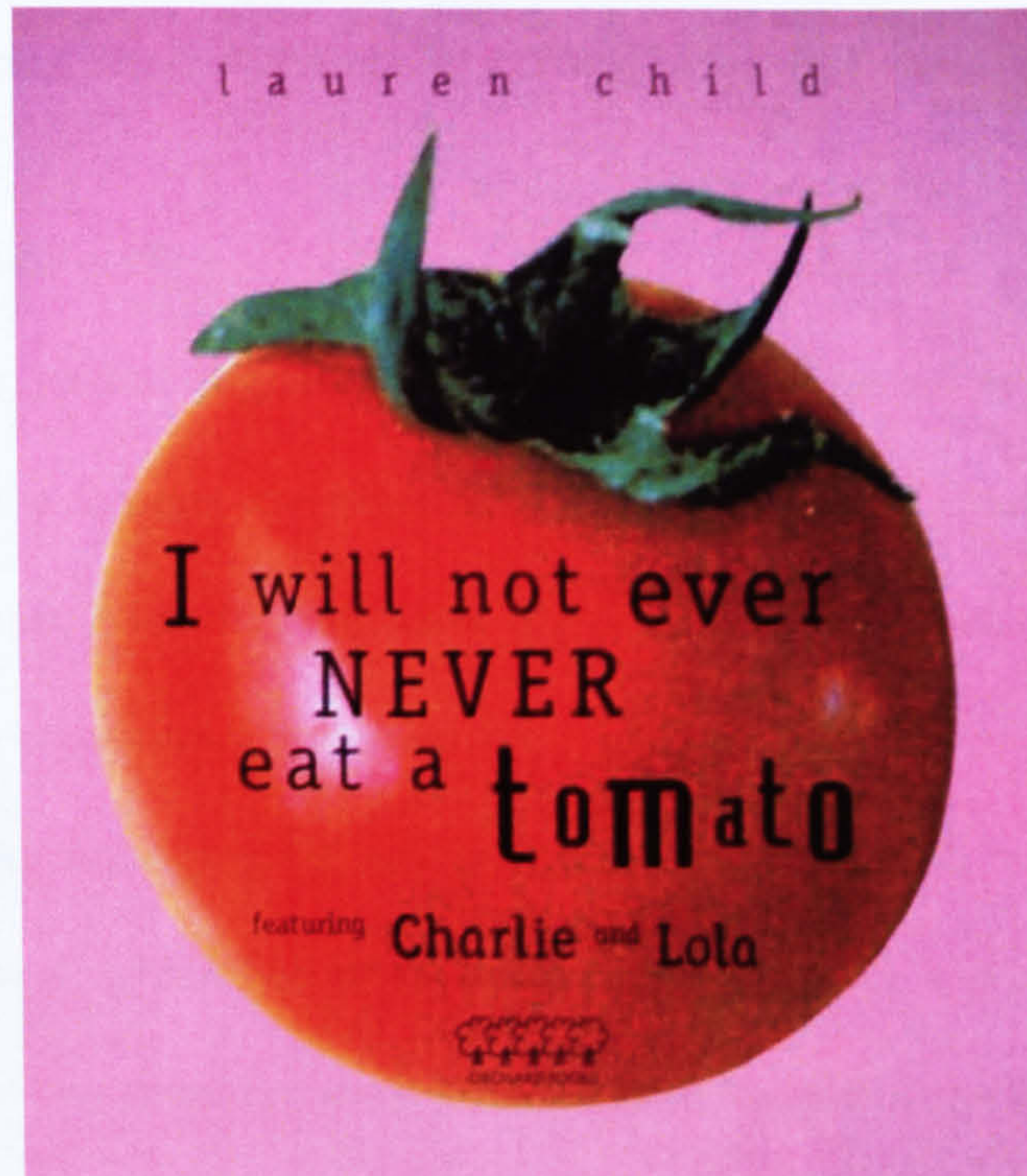


Figure 6.6 Inside page from *I Will not Ever Never Eat a Tomato*

It was difficult for the interviewees to point out many places in the book that had been influenced by generated processes; only a few places can be distinguished, such as the plain coloured backgrounds and the method of composing the typeface. Generally speaking, book (b) used the computer in an atypical way, outside the common perception of digitised imagery, creating illustrations with partial digital processes, involving hand drawn figures and composition with low quality photographs. Lauren

Child accounts for the computer in her working processes and said “I love the computer, because it’s so flexible, it keeps the whole thing fluid...” (Carey 2003, p. 74). To some extent, the computer for Child was only used as a photocopying machine to change scale and resemble other elements, but it has punctuated her illustrations to fluently express the childishness of the main characters, Charlie and Lola.

Book (c); *Wriggle and Roar!*

This book employs partial digital processes, Digital Surfaces/Layers and Electronic Collage, to create the images constituted by black-and-white charcoal lines and flat colours. The illustrator, Nick Sharratt, uses digital methods to develop his work as it is easy to paint and alter colours. Previously, when colouring with charcoal lines, he had to concentrate to avoid smudging. If any mistakes were made, it would result in the re-working all the work which had been done before. However, with a digital process, it can be re-coloured at any time. For most interviewees, Sharratt’s works illustrates a genre commonly known for using graphic programmes and a popular method for children’s book illustration, combining traditional and digital processes (TI 1) (TI 6).

I have suggested that most interviewees had pre-conceptions that digital forms of illustration are usually related to a perfectly coloured and sharp appearance. Book (c) is a typical example, which the participants thought probably dealt with digital processes. “The colour seems to be done on the computer because it seems very flat and too perfect” (BI 5). The perfectly coloured drawings are the main reason that most interviewees could instantly recognise that the creation of this book had been realised through the use of a

computer. Meanwhile, the colours in the book are considered clear but “slightly harder in its look than work produced traditionally” (BI 2). For instance, in Figure 6.7, the image can be seen to be composed of vibrant colours as if it had been drawn by traditional media. The images can possibly be interpreted as muted and with more tonality and which sometimes may be accompanied by accidental marks because of the nature of hand painting. Hand rendered colours cannot always be painted perfectly flat. With digital effects, however, the image is perceived to have a sense of clarity and cleanness.



Figure 6.7 Inside spread from *Wriggle and Roar!*

The other aspect the interviewees noticed as an effect of the use of graphic software was the gradation of tone. The glow of the people’s cheeks, in the Figure 6.7 for example, regularly fades out, which is a common perception of the generated effect. “... from the

kids' cheeks you can see that sort of glow that cannot be achieved if hand drawn" (BE 3). The glow drawn by hands would occur in irregular shapes, with uneven gradation of the pinks and the blurring impression over people's cheeks would be different to that created through hand painting.

Furthermore, many interviewees also commented that a sophisticated pattern is a sign of having used graphic software. "Obviously, there would not be this mad wallpaper, it would be much simpler" (BE 3). For example, in Figure 6.8 the circular pictures have backgrounds with various patterns that, if worked on before the arrival of digital technology, would have been considered too complicated, because it would have been a laborious task, to colour in manually. The interviewees thus observed that Sharratt's pre-digital illustrations are comparatively simpler before the use of digital means. This suggestion can also be supported by part of Sharratt's interview data, "... when I started using the computer, picture books took me days instead of hours because I kept changing the colours, trying every single possibility. The computer has too many possibilities and choices for me" (BI 3). The phrase 'too many possibilities', implies that whilst the creator is working, the computer offers him several choices which prolong working hours as well as unintentionally contributing to the illustrator's style and becoming increasingly sophisticated even though it may not be necessarily desired.



Figure 6.8 Inside page from *Wriggle and Roar!*

The other possible clue, which also relates to complicated patterns, is how the computer provides ease of duplication. In the book it can be seen that many elements have been copied from one place to another or there are repetitive patterns. This often suggests that the image has been created with digital processes (BE 2). The repetitiveness of elements therefore could be considered an example of visual evidences of digital effects.

Book (c) is an example of how most specialists in the field of art and design would use digital means to create their work. One characteristic of Sharratt's work, the adoption of digital technologies, has definitely enhanced his drawing process in certain ways. The technology has altered the appearance of his illustrations, which now have increasingly sophisticated patterns, repetitive elements, and perfectly saturated colouring. However,

on the whole, his distinctive artwork remains intact even with these differences.

Book (d); *Marmalade and the Magic Birds*

The drawing process of book (d) is carried out entirely on a computer, using Digital Montage/Collage to create a characteristic of drawing using acrylics, strongly perceived as carried out without using any digital means. The author/illustrator, Robin Harris, has developed his digital techniques well; his characteristic of illustration resembles work drawn by traditional media. Similar to colourful and sophisticated acrylic painted images. Whilst examining the book, most interviewees could not distinguish that the images had been drawn on a computer and were even surprised that the images were entirely produced by a digital process. Amongst the interviewees were those with expertise in employing graphic programmes in their daily work, even they were still uncertain about the processes used in the book (BE 2) (BI 3). After deliberate examination, however, some interviewees began to indicate some places where the images had been created with digital technologies, but they were not entirely sure if it had been manipulated by digital processes or if it was merely their assumptions. "Only when I look carefully, the softer lines... in some places you can see the pattern is quite intense and the 'cut outs', these type of things show it might be computer generated work, but I am not quite sure of it" (BI 6).

Due to the creator's intention to simulate traditional media with his expertly developed digital techniques, not many images in the book were recognised as examples of digital effects during the interviews. The image, shown in Figure 6.9, is one that an interviewee

thought had been drawn with the computer. Particularly, the shadow of the car, where the black is faded out and slightly blurred, this is different from traditional media which would have created a 'washed-out' black effect. Often, a blurred and unfocused appearance is an indication of a generated effect and can be used to point out where an image has been affected by digital technologies.

