



The  
University  
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Making an Impression: An  
Assessment of the Role of Print  
Surfaces Within the Technological,  
Commercial, Intellectual and Cultural  
Trajectory of Book Illustration, c.  
1780-c.1860

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# Abstract

The processes by which book illustrations were printed and reproduced underwent dramatic changes between 1780 and 1860. The arrival of lithography, the invention of steel engraving and the revival of wood engraving had lasting effects on the market for illustrated books, which gave rise to the ‘golden age’ of illustration by the 1860s. This thesis assesses the function of book illustration amidst the technological, commercial, cultural and social changes that took place before the onset of this golden age of illustration. It does so through the lens of illustrations’ materiality: the form, shape and size of illustrations, which inform both the visual contents of illustrations as well as the position they occupy on the page and arrangement across the book. It argues that a greater appreciation of the print surfaces reveals more about how illustrations both shaped and were shaped by the social, cultural, commercial and intellectual contexts in which they were produced. This thesis intersects between bibliographical approaches that have enriched our understanding of the techniques and surfaces used to reproduce book illustrations, and visual culture studies that foreground the graphic contents of such illustrations. Macro analyses of the changes to printing techniques across different subjects, in addition to micro-analytical studies of individual illustrations and books allows for a greater understanding of the diverse and often complex roles illustrations played in these books, which often transcended considerations of narrative or genre. Furthermore, by applying computational and digital methods, we can begin to understand broader patterns of illustration both within the book and across different subjects that would not otherwise be possible. As such, this thesis has implications for the history of the book, visual culture studies, digital humanities, and the history of the subjects and genres that have been used as case studies.

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## Book Sizes (cm)

Folio	30.5 x 48
Quarto	24 x 30.5
Royal Octavo	16.5 x 25
Octavo	15 x 23
Duodecimo	12.5 x 19



# Introduction: Making an Impression

In 1842, a review of an illustrated edition of the Scottish author James Thomson's famous poetical series *The Seasons*, originally published between 1726 and 1730, perfectly encapsulated the spirit of the early-Victorian book market:

Illustrated books please, and have pleased, from infancy to age, many a generation [...] Not a book now-a-days can dare to show its face simply "*pumice mundus*." That would be bringing "its nose to the grindstone" to little purpose. It must come out "splendid." It must be strictly "pictorial" [...] The public, like Mr Puff's players, can never have too much of a good thing.<sup>1</sup>

This appraisal of Thomson's illustrated edition acted as a thinly veiled attack on the works of eighteenth-century politician and antiquarian Horace Walpole, suggestive that 'polished' but plainly bound, heavily textual books were insufficient to meet changing market demand, regardless of their intellectual authority, entertainment or claims to knowledge.<sup>2</sup> More generally, the observation made here by the reviewer of Thompson's republished edition highlights the shift in the fundamental requirements and expectations of what a book should look like against the backdrop of technological, industrial and commercial changes to book production that took place over the first half of the nineteenth century.

The year 1842 represented a significant year for illustrated literature. It marked the ten-year anniversary of illustrated periodicals *Chambers's Edinburgh Journal* and *The Penny Magazine*. Perhaps more importantly, the review was published in the same year *The Illustrated London News* commenced circulation of weekly issues, widely regarded as the first official illustrated weekly news magazine. The reduction of the Newspaper Stamp Duty, a tax imposed on newspaper proprietors that formed

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<sup>1</sup> 'Thomson's Seasons', *Blackwood's Edinburgh Magazine*, Vol. 52, November 1842, p. 674.

<sup>2</sup> The latin term 'pumice mundus' was used heavily in Walpole's works and is translated as a 'polished book.' Fernando Navarro Antolín (ed.), *Lygdamus: Corpus Tibullianum III.1-6 Lygdami Elegiarum Liber*, trans. J.J. Zoltowski (New York, 1996), p. 116.

one part of the 'taxes on knowledge', from 4d to 2d in 1836 alleviated the restrictions of newspaper and periodical circulation.<sup>3</sup> The increasing circulation of these cheaper forms of reading matter to a wider reading public underscored the importance of illustration to these new serials.<sup>4</sup> Although the majority of illustrated books remained out of the financial reach of those who relied on these cheaper forms of illustrated literature such as *The Penny Magazine* and *The Illustrated London News*, both the introduction of these weeklies together with the perceived necessity to include illustrations in books outlined in the above review, confirms the rise of an 'illustration culture' by the early-Victorian period.<sup>5</sup>