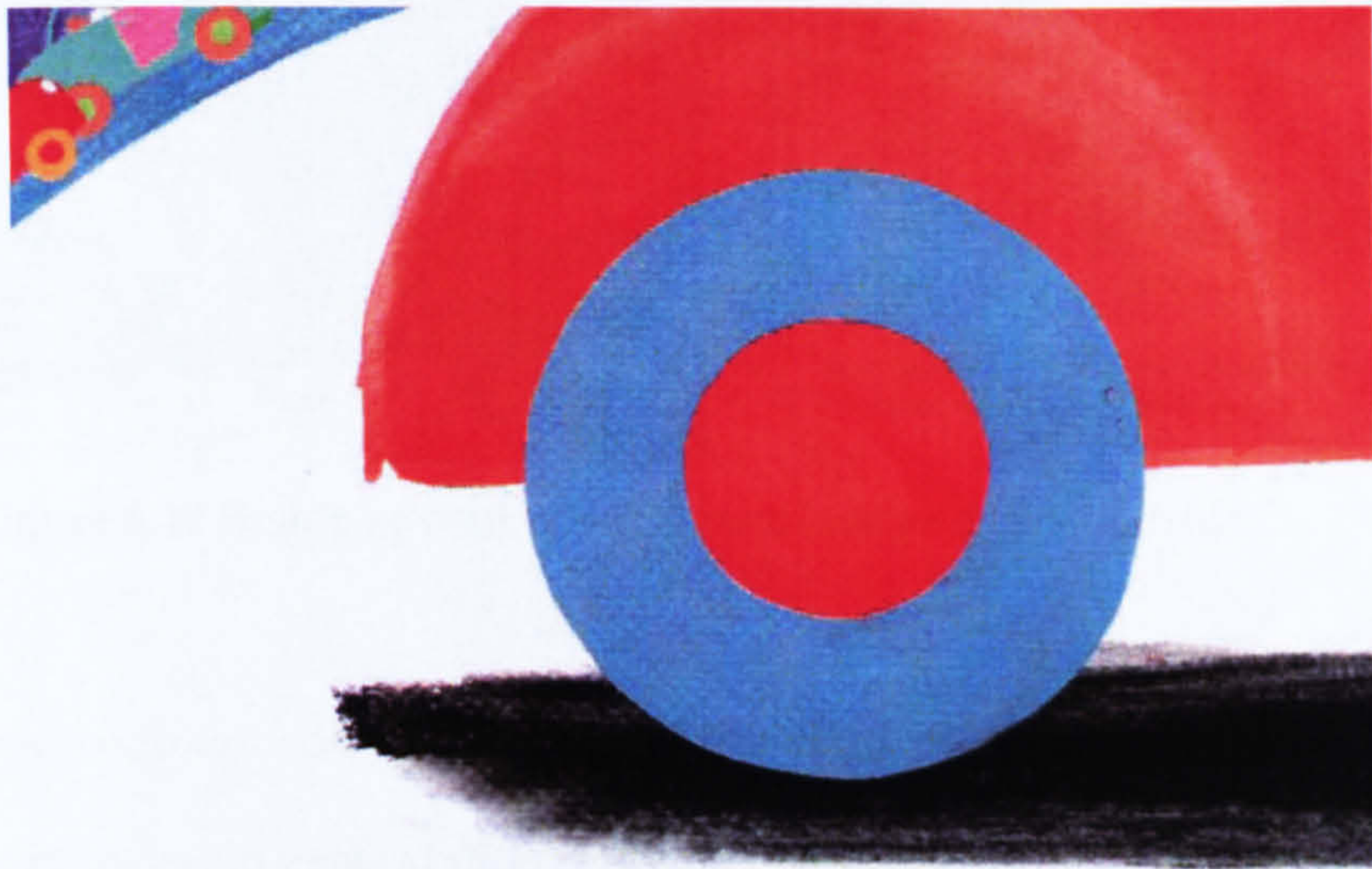


Figure 6.9 Part of inside page from *Marmalade and Magic Birds*

As it is difficult to determine where digital means have been employed in this book, the interviewees instead began to discuss where, if the image had been worked using traditional methods, the artist would have had difficulties. For instance, in Figure 6.10, some interviewees indicated that if the birds and people were manually drawn, it would be very difficult to achieve a person to be superimposed over the others. This required skilful hand drawing as well as a lot of concentration producing the image. "It is very difficult whilst using traditional methods, especially superimposing people with the

complicated patterns” (TI 3).



Figure 6.10 Inside spread from *Marmalade and Magic Birds*

One common contradiction of typical perceptions of digital appearances in book (d) is that the interviewees in general thought that computer produced works would have had a less sophisticated texture and tone when using digital brushes. This book, however, questions their perception of illustrations drawn using digital brushes, particularly as the book is produced in an entirely digital process. “To some extent, illustrations produced by traditional methods will have greater changes of tones but in this book it appears tonal as well” (TI 7). One interviewee also indicated that if it had been worked using traditional methods, it possibly could not have achieved sophisticated textures because the artist would avoid those difficulties resulting in the images with less texture (TI 5). This contradicts the common view of digital illustration which is perceived as having less tone and texture. Generally speaking, book (d) is characteristic of traditional media

where some images have been enhanced by digital processes. The subtle textures and variation of tones and brush strokes created in this book are no different from those hand painted. This is considered contradictory to the common perception of digital illustration. To quote Harris evaluation of his own works employing digital technologies, he said, "I want to keep the same vision that I had on the desk, and I'm actually quite pleased that I have managed to keep that vision" (Coates-Smith and Salisbury 2001, p. 50).

6.1.2 The Implications of the Four Books

The foregoing examination of the four books offers possible answers to the three questions regarding the digital effects on the appearance of children's book illustration.

1) What kinds of appearance were difficult to achieve before the computer was invented?

A number of digital effects which are considered difficult to obtain with traditional methods, can be elicited from the examination of book (a), such as the following:

Blended effect:

An image which contains the blended effect uses a method of merging several layers; the effect often appears as a blurred and translucent element in some part of the image. The graphic programme Photoshop can facilitate this effect, as it provides the 'mask' function to help elements in different layers to blend together naturally. If blended effects were produced through traditional methods, it would possibly need to have been done as a

photographic process in a darkroom.

Translucent effect:

Translucent and blended effects usually appear simultaneously within an image. A translucent effect often conveys an insubstantial quality on an image that encompasses a blurring with other elements.

Transformative effect:

A transformed effect in an illustration often transforms an image's appearance and this appearance can be exaggerated or appear as a surrealistic and aesthetic atmosphere. The transformative effect may include resizing and distorting an image to one that becomes completely different to the initial image.

Cinematic effect:

Generally, a cinematic effect involves photography as part of the creative process and conveys a passage between reality and illusion. Due to the inclusion of photography in illustrations, the image can present 'reality' in a scenario. To produce a cinematic effect using traditional methods is often considered more difficult than working with digital processes.

2) What kinds of digitised traces could be found in illustrations which aim to simulate traditional media?

The chosen books (b), (c) and (d) examine illustrations using the simulation approach,

where the appearance of digital effects can be traced. From previous examination, book (b) has only a few evident places showing indications of the use of digital processes because it largely incorporates traditional methods. Some evidence of digital generation could be found in the book such as the low quality of photographs and flat background colour. But with book (c), the use of a computer can be more easily identified. Indications of digital effects include the images appearing with perfect colours, sophisticated patterns and repetitive elements and the clarity of its appearance. These indications largely correspond with the pre-conceptions of generated imagery. Book (d), however, proved far harder for most of the interviewees to identify where it has been affected by digital processes, although the book was entirely created on a computer. The only evidence pointed out by the interviewees is in relation to the blurred and fuzzy appearance in some of the images. The following summarises the characteristics of those traces found in the books.

Perfect colouring:

The use of colouring artwork on a computer would commonly result in perfect coloured area with fewer accidental marks in its creation, compared with traditional drawing. Therefore an image perceived as being perfectly coloured and with colours that seem to be more saturated and sharp, is more likely to be produced with digital processes.

Regular gradation of tone:

An image with a regular gradation of tone is again likely to be a sign that digital methods have been used, because graphic programmes provide the means for mechanical

gradation to be rendered regularly.

Regularity of line:

If an image appears with a regularity of line this would indicate the use of digital processes. The mechanism attributed to regular lines is different from hand drawn lines as, being controlled by a human hand; hand drawn lines often result in irregular line drawing.

Repetitive pattern:

Repeating patterns can be achieved with traditional methods. However, the use of traditional methods would not appear as a regular pattern and the patterns would be simpler than working with traditional methods because graphic programmes can facilitate this process. An illustration exhibiting sophisticated and repetitive patterns can indicate the use of digital processes.

Clarity of appearance:

An image, if it is produced with digital methods, would give an impression of clarity and cleanness in its appearance. The use of digital means often contributes to the end result displaying the characteristic of flawlessness, which is unlikely with an illustration using traditional methods.

Fuzzy image:

Computer programmes sometimes can lead to images having a 'fuzzy' or unfocused

appearance if working with low pixels, because the common standard of printing for publication is 300 dpi. Thus, during a working process, creators may work with pixels that are far lower than the standard and this can result in a fuzzy effect in certain parts of the artwork.

3) Can an entirely digital process pass off as traditional media?

As described in the previous section, most interviewees could not distinguish at first glance book (d) that was entirely produced on the computer. But after closer examination, some of the interviewees began to identify some examples which were illustrated using digital-processes. The interviewees responded to the book with the view of whether an entire digital process can replicate traditional drawing. Table 6.1 summarises the statistics of the interviewees' responses. All the interviewees could not differentiate the images that had been worked with digital means initially. Only 8 of the participants, after close examination appeared more certain stating that some areas of the images could have been produced digitally.

Interviewees	Could not recognise book (d) was produced digitally	12
	Not sure, but after inspection could distinguish that a proportion of book (d) was produced digitally	8

Table 6.1 The summary of responses from the interviewees on distinguishing the images in book (d)

Thus, this suggests that the use of graphic programmes can simulate conventional drawings to the extent that even specialists in children's book illustrations cannot easily distinguish digital traces in the images initially. The simulation of traditional media depends on the illustrators' technological ability. If an illustrator can draw traditionally and also has a knowledge of how to apply graphic programmes to achieve the same effect as traditional drawing, then the produced artwork may have greater sophisticated textures and tonalities than the traditional way of drawing. However, this all depends on whether the illustrators knowledge can be applied to the programmes as well as whether their hands can control a digital device such as pressure-sensitive pen in the same manner as a traditional pen. In addition, if illustrators have a graphics tablet and a pressure-sensitive pen then that can increase the possibility of 'passing off' an image in the style of traditional media, using entirely digital tools.

6.2 Comparing Traditional and Digital Illustration

Before presenting the comparison of visual samples provided by the eight selected illustrators, a definition of 'intrinsic differences' between traditional and digital illustration depending on every interviewee's interpretations and understanding will be considered. Many interviewees described their reflection on the intrinsic differences between both types of illustration and concluded that there were fewer notable differences, before they began closer examination their own samples. This may mean that their understanding of intrinsic differences was influenced by their own approach as illustrators, which may not have changed since adopting digital technology. As my research has suggested, although most of the professional illustrators involved (in particular the older illustrators), have used digital methods, they would still prefer that their digital illustrations were similar to their own hand drawn styles. Therefore, for the interviewees the definitions of the differences before and after adopting digital methods, registered few differences because their thought their own artwork had not changed in any way as they always kept a similar quality as hand drawn. Importantly, the interviewees considered the differences between traditional and digital illustration concerned artistic integrity and did not acknowledge specific differences such as colour, stroke and texture which were affected by digital software.

However, in the words of one interviewee, I will discuss why there are essential differences in the illustrations before and after adopting digital means: "The essential

differences would be due to a person's skill not software. If they are unskilled in using computers, they would not be able to produce a 'near traditional' work" (BI 4). Not all of the other practitioners have as well-developed digital skills as this practitioner, or intended to simulate traditional media. Meanwhile, there is a learning curve whilst a practitioner is learning graphic programmes, this takes time and practitioners will need to learn from their mistakes. For example, a work produced during the early phase of learning generally will be recognised as digital more so than later on because practitioners are learning how to apply graphic software and are not yet skilful to enough to control the software in the same way as their traditional media. Thus, the evidence of the use of digital effects can be clearly seen to various degrees in every interviewee's work. Having adopted digital methods in relation to the knowledge of application can show how software was applied during interviewees' learning curve.

6.2.1 The Eight Selected Illustrators

The following evidence is based on visual samples, which contain, firstly non-digital illustration and secondly digital illustration.

BI 1: Pastel Drawing vs. Electronic Collage

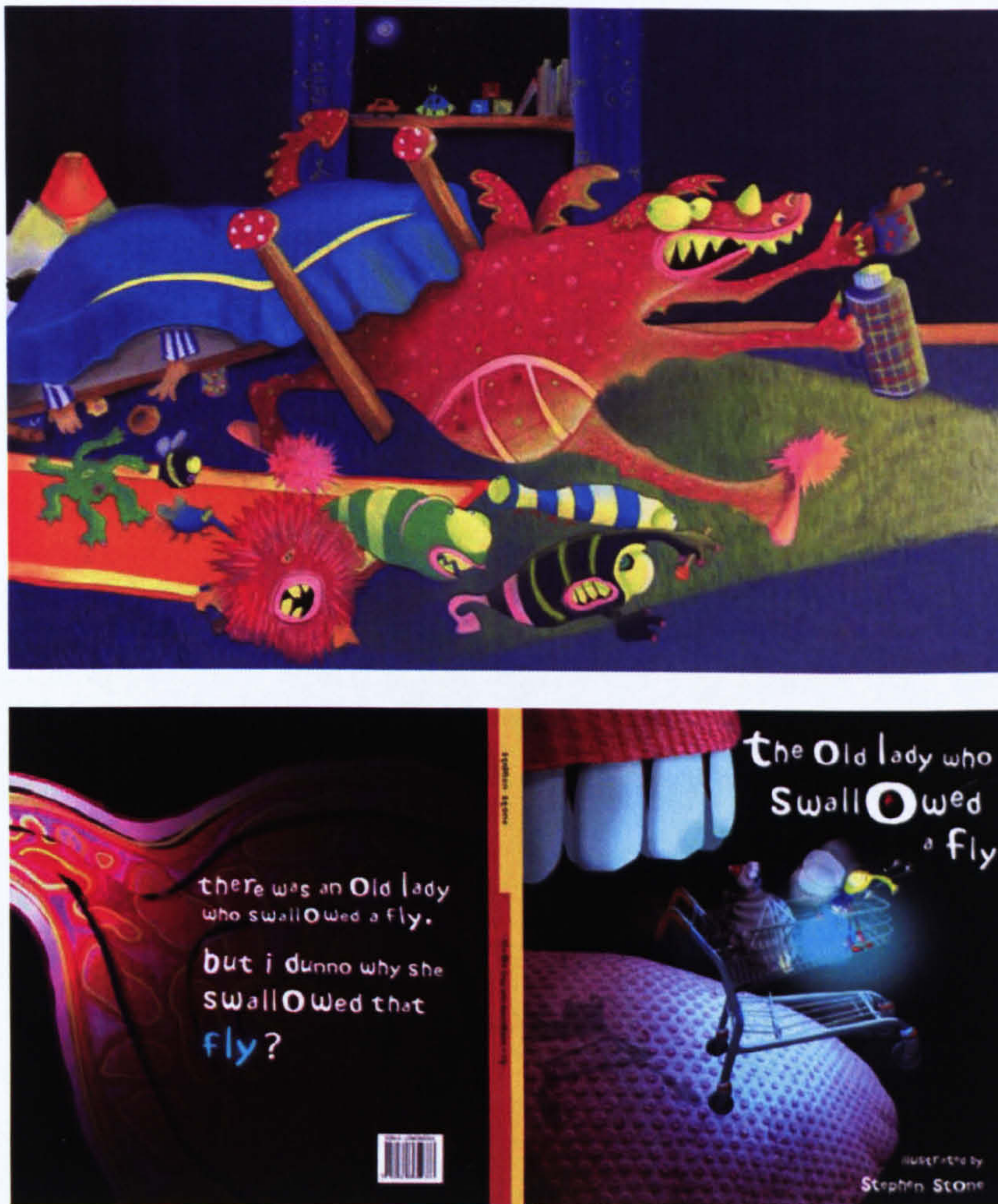


Figure 6.11 A comparison of traditional and digital illustration, provided by BI 1

The first traditional sample is composed of the elements which are drawn by pastel chalks, those elements are positioned through a cutting-and-pasting process, to create energetic movement. The second sample employed computer technology to compose elements which may not have been initially seen in the traditional sample by using digital applications to transform elements and creating a different appearance. The merit of using digital processes in this example can be seen in the way elements are reshaped, creating a new meaning and how, importantly, this process can only be completed by one creator.

The practitioner considered his sample illustrations and commented, "The main features that are distinguishable from traditional to digital image are the use of light and shadows." Light and the shadows have played a significant role in the digital sample, to help express a spatial atmosphere which is different to the example produced through traditional media. For the traditional example, the practitioner felt that "it created a naïve and tactile appearance which is not often what you achieve from using digital." Overall, the traditional example has a greater tactile appearance in its brush strokes; the digital example appears to have a slightly glossy surface in which the light and the shadow create a 3D look.

BI 2: Mixed Media vs. Electronic Collage



Figure 6.12 A comparison of traditional and digital illustration, provided by BI 2

The above samples both use mixed media such as pastel, acrylic and ink. Yet, the practitioner has used digital means to add effects to those drawn element as seen in the second sample. If the first sample, on the other hand, would be entirely completed by

traditional methods, without using any digital means, this would have highlighted a slightly more sophisticated texture than the second sample, because digital effects often show a blurred and 'insubstantial' feel if using the translucent function.

During the interview, the practitioner suggested she would prefer the illustration to convey the message that it was created entirely using traditional media. However, there are still several noticeable differences between the samples described by the practitioner; the quality of line in the first sample, "Obviously this is much clearer on the artwork as the line has a surface and volume." She further indicated; there are some areas that have "edgy marks and syrupy lines". For example, the white colour that surrounds the infant in the first sample is distinguishable from the oblique light encompassing the black infant in the second sample. The white light in the second sample appears translucent and gives a blurred overlaying of the image. In the first sample, greater volumes of brush strokes and subtler textures of white light surround the coloured infant can be seen.

According to the interviewee, she prefers drawing the backgrounds on a smaller scale to save time, instead of drawing backgrounds which require particular sizes for the main characters. In the second sample it can be seen that the texture of the background is rougher than in the first which is the result of enlarging a smaller background. The results are bigger texture grains in the appearance. It is possible to distinguish both samples, in terms of their digital input. For example the textures in some areas of the digital sample appear less detailed, insubstantial and more blurred. Although this practitioner strives to present an image without evident manipulation by digital

techniques, such techniques could still be identified in her artwork. This may be because the digital sample was created in the early stages of learning how to apply the graphic software; therefore, the practitioner was less skilled at using digital techniques in a more subtle way.

BI 3: Line Work with Watercolour Coloured vs. Digital Surfaces/Layers and Electronic Collage

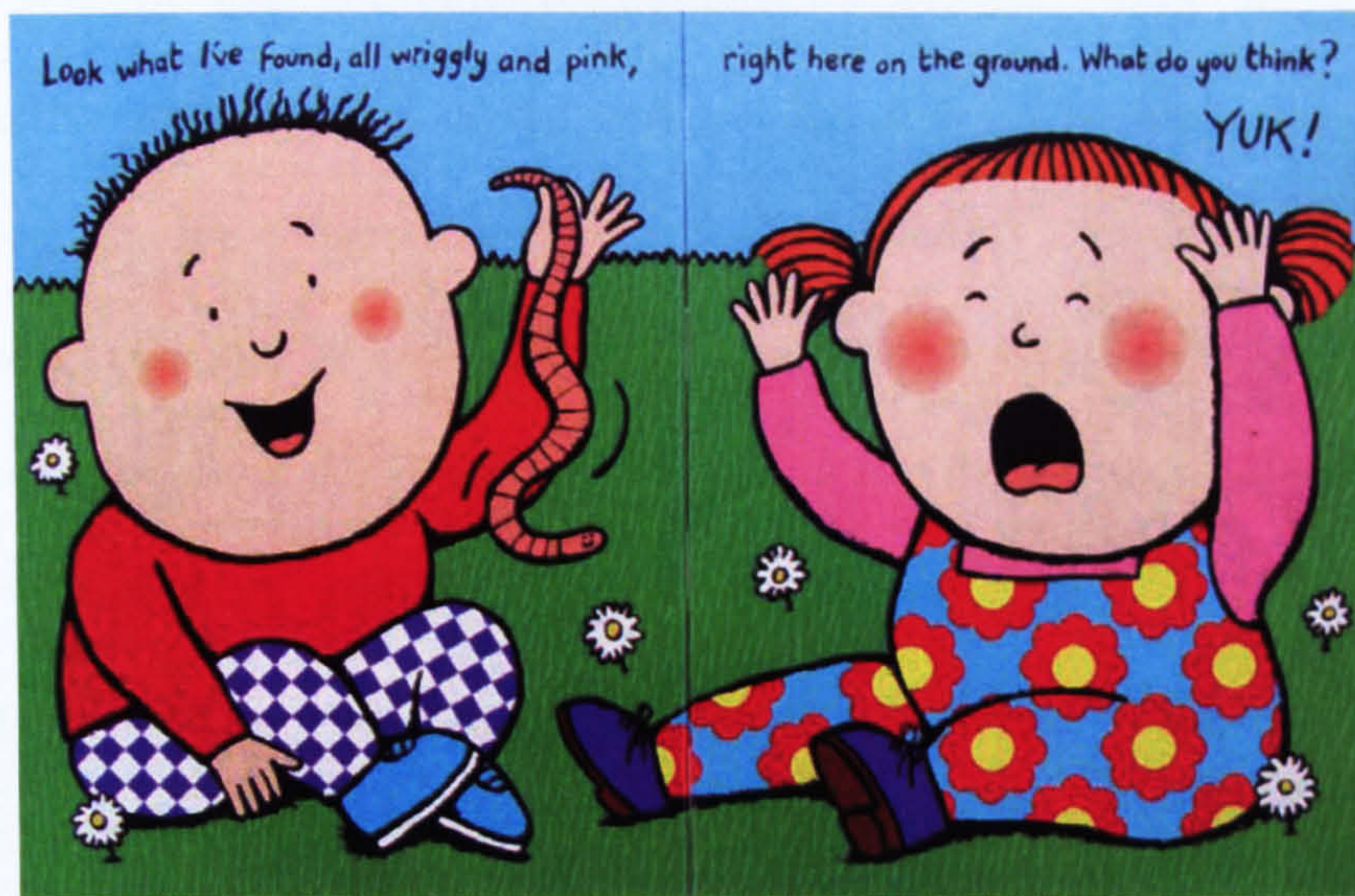
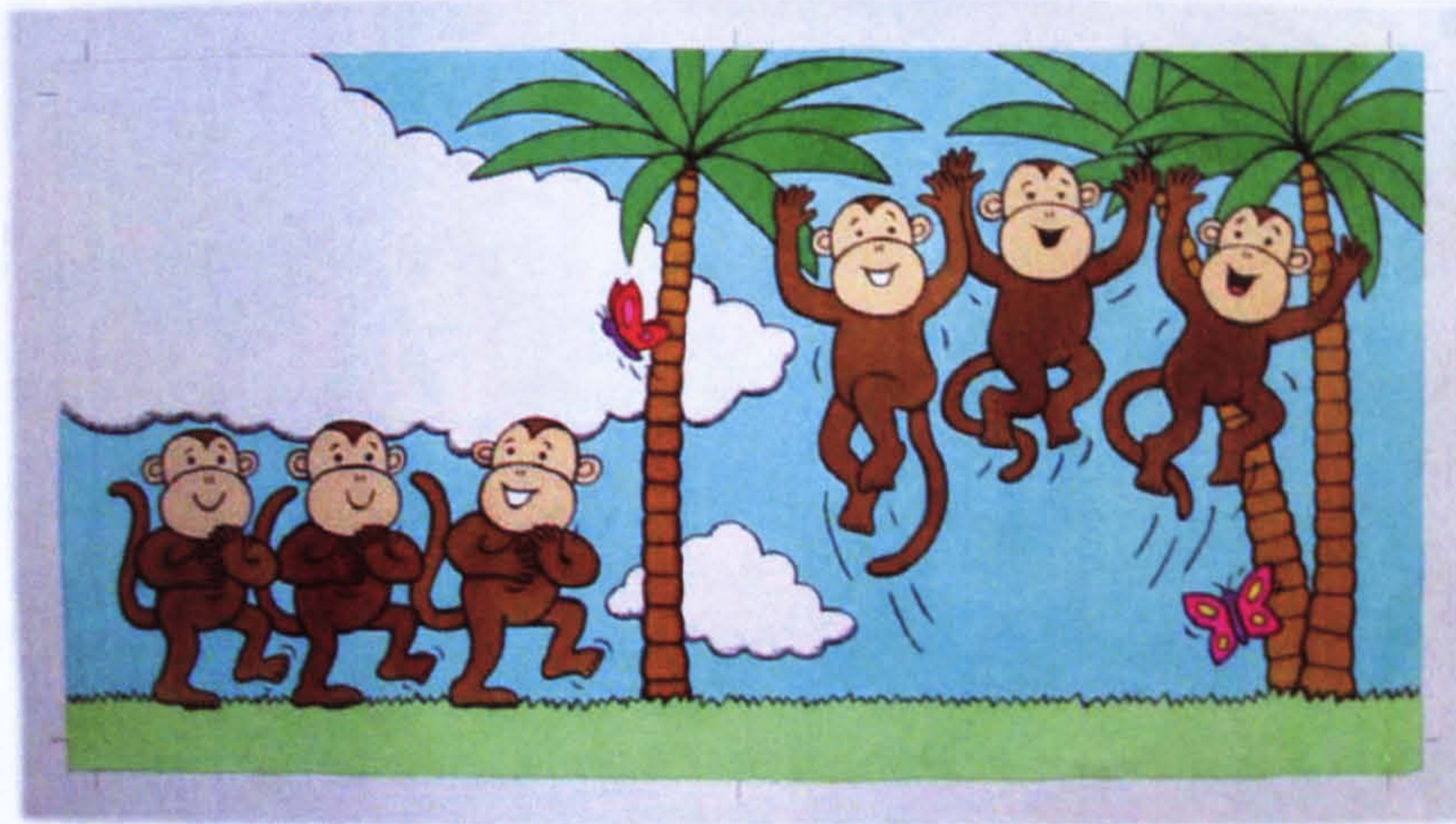


Figure 6.13 A comparison of traditional and digital illustration, provided by BI 3

This example of a traditional illustration used charcoal in order to draw the black line which was later coloured by watercolour and which was difficult to achieve perfect flatness. The line in the digital sample, however, was drawn using a 6B pencil and

subsequently the drawn line work was scanned and worked in a computer in order to enlarge and manipulate the imitated charcoal line. The colours in the digital sample had relatively clear qualities compared to the traditional sample.