It is the primary objective of this thesis to further explore the establishment of this culture: why books were illustrated and how these material changes impacted upon the book, those invested in its production, and the subject or genre to which the book belongs. It has been widely accepted that the period under consideration marked a formative period for illustration against the backdrop of technological changes within the world of print production. It is striking, however, that we lack a study that charts this trajectory in relation to the more specific intellectual, social and cultural contexts in which these illustrations were employed by authors, publishers, artists and engravers. I will explore the significance of the printing methods used to illustrate these books, the different levels of value placed on them by contemporaries as well as the motivation behind their use. It is all too easily forgotten that a two-dimensional illustration was originally printed from a three-dimensional object. I therefore aim to expose the journey between the materiality of the mediums involved in the production of illustrations and their final manifestation on the page as well as their arrangement in the book. In so doing I

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<sup>3</sup> The complete repeal of the Newspaper Stamp duty took place in 1855, whilst the Excise Duty on Paper, the final 'tax on knowledge' (there were four in total), was repealed in 1861. For more detailed accounts of the 'taxes on knowledge' and the significance of their abolition, see Martin Hewitt, *The Dawn of the Cheap Press in Victorian Britain: The End of the 'Taxes on Knowledge', 1849-1869* (London, 2014); Lynne Oats and Pauline Sadler, 'The Abolition of the Taxes on Knowledge', in John Tiley (ed.), *Studies in the History of Tax Law*, Volume 2 (Oxford, 2007), 287-306; Henry Dagnall, *The Taxes on Knowledge: A Brief History, 1712-1861* (Edgware, 1992).

<sup>4</sup> The *Illustrated London News* was issued in weekly parts priced at 6d.

<sup>5</sup> I use Julia Thomas's term here to describe such a culture in place of the more ill-defined 'visual culture'. See Julia Thomas, *Pictorial Victorians: The Inscription of Values in Word and Image* (Ohio, 2004), p. 3.

bring the materiality of prints to the forefront of a critical enquiry into what illustration meant to the page and the book, as well as those individuals involved in its design and production between 1780 and 1860.

The early nineteenth-century print trade in Britain was marked by the arrival of new techniques such as lithography and steel engraving for reproducing illustrations. Etching and engraving on steel ensured that intaglio techniques remained prominent print-making techniques, whilst the invention of lithography by Alois Senefelder and the revival of wood engraving led by Thomas Bewick provided authors, artists and publishers with a greater variety of processes used to reproduce illustrations.<sup>6</sup> One of the purposes is to test the preordained collection of illustrations used in this thesis against other bibliographical accounts of technological changes to book illustration from the late-eighteenth century through to the early-Victorian period. 2018 marks forty-five years since the publication of Geoffrey Wakeman's quantitative analysis of the technical changes to printing techniques used in the Victorian period.<sup>7</sup> Since then, there have been a number of highly-detailed studies that have enriched our understanding of the physical properties of these techniques as well as the labour involved in the production of illustrating books in the eighteenth and nineteenth century.<sup>8</sup> This scholarship informs the quantitative analysis of the techniques used to print the illustrations in the corpus of illustrations used in this thesis.

The thesis began with a digitised collection of close to 100,000 illustrations from 6000 books belonging to the Rare Books collection housed at the British

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<sup>6</sup> These printing techniques will be discussed in greater detail in chapter one.

<sup>7</sup> Geoffrey Wakeman, *Victorian Book Illustration: The Technical Revolution* (Newton Abbot, 1973). Earlier useful accounts of technical changes to book illustration include, David Bland, *A History of Book Illustration: The Illuminated Manuscript and the Printed Book* (London, 1958); Michael Twyman, *Printing, 1770-1970* (London, 1970); Percy Muir, *Victorian Illustrated Books* (London, 1971).