In the scrutiny of the above samples, the practitioner thought the overall effect of the non-digital sample was softer-looking than the digitally generated sample. In the non-digital sample, the black charcoal line is “not as dark and not so crisp”, the colours are “slightly muted and textured, and not perfectly flat like the digital image. They bleed slightly.” But in the digital sample, the patterns appear to be shaped regularly, the colours are perfectly flat. The glow on the children’s cheeks fades out mechanically which shows the employment of digital methods. As this digital sample is an early piece of work using graphic software, the practitioner explained that the early version of software has not provided as good effects as today’s standard, so as the fading out glow that could not appear any more natural on the cheeks; if this image was to be produced using more sophisticated current graphic software it would not show the hard edges of the glow. On the whole, visual differences between both samples can be seen in the use of colouring, patterning and gradation.

BI 4: Mixed Media vs. Digital Montage/Collage



Figure 6.14 A comparison of traditional and digital illustration, provided by BI 4

The above samples are created by the interviewee whose digital ability is highly developed. The digital sample is processed using only digital methods. Both samples exploit vibrant colours, but the non-digital sample shows the colours slightly muted and dulled.

There are a number of differences between both images; the traditional sample has a tactile quality from the collage, reinforced through a depth of irregular shapes bordering the design and overall the colours appear duller than in the digital sample. The digital sample, to a certain extent, still presents a rich texture and tonality on the image. The colourful and sophisticated textures appear in the digital sample although these are different to the traditional sample, but if they are simply examined the digital sample is harder to recognise, even though the sample was produced entirely using digital processes.

TI 1: Line Work with Watercolour Coloured vs. Digital Drawing/Painting

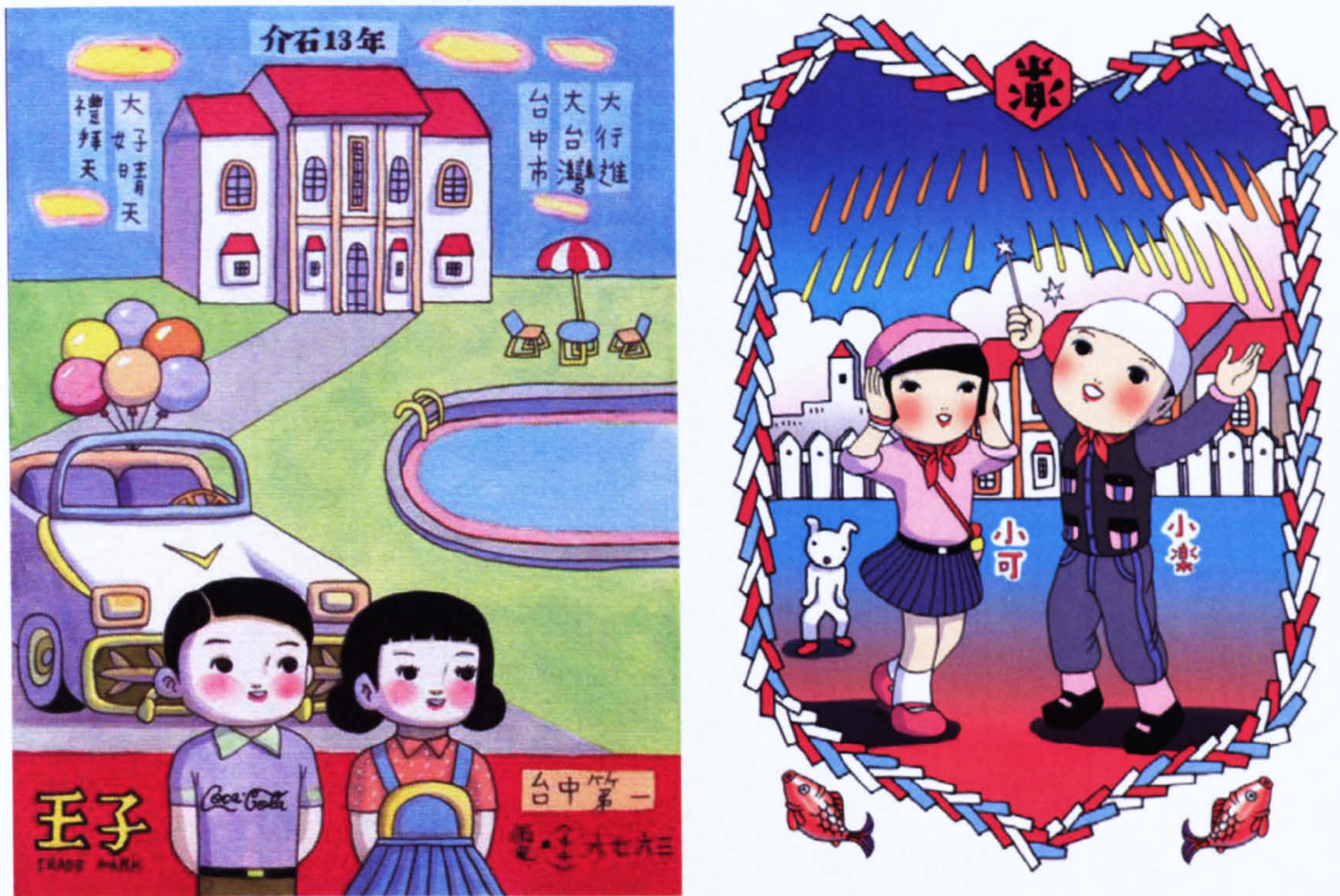


Figure 6.15 A comparison of traditional and digital illustration, provided by TI 1

Both samples exhibit similarities as well as differences. The first sample was developed using drawn pen lines outlining the features, colour was then added using a traditional medium such as watercolour. The second image shares a similar style to the first, but here it uses a digital method in which the image appears with regular lines and plain colours.

The reason the computer was used to produce the second sample was described by the interviewee "The pigments began to run out at the time and the deadline was approaching... I needed to produce similar features to the first image" There are strong

similarities between the two images; the only difference would be the tonality, the gradation of colours and the black lines in the digital image. In the non-digital sample the colours tend to bleed slightly, each colour has a varied tones and the hand drawn black lines consist of irregular line widths. In the digital sample, the gradated colours and width of line seem to be regular in appearance. Considering the overall look of both samples; the non-digital demonstrates variations of tone in common with nature of watercolour. The digital imagery appears crisp and plainly-coloured with a regular width of out-lines.

TI 2: Watercolour Drawing vs. Digital Drawing/Painting



Figure 6.16 A comparison of traditional and digital illustration, provided by TI 2

Parallels can be drawn between the above samples provided by TI 2. The practitioner produced the first sample using a pen, he drew the line, outlined features and then used the method of 'wash' onto the image, but he created the second sample employing entirely digital processes.

The non-digital sample using watercolour shows a bleeding and dissipation of colour in varying degrees of sophistication. The practitioner felt the non-digital sample had a watery and textural feel, "The watercolour shows a human touch and a sense that the artist has actually hand rendered the colour." This may relate to the nature of watercolour which has an 'intimacy' with the paper, using different qualities of paper

and different amounts of water can be a result in the 'bleeding' effect to varying degrees. A colour containing more water on the paper will appear to give a stronger bleeding effect but far less saturated. More importantly, the texture of paper could be seen in the traditional watercolour method due to watercolour having a degree of transparency. Therefore, as described by the interviewee "... for me, two distinguishing feature that separated between both samples would be the texture of paper and the colours." In an image that uses the watercolour wash method the details of the paper can be seen more clearly than an image that uses digital methods. Some graphic programmes offer functions to simulate the texture of paper, but there remain subtle differences between a digital imitation of paper and an actual piece of paper. In traditional washes, the dry colour is generally perceived as being less vibrant than when it was first painted; in other words, if a piece of artwork was coloured using watercolour it is often seen as more muted than in other drawing media. On the whole, the differences between both samples could be the texture of paper; the way bleeding occurs over colours and their final saturation of colours when used.

TI 3: Poster Paint Drawing vs. Digital Drawing/Painting



Figure 6.17 A comparison of traditional and digital illustration, provided by TI 3

The first sample was painted using poster paint, conveying a subtle tonality. The second sample was drawn only by a computer, which was painted by perfectly flat colours on the image.

In the above samples, the use of digital methods can easily be distinguished; in particular the way of colouring on the non-digital sample has a greater tone and texture than in the digital sample. The traditional sample shows how colours have been manipulated by their similar tones such as over the chickens and the background, which allows the image a greater tonal volume. In contrast, the sample produced using digital processes has a flatter and perfectly coloured appearance and seems to have less texture within the colours. The overall look of both samples shows differences both in the style of colouring and the variation in tone and line.

TI 4: Mixed Media vs. Digital Composition

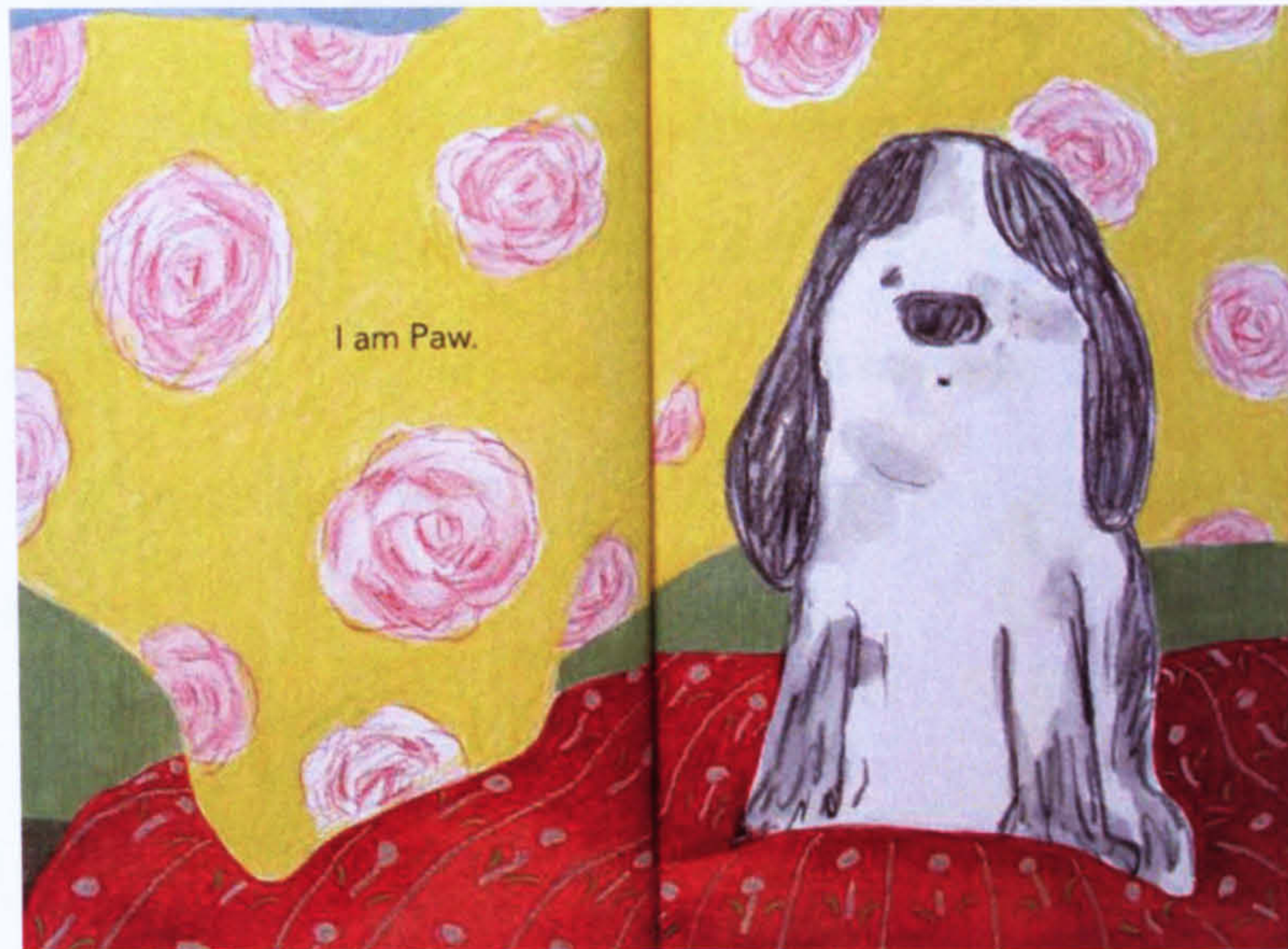


Figure 6.18 A comparison of traditional and digital illustration, provided by TI 4

This comparison is exceptional, due to the practitioner's sole use of the computer for composing the elements, following that the drawing process was mainly hand painted. The first sample is a spread of a children's book that serves as the end product, the

second sample is an image used for pre-visualisation which was subsequently developed to produce the first sample. To compare these samples may not be considered fully appropriate. However, as the purpose of the comparison is to understand the differences between traditional and digital methods, even though the second sample is not even a final product, I will use the samples to show the qualities before and after digital means are employed. This is a good example of how digital samples can be later produced using traditional media.