<sup>8</sup> Anthony Griffiths, *Prints and Printmaking: An Introduction to the History and Techniques* (London, 1980); Richard Maxwell (ed.), *The Victorian Illustrated Book* (London, 2002); Edward Hodnett, *Five Centuries of English Book Illustration* (London, 1988); Griffiths, *The Print Before Photography* (London, 2016); Geoffrey Bridson and Geoffrey Wakeman (eds), *Printmaking and Picture Making: a Bibliographical Guide to Artistic and Industrial Techniques in Britain 1750-1900* (Oxford, 1984); Ad Stijnman, *Engraving and Etching 1400-2000: A History of the Development of Manual Intaglio Printmaking Processes* (London, 2012); Timothy Clayton, 'Book Illustration and the World of Prints', in Michael F. Suarez and Michael L. Turner (eds), *The Cambridge History of the Book in Britain, Vol. V, 1695-1830* (Cambridge, 2009), pp. 231-245; Dennis Bryans, 'The Double Invention of Printing', *Journal of Design History*, 13.4 (2000), pp. 287-292.

Library.<sup>9</sup> Given the scope of the collection, I focus predominantly on books published in English speaking countries. The vast majority of books were published in Britain, and particularly in the larger publishing centres of London and Edinburgh. There are also a small number of books published in America, particularly from 1840 onwards, which allows for a greater understanding of how the culture of illustration within specific intellectual contexts was disseminated across the Atlantic.

Given the impracticality of researching collections of this size and scope using established techniques, I adopt both quantitative and computational techniques in order to accommodate such a large dataset within a critical historical enquiry. Scholars interested in illustration have often relied upon a relatively small selection of illustrations, adopting methods derived from visual culture, in order to understand what they reveal about the wider social and cultural concerns of the period. The considerable time taken to leaf through hundreds of books to determine the printing techniques used largely determines the scope of a study into the history of book illustration. Those who have analysed a larger corpus of illustrations have tended to do so in order to trace the trajectory of print techniques throughout the nineteenth century.<sup>10</sup> The process of digitisation has allowed me to ask further questions of the collection that move beyond a survey of the processes used to print book illustrations. Accounts of the techniques and technologies used to produce book illustration tend to be grounded within bibliographical, primarily descriptive accounts of change over time. While chapter two charts the developments in the techniques used to produce illustrations, it represents the starting point of this thesis and provides the contextual framework for the remaining chapters.

In addition to applying quantitative methods to trace the development of printing techniques in this period, I also use chapter one to test the utility of computational techniques for a deeper understanding of how the size, shape and

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<sup>9</sup> It should be observed here that this is a collaborative doctoral award between The University of Sheffield and the British Library.

<sup>10</sup> Wakeman's study was the first to attempt a quantitative history of print techniques used during the second half of the eighteenth century. See Wakeman, *Victorian Book Illustration*. Scholarship cited in footnote 8 of this chapter has enriched our understanding of the processes behind the production of illustrations throughout the eighteenth and nineteenth centuries.



material form of illustrations produce meaning in the book, often independent from the written word, and the wider context of the subject matter they are designed to illustrate. Additional metadata, including the size of illustrations in pixels, the position illustrations occupy on the page and their distribution in the book can help to reveal changes that more established humanities approaches to the book cannot show.<sup>11</sup> It is possible, for example, to visualise the development of the sizes of illustrations that were used in books belonging to different literary subjects, as exemplified in chapters three, four and five.<sup>12</sup> This helps to reveal a number of tensions between author and publisher, the dynamic between word, image and the page, as well as the relationship between the intellectual output of the book and the subject or discipline it belonged to. The data can also reveal subtler variations in book illustration. I argue through a comparison between two eight-volume illustrated histories of England in chapter five that the mutability of wood engraving and the advantages it offered in determining the layout of the page can reveal the difference between illustrating a text and illustrating a book in the early-Victorian period. These methods allow for a greater insight into the significance not only of what was illustrated but how the book and the page was illustrated.

### A Question of Value

The collection used in this thesis features a wide range of illustrations both in terms of genre and printing technique. They range from stock woodcuts and decorative embellishments to engraved maps and landscape scenes; from diagrammatic designs to historical illustrations. The size of the corpus in addition to the rich variety of illustrations allows for detailed snapshots into the way in which illustrations were used across different disciplines and genres. Traditional

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<sup>11</sup> These techniques have been applied throughout the thesis and discussed in more detail in chapter one. See, for example, Franco Moretti, 'Style, Inc. Reflections on Seven Thousand Titles (British Novels, 1740-1850)', *Critical Inquiry*, 36.1 (2009), pp. 134-258.

<sup>12</sup> 'Literary' is not considered in relation to fictional literature but rather to show I am referring to books that belonged to different subjects.

bibliographical accounts of technological change over time are predicated on the types of books and illustrations sampled. Wakeman's study, for example, was based on books in the Bodleian Library classified under 'art', while John Buchanan-Brown's investigation into early-Victorian illustrated books was primarily concerned with the aesthetic appeal of wood engravings and steel etchings in order to establish a closer connection between new concepts of book design and the finest printing of the period.<sup>13</sup>

The aesthetic value attached to printing techniques was mirrored in remarks by contemporaries of the period. Before the arrival of new printing techniques such as steel engraving and the revival of wood engraving, copper engraving was widely regarded to stand at the apex of graphic reproduction:

Of all the imitative arts, painting itself not excepted, engraving is the most applicable to general use, and the most resorted to from the necessities of mankind. From its earliest infancy it has been called in, as an assistant in almost every branch of knowledge; and has, in a very high degree, facilitated the means of communicating our ideas, by representing to the sight whatever is capable of visible imitation[...]<sup>14</sup>

Given that mechanical and technological developments to graphic reproduction were embryonic at the time the engraver and antiquarian Joseph Strutt was writing compared to the proceeding century, the high regard that copper engraving was afforded is perhaps unsurprising. Aesthetic value continued to be attributed to intaglio techniques.<sup>15</sup> The reviewer of Thomson's *Seasons*, while revelling in the revival of illustration, confirmed the high status afforded to these intaglio techniques, 'fine engraving is perhaps mostly adapted to pictures of the highest class. [...] For illustration, we like more visibly to behold the artist's hand; and, for this, etching is the best, and next to etching wood engraving, where the drawing is made on the

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<sup>13</sup> John Buchanan-Brown, *Early Victorian Illustrated Books: Britain, France and Germany 1820-1860* (London, 2005).

<sup>14</sup> Joseph Strutt, *A Biographical Dictionary: Containing an historical account of all the engravers, from the earliest period of the art of engraving to the present time* (London, 1785), p. 1.

<sup>15</sup> Intaglio belongs to a group of printing techniques whereby lines were incised into the metal surface. Intaglio techniques will be discussed in more detail in chapter one.

block by the painter himself.”<sup>16</sup> The reviewer here establishes a hierarchy of value ascribed to different printing methods.

The technical developments made to wood engraving first established by Bewick rose to greater prominence from the mid-1820s and challenged the hierarchy of metal over wood. The capacity to carve out a far greater number of lines in relief on the woodblock served to rival intaglio methods.<sup>17</sup> The artist Walter Crane, while reflecting on the time spent in his father’s studio flicking through illustrated folios, recalled his admiration for designs printed in *The Art Journal*, formerly *The Art Union*, first published in 1839. However, it was not ‘elaborate steel engravings from modern pictures’, but the wood engravings from older works of art that Crane attached the greatest value.<sup>18</sup> The value of the printing technique was therefore subjectively attributed by contemporaries.

One of the objectives of this thesis is to emphasise that value was not always predicated on aesthetic or artistic merit. The ascription of value quite often depended upon the subject or genre that the illustrated book belonged to. As David McKitterick has observed, in order to understand what is new, we need to understand what it replaces: ‘material properties have always been subject to change, to manipulation, to revaluation and to reinterpretation.’<sup>19</sup> In light of this claim, I argue that the material properties of the printing techniques adopted in specific publishing contexts transcended aesthetic design and were borne out of wider concerns including the democratisation of knowledge, commercial motivations and the physical design, layout and arrangement of the book more generally during a period when the world of print underwent sustained transformations. Chapter three of this thesis, which explores the use of illustration in geological publications underscores the intellectual value of cheaper and visually cruder forms of illustration. The wood engravings used in Charles Lyell’s *Elements of Geology* (1838) were

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<sup>16</sup> ‘Thomson’s Seasons’, p. 675.

<sup>17</sup> Buchanan-Brown, *Early Victorian Books*, p. 21. The revival of wood engraving will be examined in greater detail in chapter one.

<sup>18</sup> Walter Crane, *An Artist’s Reminiscences* (New York, 1907), p. 15.