The sample of traditional work is a final product, therefore there are sophisticated details of texture and tone within the image; in particular, the dog which is drawn by pencil appears as a 'rough' drawing, as though produced spontaneously. The background has also been deliberately manipulated in order to reflect the practitioner's own particular style. The digital sample, however, is not a final piece and seems less detailed; the background was simply coloured using a plain yellow with selected pink roses and the black dog was painted by a brush. Although these samples are produced in different circumstances, since only one has been completed, the result of using digital methods produces an effect that is considered less textural and limited in use of tone.

6.2.2 The Implications of the Comparison

Two main suggestions have emerged from this comparison of traditional and digital illustration. The first suggestion concerns the use of digital methods to simulate a traditional medium, watercolour, which would seem to be more easily differentiated.

Whilst the interviewees attempted to simulate watercolour using digital means, it often appeared distinguishable from an illustration created by traditional method. Compared to other traditional media, such as acrylic and pastel, it appears that the computer simulates other media more convincingly than watercolour; this may be because of watercolour having a transparent property which subtly interacts with paper. To faithfully mimic traditional watercolour appears problematic. By contrast, the method of collage has been well achieved using graphic software; this was confirmed by examining a comparison of the two. If the elements of collage are hand made by the creators or 'found' materials are used and the computer is mainly used for assembling the elements, the resulting digital collage would be similar to the image produced by a traditional approach. This implies that the digital method used to collage would seem to have been integrated alongside that of traditional drawing.

The comparison of the traditional and digital illustrations also highlight intrinsic changes after the digital means have been adopted, in regard to the construction of an illustration, such as colour, line, stroke, texture and pattern. Although there is not a 'golden rule' in order to distinguish between digital and traditional illustrations, the following lists the differences between traditional and digital methods for illustrations.

Colour and Tone:

Working with traditional media such as watercolour, colours can appear slightly muted and textured; they bleed slightly and are not perfectly flat. There is also a wide variation of tones. Colours produced by digital methods often seem flatter; perfectly coloured and

they usually possess a clarity and crisp quality.

Line and Stroke:

A line drawn by traditional media generally appears with irregular widths and is accompanied by various tone changes. The characteristic of brush stroke is similar to the appearance of line; it has natural strengths that are controlled by hands conveying a variation of tone in the stroke. Lines and strokes are manipulated by the computer often give a more mechanised effect, having relatively regular widths to their lines or strokes.

Texture:

Texture in traditional drawing often creates a tactile impression, which involves pigments physically drawn onto textured paper and depict sophisticated detailing. Textures that have been imitated in graphic applications usually show more insubstantial qualities and can have a slightly glossy appearance.

Pattern:

In traditional drawing patterns often seem simple and uncomplicated, but digital patterns do appear comparatively more sophisticated, relaying on a wider selection of designs, there is often a repetition of pattern which is easily achieved.

Overall:

The overall impression of traditional illustration when compared to digital illustration is a softer 'look' and a more tactile quality. Digital illustration, however, seems slightly

harder edged and shows a clarity and cleanness, a feeling of being produced by mechanical means.

6.3 Conclusions

The preference of using digital methods, in children's book illustration, is often to simulate genres of traditional drawing which can be achieved without the use of digital methods. Evidence of this is discussed in the previous chapters. Although practitioners who have now adopted digital means can strive to create artwork similar to that using traditional media, there is still evidence of digital techniques. In Section 6.1, I have suggested that the common indication of digital use found in children's book illustration can be identified when: perfect images appear flat coloured, a regular gradation of tone, regularity of line and repetitious mechanical patterns. If the appearance of those elements that go to making an illustration give an impression of clarity or in part a blurred 'look', then these could also indicate the use of a digital process in creating the illustration. However, possible visual traces are only suggestive of the appearance of digital illustration in general. Practitioners who show great capability in applying graphic software as well as hand drawing skills create artwork which initially appears as traditional drawing but has actually been produced using entirely digital methods. This implies that viewers may not necessarily know or care if an illustration had been produced through a digital process or by hand drawn methods.

Despite the preference of illustrators working in children's books for presenting images using traditional media, a number of illustrators have produced a new aesthetic in illustration. Those visual effects which exist in the children's book market involve the blending effects, translucency, transformation and cinematic manipulation. Effects, often accompanied by other effects, can appear spontaneously and simultaneously in this new aesthetic of illustration. These effects might possibly have been achieved before the digital era but they would have appeared in slightly different ways, and more importantly the processes would have taken a considerable time to complete.

Since the advent of digital methods, illustrators may now deliberately create images similar to their traditional work. However, this digital work often contains distinctive differences from their traditional methods. They may not necessarily like these and prefer to discount them. My research has highlighted the fact that, to varying degrees, every digital practitioner interviewed has been affected to some degree by the graphic programmes they have adopted. Digital effects may not have altered an illustrators' aesthetic style but the effects have shown variations in their artwork. According to my examination of the eight interviewees who have used digital means, watercolour was one of most difficult media to simulate. For those interviewees who have employed this medium, in a digital way there are apparent differences to the work previously created by hand. In Section 6.3, the illustrators' traditional and digital samples were compared and this clearly demonstrated detailed variations. The variations could be seen in terms of colour and tone; these appeared less tonal and slightly clearer in the digital sample

than in traditional coloured version. Variation could be seen in both the line and brush stroke where traditional mark making uses a natural strength which is controlled by hand, and shows irregular variations. Meanwhile, variation could also be seen in textures and patterns; in digital illustration, the texture often communicates an awareness of the insubstantial quality and pattern appears comparatively more sophisticated than in traditional illustration.

Finally, my data also notes that cultural differences have had influence on the visual appearance of digital illustration. Although digital technologies have contributed to the genre of children's book illustration, creating similarities that cutting across national boundaries when examining the digital effect on illustrations produced by British and Taiwanese illustrators, the influence of digital effects showed some differences. For example in Britain, the composition of children's book illustration is generally of a "more traditional/non-digital manner such as in the work by Nick Sharratt, drawing and scanning the artwork, the work largely still comes from the hand..." (BE 2). This shows that some British illustrators often partially employ digital methods, and incorporate these alongside with traditional media. Their artwork can be affected by graphic programmes, but not as extensively as when work is produced entirely on a computer. In Taiwan, illustrators who have adopted digital methods have a tendency to work entirely within a digital environment. This suggests that their artwork can be viewed as having been completely affected by digital generation and is easier to identify than that produced by British practitioners in general: "... when I see work from Taiwan it tends to use more digital technologies in a stronger, more aesthetic way... this may be because of

the difference in culture...” (BI 7) Therefore to summarise the differences between Taiwan and Britain, the visual appearance of digital illustration could be described in a broad way, both show many similarities within digital illustration. The distinctive difference would seem that British illustrators tend to prefer incorporating digital illustration alongside traditional media; this may be because it is easier when presenting the work as traditional drawing. In comparison, Taiwanese illustrators who have adopted digital methods prefer to use entirely digital methods; their works demonstrated more obvious evidence of the digital process.

Chapter 7 Research Conclusions and Implications

As set out in the Introduction, the motivation for this study grew from my personal experience of the transition from traditional to digital usage in the 1990s in Taiwan. Especially when I was teaching in universities, I noticed that there was an increased number of students using computers instead of hand drawing to create their artwork, which suggested that students were better disciplined in applying graphic software than in hand painting. This phenomenon increased my desire to help students be well-equipped in both digital knowledge and hand drawn skills.

The illustration of children's books is one art form that is still dominated by the use of traditional media, especially those picture books for children aged 8 and under. This study therefore aimed to explore which working processes are used in children's book illustration and why illustrations continue to be produced through a conventional medium. Is it the case that the working processes used in children's book illustration perceived as drawn by traditional media, simply apply traditional methods or have digital means been employed during practitioners' working processes, using a simulation approach to create digital illustration? If a simulation approach has been used then are there any distinctive differences between those illustrations produced by traditional and digital methods? What actual changes have taken place within children's book publishing since the advent of the computer?

To answer these questions, the study firstly reviewed the development of children's books from Britain and Taiwan, and discussed the transition from traditional to digital usage and the visual appearance of digital illustration (Chapters 1 and 2). I established that to date, in relation to digital illustration in children's books, there has been very limited research which has specifically examined the influence of digital means on children's book illustration. Therefore a qualitative approach was adopted to investigate the impact of digital technology on children's book illustration in depth. The method of semi-structured interviews was employed to obtain detailed information. The interviews were conducted in two phases: the initial and then a further interview, interviewing illustrators and experts in the field of children's book publishing. The description of the research methods, interview processes and the type of data analysis used is presented in Chapter 3.

The interviews investigated three major aspects, firstly, experiences and attitudes towards digital usage, the impact of digital technology on children's book publishing and issues in connection with publishers, art directors and illustrators. These aspects are described in Chapter 4. Secondly, digital working processes were examined, the research initially established nine digital working processes, providing a platform from which the digital processes commonly employed in children's book illustration could be considered. Subsequently, these digital working processes were linked to the examples of working processes provided by the interviewees, to explore any changes introduced and the reasons to explain adopting digital means. This examination offered the possibility of

developing a rationale for why illustrators have altered their traditional methods and have adopted digital working processes. This investigation is explored in Chapter 5. Thirdly, the visual appearances of digital illustration were considered; two sorts of visual samples, drawn from four digital children's books and eight traditional and digital illustrations by illustrators were provided. The sample of four selected digital children's books was provided by the researcher to evaluate the visual qualities of digital illustration. The sample of eight was provided by the interviewees/illustrators in order that the differences between their own traditional and digital work could be compared. The evaluation of the visual samples is discussed in detail in Chapter 6.

7.1 Research Conclusions

In this thesis, I have carefully examined the development and impact of digital technology with reference to children's book illustration. This has involved the discussion of the development of children's book illustration and illustration in the digital age as well as investigations into the specific influence of digital usage on children's book illustration. A number of fundamental themes have emerged from this study. Its main findings therefore can be grouped under the following headings:

- Perceptions of illustration in children's books: a conservative market
- Blurring the lines between traditional and digital illustration

- A tendency to integrate traditional and digital methods
- The changing nature of the relationship between illustrators and designers
- Taiwanese and British perspectives of children's book illustration

7.1.1 Perceptions of Illustration in Children's Books: a Conservative Market

The arrival of digital technology has influenced practice in the publishing industry. Most practitioners have been challenged to use the computer as the main tool for creating an image. However, there seems to have been less impact on children's book publishing from digital means, as its images appear to have been dominated by traditional illustrations. Since beginning this study, I have questioned whether children's book illustration, especially those picture book illustrations which may not have been simply created by traditional media, have been partly created by using a simulation of traditional drawing, through a combination of both traditional and digital methods. Why is the preference of the picture book market dominated by traditional media? This can be answered from two perspectives. Firstly, the buyers of children's books to a certain extent are not children; the buyers are their parents, especially of those books for aged 8 and under. Because children are young, parents therefore are in control of choosing their reading material. For most parents when they were young they did not encounter by digital imagery and almost all of the illustrations in their reading books were drawn by traditional media. Therefore it seems to have been easier for the buyers or parents to opt for books created by traditional methods. Secondly, the quality of illustration made by

traditional methods seemed more attractive than a computer generated illustration, particularly in the early 1990s. The relatively poor reputation of digital illustration has been noted by most publishers, which means publishers have been reluctant to publish picture books containing digital illustrations. Although there are some picture books available that clearly demonstrate the skilful use of digital methods, it is the use of illustration drawn by traditional media that has dominated picture book publishing.

Evidence that shows publishers' preference for publishing children's picture books which use traditional media can be seen in Chapter 4.1, through the experiences of two interviewees/illustrators. Both interviewees employ traditional and digital techniques, but when they turned to using the computer, their publishers did not welcome the use of digital techniques.

"I talked with an art designer recently and said that I had some new ideas for using the computer. But he [the art designer] said 'No, no, our boss won't agree. You better use hand drawing.'" (TI 2)

"I am told publishers do not like digital works, they worry about it and they prefer traditional hand painting..." (BI 2)

Although these interviewees can create illustrations by using digital means, the children's book market has a tendency towards conservatism and a preference for illustration created by traditional media. This might have resulted in an alternative solution for those illustrators who are skilled in both techniques, by using a combination of traditional and digital methods in order to create an image as if rendered by hand.

This is a point highlighted through this research that although some of the illustration in the market has been created by traditional methods, it has also been partly produced through a combined process of traditional and digital methods (the processes of integrating both methods can be seen in Chapter 5.1, the partial digital processes). This might lead to a tendency towards an increased number of practitioners who will use these processes. One of the key causes for this is that the practitioners who have studied in colleges or universities since the 1990s have been taught to employ both traditional and digital techniques. But because of the market preference for traditional drawing, this could possibly result in the practitioners' use of partial digital processes. Choosing the integration of traditional drawing with digital processes seems an approach which can facilitate working processes that may have been difficult to achieve or have required considerable time, when employing traditional methods. The research therefore suggests that the number of practitioners using the combination methods will increase in line with a growing number of students who have graduated from art and design institutes since the 1990s, creating illustration that seems to have been drawn by conventional media in the children's book market.

One phenomenon that could also relate to the children's book market is the rejection of new styles of digital illustration. Nowadays many illustrations have been created by a more obvious use of photography such as photographic drawing, integrating hand-drawn and photographic images on the computer. The work by Dave McKean is an example of this kind of drawing in children's books (see Chapter 6.1.1). This way of producing digital illustration has been very popular in other areas of publications; it is

especially seen in magazine and book publishing, but is not as prevalent in children's book illustration. Why is this style of photographic drawing not popular in children's books? The research suggests that the drawing style has been interpreted as a digital form of illustration, since it reflects digital methods and digital effects, neither of which are as welcome as a picture book drawn by traditional media. However, the research argues that for another generation picture books with obvious digital effects may be accepted by the market. The post-1990s generation has grown up in a multi-media environment. When they are older the obvious appearance of digital imagery may be accepted as pure illustration in its own right, and may even be referred to as traditional illustration.

7.1.2 Blurring the Lines between Traditional and Digital Illustration

Finding relevant visual samples for the study, to identify whether illustration has been created by traditional methods or produced through digital means, was one of the most challenging tasks in this research. First of all, I examined images by drawing on my own experience, then I identified the references which have described working methods or I made personal contact with the illustrators themselves. It is difficult to identify whether an illustration is digital or traditional at first glance even though I have had experience of using both methods. The illustrations in Figure 7.1 were collected in the early stages of the research. Having accessed the reference for them it was established that one was created by an entirely traditional process and the other by an entirely digital one. Nevertheless, I was surprised by the approaches employed and the visual effects created by the processes.



Figure 7.1 The first image, *Marmalade and Magic Birds* (2002) was created by Robin Harris. The second image, *Sitting Ducks* (2001) was created by Michael Bedard.

It may be presumed that the first image is a traditional illustration and the second a digital one. However, with the arrival of the computer, some illustrators have been inspired to create an illustration through traditional media that simulates digital effects as a 3D illustration; this phenomenon can be seen in the second image. Although the first image was created by an entirely digital process and the second image was drawn by traditional media, the final effect is in marked contrast with how digital and traditional methods would generally be perceived. This might reflect the point that if an illustration contains a particular visual characteristic, especially 3D, this might more easily mislead audiences to perceive it as produced by digital methods. On the other hand, the first image was created with the aid of more refined graphic programmes, Photoshop and Painter. It was considered more difficult to replicate the quality of traditional media through the earlier versions of these programmes, but the recent versions have provided a wider range in the 'brushes' palette tool and offered more flexibility in designing custom brushes. Therefore, it seems possible to 'pass off' a traditional drawing by using an entirely digital process.

With such visual evidence and the investigation of digital appearance in Chapter 6.1.2, the research therefore posits the view that the lines between traditional and digital illustration have been blurred in children's books. Why have these lines been blurred? The blurring of lines may not only relate to an improvement of the capability of graphic software, they may also refer to the integration of traditional drawing into digital processes, which is considered more difficult to distinguish, as the study has found. For example, in the work created by Lauren Child (see Chapter 6.1.1), it is difficult to

establish if she has used the computer to create her work. Without the references from publications describing Child's working methods, it may be conceived that her work was created using a traditional collage approach.

Although the lines have been blurred, the research has identified that certain styles can be more easily produced through digital means. The styles include photographic manipulation, an image with perfect and flat colours, collage and 3D images (see Chapter 5.3). These styles of illustration have benefited from the specialist graphic software such as Adobe Photoshop, Adobe Illustrator and Corel Painter, improving the appearance of digital illustration in children's books. A style of perfect and flat colours employs geometric shapes; this type of illustration might be created through Illustrator as the software specialises in creating geometric shapes for graphic illustration. Illustrations using photographic manipulation and collage might be created using Photoshop and those similar to hand painting might be created by Painter. Indeed, it is considered easier to produce certain styles of illustration through digital processes. Practitioners when using graphic software, often combine several programmes at the same time. When creating a digital illustration, the first concern is which software would be used and whether the style of illustration can be produced by the software; the connection between styles of illustration and software is an important consideration. From a practitioner's perspective the use of digital processes can be identified through certain styles of illustration, since those styles can be more easily created through the computer. An example of this is the characteristic of perfect and flat colours, with line work rendered by hand such as the work by Nick Sharratt (see Chapter 6.1.1), although this style of

illustration was in the market before the use of digital means. Nevertheless, as the use of the computer can facilitate drawing processes, there has been a rapid increase in the production of hand-rendered line work with flat coloured illustrations in the market.

7.1.3 A Tendency to Integrate Traditional and Digital Processes in Children’s Book Illustration

“In fact, new technology is sometimes invisible and has been seamlessly integrated into the work of many ‘so-called’ traditional artists” (Heller and Arisman 2004, p.78).

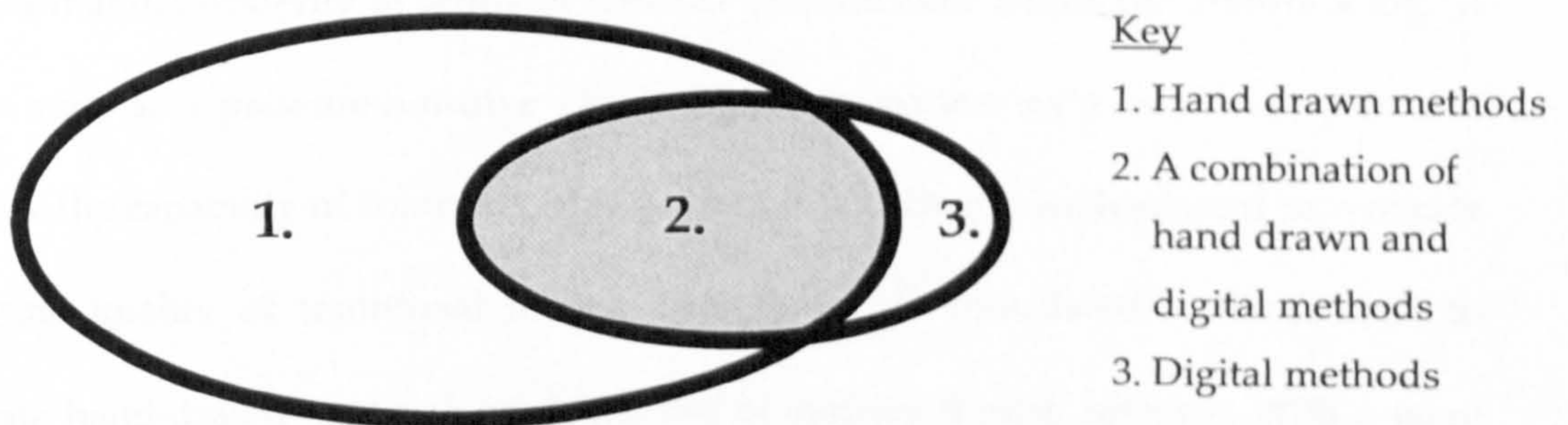


Figure 7.2 Perceptions of ‘traditional’ illustration

With reference to the above diagram (Figure 7.2), it is generally understood that most picture books are largely rendered by traditional media such as watercolour and gouache or created through mixed media as demonstrated in area 1. In this study, however, the gathered evidence has suggested that many children’s books have been created through

digital processes, especially those which have combined traditional and digital means. Digital means have been 'seamlessly integrated' into work which is later perceived as drawn by traditional media. Examples of this can be seen in Chapter 5.2, through an examination of the eight digital working processes. The research therefore suggests that when digital means have been adopted and employed by children's book illustrators, the processes used would largely employ a combination of both methods, as demonstrated in shaded area 2. This combination of traditional and digital methods accounts for a significant part of illustration, perceived as drawn by traditional methods. Although the use of entirely digital processes can 'pass off' an image in the style of traditional media, there are only a limited number of illustrations using entirely digital processes to mimic traditional media in the children's book market as shown in area 3. This is due to the issue of manual dexterity in terms of whether practitioners' hands can control a digital device such as a pressure-sensitive pen in the same manner as a traditional pen, and whether the capability of computer programmes is sufficiently sophisticated to replicate the same quality of traditional media. Therefore it is considered more difficult to simulate hand-drawn media through the use of entirely digital methods. With a large number of illustrations perceived as drawn by traditional media in the children's book market, and yet created through using digital methods, the digital processes have been disguised and integrated into hand drawn methods.

tools might change for example, from a charcoal to a pen or a computer with the

In this research, there are five partial digital processes combining traditional and digital methods which have been identified in Chapter 5.1 namely, Digital Composition, Electronic Collage, Digital Surfaces/Layers, Retouching, and Digital Integration. After the

interviews, the research established that the most sophisticated illustrations were those produced by Digital Composition, since their creation through the computer could not be easily identified. This is because the function of the composition process is a means of visualising some of the existing elements of the layouts on which combinations could be further developed. An example can be seen in the examination of TI 4: (a) Digital Composition in Chapter 5.2. The interviewee/illustrator insisted that she had not employed a computer, because she felt that her work had not been fully produced through digital means. This research has highlighted how a considerable number of current illustrators, especially those who see themselves as illustrators using only traditional methods, do use some digital processes to create their work. Notwithstanding, the illustrations produced through this process have been embedded in those books which are perceived as drawn entirely by hand.

Furthermore, since practitioners have integrated traditional drawing into digital processes, the research has found that there are a significant number of variations in their working practices and commonly these variations stem from key concerns regarding use of the computer. Firstly, there is the variation of using traditional tools; practitioners when adopting digital means may change to drawing tools that are easier to work with, which may have been difficult to control before the use of the computer. The drawing tools might change for example, from a charcoal to a pencil. Importantly with the capability of the computer the result is similar (an example can be seen in Chapter 5.2, the working process of BI 3). Secondly, the variation of drawing in mono-colour; illustrations do not necessarily have to be drawn in colour when using the computer.

They can be created in black-and-white, drawn by hand and then scanned into the computer to change the colour or add visual effects. Therefore for some illustrators since their use of the computer, they have moved from using drawing-in colour to mono-colour imagery on a piece of paper. Finally, the variation of creating small sized drawings; when integrating traditional drawings into digital processes, many hand-drawn images could be created on a smaller scale, then scanned into the computer (an example can be seen in Chapter 5.2, the working process of BI 2). Since many scanners are programmed to A4 size, it is not necessary to create a larger hand drawing; otherwise this may cause difficulties when scanning. These variations have often occurred since practitioners have adopted digital methods. The variations may have been attractive to practitioners who included the computer as part of their working process, because the combination of traditional and digital methods can practically facilitate the drawing process. Significantly, the integration of hand-drawn images into digital processes is evident in many children's books on the market, but it is difficult to establish which books have used these methods of integration on the basis of an examination of just the illustrations.

7.1.4 The Changing Nature of the Relationship between Illustrators and Designers

Before the arrival of the computer, the roles of designers and illustrators seemed to be more clearly differentiated. In publishing, the traditional role preserved for art directors was that of a liaison between key players, the marketing managers, editors, illustrators

and photographers, delivery of the design concept to layout artists and typeface creators and control of the process of design through to the end result of printing. In contrast, the role of illustrators mainly concentrated on commissions which designers were given. In the world of picture book publishing, the situation has been slightly varied. An illustrator can also be the author of a book. Those illustrators/authors often had a clear idea on how to compose a book; they might even give art directors drawings and layouts for their books. Therefore, the main role for art directors was to refine the design and layouts and to ensure this design could be printed with the required quality. Since the computer has been widely used in publishing practice, roles which were traditionally reserved for art directors and illustrators have been subtly changed as the research has highlighted. The role of art directors has been extended to include that of designer, layout artist and typeface creator and has sometimes even included the role of illustrator. Similarly, the role of illustrator has also been extended and sometimes involves the work of design, which was previously part of the domain of art directors.

The extension of designers and illustrators' roles has been absorbed by both sets of these practitioners even though these roles have not conventionally belonged to them. One of the main reasons is the influence of graphic programmes; especially through Photoshop, the extension has had a profound influence on the way that art directors and designers view illustration. Photoshop has encouraged designers to undertake illustration using their own collage and montage, bypassing illustrators, which has become a common form of practice. Illustrators therefore are increasingly aware of a diminishing number of commissions, which has led to an uneasy relationship between designers and illustrators

(see Chapter 2.1.1). Although in picture book publishing, the illustration is generally created by illustrators, other types of children's books may not be necessarily commissioned for illustrators. The need for commissioning illustrators would depend on whether illustrative styles could not be manipulated through graphic software. The commissions are often given to illustrators who have excellent drawing skills or specialist in creating certain types of illustration. Therefore it is crucial to establish a personal and individual style of illustration for survival in the era of digital technology.

Additionally, the role of illustrators has also been expanded to include the entire work of design and illustration since the use of digital methods. Examples of this can be seen in Chapter 5.2, the examination of the eight digital working processes. The interviewees/illustrators expressed the view that because of the computer, they were willing to include design in their commission. The use of digital methods can facilitate their design process as well as offer an overview of their illustrations with typefaces sets and a layout of an entire book before submission to art directors. The overview of design, composed of illustrations and text has encouraged illustrators to further share the role that has traditionally belonged to art directors because this allows illustrators to feel more in control over the output of an entire book.

Due to digital means, the extension of roles traditionally reserved for designers and illustrators has resulted in several relevant phenomena. One is an increasing workload. As computers can accelerate creative processes, many practitioners in the interviews expressed the concern that art directors required several projects in the same time frame,

which when compared to the pre-digital era, represents an increase in output. The other is infringement of 'professional knowledge' which was traditionally the preserve of art directors and illustrators. This would suggest that the use of digital technologies has not encouraged the development of working partnerships for art directors and illustrators, but has led to an increased demand for altering images, and to a certain degree, disrespect for professional knowledge which traditionally was the preserve of practitioners. For art directors the demand for changing a design may come from the marketing manager, editor and author, but for illustrators the demand could also come from art directors. Furthermore, since the use of the computer, visual design work has become more demanding; working partners may check work during a creative process and ask for variations to the image. In comparison with the pre-digital era, there is a perception that it is easier to ask art directors for alternative visual effects or designs, because of the availability and range of effects offered by the computer. Meanwhile, as the computer can process at a faster pace, working partners subconsciously think that these effects could be completed in a shorter time frame.

Traditionally, there was a greater distinction of professional responsibilities between illustrators and designers in the pre-digital era. Now illustrators can composite a book as a designer and designers can use Photoshop to collage those 'found' materials to create an illustration. Although the use of the computer has encouraged illustrators and designers to absorb the other 'specialists' roles, this research suggests that at a certain stage it is important for disciplines to overlap. For illustrators, their fundamental role is figurative interpretation. With the computer, designers need to be able to draw, whilst

illustrators need to have an understanding with type. Importantly, on a conceptual level, illustrators and designers could share visual ideas, methods, and strategies for conveying information that would benefit both sides in telling a visual story.

7.1.5 British and Taiwanese Perspectives of Children's Book Illustration

British children's book publishers are an established part of the global market. Books illustrated by British illustrators are not only sold in Britain; collaboration with other countries has allowed British book publishing to extend its market, some famous British illustrators are well-known worldwide. Although British illustrators are known internationally, one of the children's book fairs, the annual Bologna Children's Book Fair, attracts publishers from across the globe searching for partners and buying and selling rights. Illustrators in the global market need to present both a good quality illustrations and a well-established marketing strategy. British children's books have established their reputation in the global market supported by the use of English as an international language. British publishers often publish books for several co-editions with different countries at the same time. It is very important for publishers to sell picture books overseas and often those picture books are not printed in Britain but in other countries where the printing costs are cheaper such as in China and Singapore.

In comparison with Britain, Taiwan has a smaller children's book market, encompassing an excellent range of books from overseas. These books have either been translated into a Chinese version or imported mostly in the English version. The book *The Stinky Cheese*

Man and Other Fairly Stupid Tales (1992) by Lane Smith, for example sold 150,000 copies in the first month of publishing in Taiwan (Lai 2002); those buyers were not just children, but adults, noted the Taiwanese publishers. The example can also be seen in the many so-called 'adult picture books' published since the success of Jimmy (幾米) whose picture books have been very popular in East Asia (also see Chapter 1.2.4). Picture books in Taiwan are not always aimed at children but are also produced for adults; this is a significant phenomenon in the Taiwanese picture book market not seemingly paralleled with picture books published in Britain. The other difference with British publishing is that Taiwanese publishers often sell picture books in sets to maximise their sales; since not all of the picture books would appeal to the buyers, therefore the strategy of selling in sets is considered more profitable than selling individually. Selling in sets usually takes place through direct sales, and because of this sets of books are not found in bookstores. Instead buyers contact the publishers personally or via sales personnel for information regarding purchases. The strategies of direct sales and selling in sets have contributed to the emergence of a trading pattern for picture books in Taiwan (also see Chapter 1.2.3).

With the global market, children's book publishing now has extended to many other countries, crossing national boundaries. The examination of how two different cultures have used digital means has established that there are no obvious differences between Britain and Taiwan. Particularly, when practitioners use the computer to create a digital image, the research identified that commonly used graphic software and processes are similar or the same, which suggests there are no differences in the methods used for

producing digital images between both cultures. This could be attributed to the standardisation of graphic software, such as QuarkXpress for creating and editing page layouts and Illustrator and Photoshop for editing and manipulating images, which has led to a similarity in working processes in editorial practice. The only distinctive difference in the use of the computer would be in relation to how British illustrators prefer to incorporate traditional media with their computer use because it is considered easier in this way to present a genre as traditional drawing. In comparison Taiwanese illustrators, having adopted digital methods, prefer to work entirely on a computer. The impact of this approach on their work is the more obvious use of digital effects created through the graphic applications.

Such similar working processes have raised the issue of whether use of digital means has contributed to the emergence of a genre? In this research, I have identified that digital technology has further contributed to uniformity between British and Taiwanese children's book illustration, especially amongst those younger Taiwanese illustrators. The characteristics of images created by them are similar to illustrations from overseas. Two reasons might have related to this phenomenon. One is the influence of foreign children's books; a considerable number of translated and imported children's books have been published in Taiwan every year. These books have indeed attracted Taiwanese audiences with their high quality illustrations, and have therefore influenced Taiwanese illustrators to create a similar genre to those illustrations from abroad. The illustrator Junyen Tsaó who is over 60 presents a flavour of Taiwanese culture through his illustrations, which distinguishes his work from that created by British illustrators. Yet currently there are

fewer younger illustrators whose work demonstrates such cultural qualities. The other reason is because of the use of the computer. Especially when using the same computer packages, this has facilitated production of similar visual effects. In Taiwan, with the use of digital methods and influence of overseas work, there is a risk that Taiwanese illustrators may convey a visual image that does not fully reflect the traditions of Taiwanese culture.

7.2 Research Implications

Through the research conclusions, key findings from the previous chapters can be reviewed. The results of this study therefore have

- 1) provided an understanding of the context and development of children's book illustration in the United Kingdom and Taiwan since digital means have been applied in the publishing industry
- 2) provided the details of how practitioners have confronted digital technology
- 3) considered the digital working processes commonly used in children's book illustration
- 4) offered insight into the rationale for adopting digital means
- 5) offered a comparison of the visual appearance of traditional and digital illustration

This research suggests that the availability of illustrations in the market produced through the use of digital means and the number of illustrators who use the computer will continue to increase through students who have studied in art and design institutes after the 1990s. The research also suggests that illustrators who adopt digital means in children's book illustration would largely employ a combination of both traditional and digital methods. Therefore, to distinguish whether images have incorporated the use of a computer or have only utilised traditional media involves a certain degree of difficulty. The roles of art directors and illustrators have been extended since the use of the computer; digital technology has encouraged both of these sets of practitioners into roles that conventionally did not belong to them. In addition, the use of the same computer packages has presented the risk of little reflection of cultural traditions. The research has identified that for illustrators from Britain and Taiwan, there are similarities in the illustration styles.

There are a number of issues that remain unresolved after the investigation. Firstly, the visual samples for digital illustration are unsatisfactory due to the difficulty in identifying the use of digital methods in picture books, especially in those illustrations where a combination of traditional and digital methods have been applied. The samples used in this thesis were often gathered from personal contacts and those references which specified that the work was produced through a digital process. Therefore with few references that indicated illustrators' working processes; there was an obstacle in obtaining a sufficient number of visual samples. Secondly, there is a limitation in sources for both digital and children's book illustration which have specifically discussed digital

illustration in children's books. To date, seemingly very few references have examined this issue. This has led to the need for references in a more general framework of 'general illustration'.

Implications for future practice

Every era brings forth new challenges that strike both fear and exhilaration into practitioners; transitions are not easy, but they are necessary. Digital technology has indeed influenced the methods used for creating artwork, and it is now necessary for designers to adopt digital means as one of the main tools for visual design. Although illustrators can continue to use traditional media to draw, changes in working practices underline an increasing number of new illustrators who are knowledgeable in using both traditional and digital methods. This research has questioned what has actually changed within illustration and how the computer has influenced practitioners and their work, particularly considering how many illustrators have found that their work has disappeared because designers can use graphic programmes to create illustrations; commissioning illustrators has at times seemed unnecessary. An uneasy relationship between designers and illustrators has existed but this now seems more contentious than in the pre-digital era. Although in picture book publishing commissioning illustrators remains a primary choice, however if illustrators do not have a distinctive style or possess excellent drawing techniques that cannot be replicated or manipulated by designers using a computer, then these illustrations might also disappear. For the younger generation who has been trained using the computer in art and design institutes, the computer is no longer new. They know how to apply programmes as well as develop

their unique drawing styles without relying on digital effects; this is of fundamental importance for the future of the illustrators.

Implications for the relationship between hand drawn and digital methods

Since the computer has been used in producing illustration, for those illustrators who studied art and design before the 1990s and had already established their reputation through using traditional media, it is difficult to adopt digital means, although they are aware of the potential for greater control and flexibility in their work through the use of the computer. When the illustrators decide to adopt digital methods, it is important for them to reconcile computer use with their established styles and themes, maintaining their styles and exploiting merits of digital methods. The use of integration of traditional drawings into digital processes is an approach which is often used in picture book illustration. Due to the market's preference for traditional media, it is easier to present an image as if drawn by hand. Therefore, the relationship between hand drawn and digital methods seems essential, whilst applying both methods. How can the computer be reconciled with illustrators established styles? For illustrators who have studied art and design after the 1990s, the combination of traditional and digital methods is also essential for them, in order to integrate certain hand drawn textures with digital effects. As the preference of the market is traditional illustration, the relationship between hand drawn and digital methods and the issue of how to integrate hand drawings into digital processes as if entirely drawn by hand, are both considered important for all professional illustrators who are either already using digital means or planning to use the computer to be part of their working processes.

Implications for educators

Since many designers can now create illustration by themselves, for illustrators the main concern is how their creations can now be distinguished from others in the vast number of publications on sale. A well developed individual drawing style is considered an important factor for illustrators to survive in the children's book industry. This implies that it is essential for educators to encourage students to develop a distinctive drawing style and well-trained hand skills whether using traditional or digital methods. It is important for educators to rethink what is in the best interest to help students develop their drawing ability. This raises a further issue of whether the curricula for design and illustration students have overemphasised digital technology? I believe that to a certain extent the Taiwanese education sector has emphasised digital technology which has improved student knowledge of the application of digital methods, but at the expense of hand drawn skills. In order to create high-quality digital illustrations, it is fundamental to train students to handle digital devices in the same manner as a traditional pen. Therefore, hand drawn skills are of utmost importance for students. In this research, the work created by British illustrators using both traditional and digital methods can be seen as an example for Taiwanese educators and students. I believe that when Taiwanese universities emphasise digital technology and its integration into a range of education programmes, they should also equally focus on the integration of both traditional and digital methods.

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Appendix A: Interview Questions of Illustrators (initial interview)

Explanation of personal work

1. Could you please tell me about your work?

Sub-questions:

Can you tell me about the history of you becoming an illustrator?

What are you currently working on?

Can you explain how you conceive illustration for a new book?

Can you show me some of your children's books and explain the drawing methods or processes, and the materials you have used?

2. Could you explain your views on the aesthetics of drawing and how these impact in your children's illustration?

Sub-questions:

Have you been influenced by any artists or art forms?

Are your drawing styles influenced by any marketing needs or perceptions of what children like or feedback from children/others?

3. Could you explain your process of illustration when drawing a book for a publisher?

Sub-questions:

How do you choose or select publishers? How do you co-operate with publishers and art designers?

Do you co-operate with authors? If so, how do you relate with authors and publishers?

What are the difficulties working with publishers and art designers?

Influence of digital techniques

4. Since 1990s to the present, the computer has been used widely. Have you seen any changes/development in the trend of illustration over this period of time?

Sub-questions:

Have you seen a transformation of illustration genres over recent years? Can you give me some

examples?

How strongly do you feel the influence of computer usage in your work process? Can you give me some examples?

Amount of Influence			
None <input type="checkbox"/>	Weak <input type="checkbox"/>	Moderate <input type="checkbox"/>	Strong <input type="checkbox"/>

If going to publishing, how strong do you feel the influence of the computer usage in the publishing industry?

Amount of Influence			
None <input type="checkbox"/>	Weak <input type="checkbox"/>	Moderate <input type="checkbox"/>	Strong <input type="checkbox"/>

5. Have you observed a change in the production process since the introduction of computers within the publishing industry?

Sub-questions:

Any particular ground-breaking publications?

Is there any difference in using computers for publishing?

What is the impact on illustrators?

6. From your observation, has the advent of computer use in illustration made the job of illustrator different? If so, in what way?

Sub-questions:

How digital impacts on the control of what illustrator produce? (e.g. changing colours, superimposing images, manipulating types and retouching images...etc.)

What is the ways of you using computer for the work process? Can you give me examples on work involving computer at different points in the process?

7. Have you observed the differences between Western countries (UK) and Asian countries (Taiwan) how computers are used in the work produced?

Sub-questions:

Can you give me some examples?

Evaluation of the digital/non-digital visual quality

8. Some illustrators use software to simulate traditional skills, for example Robin Harris's *Marmalade and Magic Birds*, Dave Mckean's *The Wolves in the Walls*. Lauren Child's *I will not Ever Never Eat a Tomato*, Nick Sharratt's *Wriggle and Roar!* Could you evaluate the visual quality and appearance of these illustrations?

Sub-questions:

Marmalade the Magic Birds (by Robin Harris)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Robin Harris has used software (Photoshop and Painter) to simulate traditional illustration?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

The Wolves in the Walls (by Dave McKean)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Dave McKean using the computer to elaborate the images?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

I will Not Ever Never Eat a Tomato (by Lauren Child)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Lauren Child using the computer to montage her drawings and patterns she collected? Is it an easy way to montage images in computer than hand making?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

Wriggle and Roar! (by Nick Sharratt)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Nick Sharratt using a scanner to scan charcoal line into computer, then overlaps the textures and patterns? What do you think of Sharratt using his own typeface, which is created in the computer?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

9. Do you feel there are intrinsic differences in children's book illustration between work produced on the computer and the work done by more traditional methods? If so, can you describe these?

Sub-questions:

Can you give me any examples of successful and unsuccessful digital illustrators? Why are they?

Future Prospects

10. Do you think there will be an increasing number of children's book illustrators using digital forms in the future?

Sub-questions:

How about the future trends?

What will cause the acceleration of illustrators using digital forms e.g. design education, market needs, and films?

**Do you think perhaps someday you will adopt the computer to be part of your work process?
(the question only applies to traditional illustrators)**

Appendix B: Interview Questions of Experts (initial interview)

Explanation of personal work

1. Could you please tell me about your publisher/company?

Sub-questions:

What are examples of the outstanding or typical children's books that have been published by your company?

Does your company co-operate with overseas publishers? If so, in what way?

2. Could you please tell me about your work?

Sub-questions:

How long have you been involved in commissioning illustration?

What is the scope of your work? How do you interact with other departments?

How many books/ book proposals you are currently involved with?

3. Could you explain how you select books to be published?

Sub-questions:

How do you decide which books are to be published?

How do you choose/select illustrators? How do you co-operate with the illustrators?

Could you tell me about the publishing process (such as layout, typography, printing, distribution, etc)? How do you represent the best part of illustration in children's books?

Art Directors work in the publication industry; therefore they need to compromise between an illustrator's style and the marketing needs. How do you negotiate for them? Can you give me examples?

Influence of digital techniques

4. Since 1990s to the present, the computer has been used widely. Have you seen any changes/development in the trend of illustration over this period of time?

Sub-questions:

Have you seen a transformation of illustration genres over recent years? Can you give me some

examples?

How strongly do you feel the influence of the computer in your work process?

Amount of Influence							
None	<input type="checkbox"/>	Weak	<input type="checkbox"/>	Moderate	<input type="checkbox"/>	Strong	<input type="checkbox"/>

Can you give me some examples?

5. Have you observed a change in the production process since the introduction of computers within the publishing industry?

Sub-questions:

Any particular ground-breaking publications?

When did your company start using the computer for publishing? What kind of systems and software you have used? Are there any differences in using the computer for publishing?

What is the impact on illustrators?

6. Has the advent of computer use in illustration made the job of art designers easier or harder? If so, in what way?

Sub-questions:

Has it changed the role of art designers?

How digital impacts on the control of what art designers produce? (e.g. changing colours, superimposing images, manipulating types and retouching images...etc.) Does they have changed things in terms of how and what point of designers can influence the end result?

Can you give me examples on work involving computer at different points in the process?

7. Have you observed the differences between Western countries (UK) and Asian countries (Taiwan) how computers are used in the work produced?

Sub-questions:

Can you give me some examples?

Evaluation of the digital/non-digital visual quality

8. Some illustrators use software to simulate traditional skills, for example Robin Harris's *Marmalade and Magic Birds*, Dave Mckean's *The Wolves in the Walls*. Lauren Child's *I will not Ever Never Eat a Tomato*, Nick Sharratt's *Wriggle and Roar!* Could you evaluate the visual quality and appearance of these illustrations?

Sub-questions:

Marmalade the Magic Birds (by Robin Harris)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?
Could you evaluate how Robin Harris has used software (Photoshop and Painter) to simulate traditional illustration?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

The Wolves in the Walls (by Dave McKean)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Dave McKean using the computer to elaborate the images?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

I will Not Ever Never Eat a Tomato (by Lauren Child)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Lauren Child using the computer to montage her drawings and patterns she collected? Is it an easy way to montage images in computer than hand making?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

Wriggle and Roar! (by Nick Sharratt)

Do you see how computer is used to manipulate illustrations in this book? If so, in what way?

Could you evaluate how Nick Sharratt using a scanner to scan charcoal line into computer, then overlaps the textures and patterns? What do you think of Sharratt using his own typeface, which is created in the computer?

In your opinion, what are the advantages/disadvantages of using digital forms on these illustrations e.g. aesthetic, work process?

9. Do you feel there are intrinsic differences in children's book illustration between work produced on the computer and the work done by more traditional methods? If so, can you describe these?

Sub-questions:

Can you give me any examples of successful and unsuccessful digital illustrators? Why are they?

Future Prospects

10. Do you think there will be an increasing number of children's book illustrators using digital forms in the future?

Sub-questions:

How about the future trends?

What will cause the acceleration of illustrators using digital forms e.g. design education, market needs and films?

Appendix C: Interview Questions of Digital Illustrators (further interview)

Briefing:

According to the first round of interviews, the present research has found traditional/non-digital and digital illustrations having differences of visual appearance. As the study going on the research would need to develop further information from participants and to understand certain questions. The following questions are for understanding of distinguishing features between traditional and digital illustrations and the working process of digital illustrations.

Questions:

1. Could you please show me your traditional and digital illustrations, and explain where you think there are any distinguishing features between them?
2. Could you give me an example of your work process and explain your work process?
3. Why have you chosen that digital process for your drawing? Is it convenient, a simulation, a new aesthetic, learning environment or others?
4. What do you think about the idea that children's book illustrators tend to disguise the effect of the digital processes on their artworks?

Appendix D: Interview Consent Form

Project Title:

The impact and development of digital forms of illustration in print publishing from 1990 to present, with particular reference to children's books (PhD)

Researcher:

Interviewee:

Content Agreement:

I agree to be interviewed for the above research project, and authorise the researcher to refer to the content of the interview, including quotation, in her thesis and any work publishing under her name as an author and co-author, which is solely for academic purposes. I also agree to be identified as the interviewee.

The researcher agrees to ensure all quotations are accurate, and to respect any restrictions the interviewee wishes to place on parts of the interview that she/he does not wish to be quoted.

Signature of interviewee:

Signature of researcher:

Date completed:

Appendix E: Visual Consent Form

Project Title:

The impact and development of digital forms of illustration in print publishing from 1990 to present, with particular reference to children's books (PhD)

Researcher:

Interviewee:

Imagery Agreement:

I agree to have images recorded for the above research project, and authorise the researcher to use the recorded images of the interview, in her thesis and any work publishing under her name as an author and co-author, which is solely for academic purposes.

The researcher agrees to ensure all the recorded images are used properly and correctly attributed, and to respect any restrictions the interviewee wishes to place on parts of the interview that she/he does not wish to be presented.

Signature of interviewee:

Signature of researcher:

Date completed:

Contact information:

Tel/Fax _____

Address _____

Email _____