<sup>19</sup> David McKitterick, *Old Books, New Technologies: The Representation, Conservation and Transformation of Books Since 1700* (Cambridge, 2014), p. 2.

rudimentary in their appearance but it was precisely the unsophisticated nature of the illustrations that contributed to Lyell's aim of democratizing geological knowledge. The application of steel engraving in topographical works discussed in chapter four was met with concerns over the status of topography as a form of rigorous intellectual enquiry. This was because the aesthetic value of steel engraving was considered counterintuitive to the discipline.

An analysis of the application of wood engraving in addition to steel engravings to topographical works reveals the capacity of illustration to transform the physical act of reading topography within the wider cultural and social changes taking place in this period. The numerous practical and commercial advantages offered by wood engraving, particularly printing wood engravings and type on the same press simultaneously, made it an attractive medium for publishers and writers of illustrated books.<sup>20</sup> I argue that the increasing use of wood engraving within this discipline was used by writers and publishers to construct a 'virtual topography' whereby the act of travelling and encountering the scenes represented in the illustrations were reflected by the design of the page and book itself. In doing so I hope to reveal the utility of a production and design-led approach in order to establish the connection between the materiality of illustrations, their arrangement and reading or 'viewing' practices.

A central concern of this thesis, therefore, is to explore more fully the function and value ascribed to different print mediums according to the wider cultural, social and intellectual conditions in which they were printed. I argue that this cannot be achieved solely by reading illustrations in terms of their abstract contents, but rather by a greater appreciation of their very materiality as cultural objects; their shape, size, and overall arrangement both in relation to the page and the book more generally. I therefore read prints in this period as cultural objects both individually and collectively; I ask how they shape and are shaped by the

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<sup>20</sup> The mid-nineteenth century has been acknowledged to represent the golden age of wood engraving. See Paul Goldman, *Victorian Illustrated Books, 1850-70: The Heyday of Wood-engraving* (London, 1994).

broader intellectual, social and cultural changes that took place in this period. To this end, the thesis serves as a critical reflection on the role of technology in mediating the dissemination of knowledge and the physiology of reading more generally. I argue throughout that technological, commercial, artistic, social and cultural changes to illustration are intricately connected, which serves to place equal emphasis on people and materials through the processes by which the illustrated book was produced in this period. By reading illustrations in this way, we can move beyond analyses of their abstract contents in order to investigate more closely how print mediums were exploited according to the diverse aims of those tasked with the illustrated book's production.

This thesis draws influence from methodologies integral to a wide range of scholarship including bibliography, book history, word and image studies, illustration studies and social semiotics. I stress the importance of the materiality of illustrations in order to more fully understand the working relationships between individuals involved in the production of the illustrated book, the way in which these materials shaped the design and layout of the page and the book as well as the role of illustration in shaping or even transforming the intellectual discipline to which the book belongs.

I am also influenced by the approach taken by Laurel Brake in her edited volume exploring the role of illustration in nineteenth-century print journalism. I adopt the discursive approach from this volume in charting the trajectory of book illustration across a 70 year period as opposed to a single period or specific genre.<sup>21</sup> Scholarship that has traced the technological trajectory of the book is predominantly rooted in bibliographical surveys of technological change.<sup>22</sup> Furthermore, the period between 1780 and 1860 has often been viewed as the precursor that led to a culture of illustration by the second half of the nineteenth century. One of the principal aims of this thesis is to explore the meaning behind

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<sup>21</sup> Laurel Brake and Marysa Demoor, 'Introduction', in Laurel Brake and Marysa Demoor (eds), *The Lure of Illustration in the Nineteenth Century: Picture and Press* (Basingstoke, 2009), p. 4.

<sup>22</sup> See Footnote 8.

the print medium and the function of illustration more generally during a formative period for book illustration.

Whilst I ground this study within a bibliographical context, I examine technological developments within the specific cultural, social and intellectual landscapes that came to define the material production and reception of different subjects and genres, of which illustration was particularly crucial. Furthermore, adopting a similar intellectual approach to that of Brake for the history of the illustrated book allows for a discursive analysis that subsequently engenders a greater insight into how the contemporaneous idea of 'progress' ascribed to technological development was at once triumphed, exploited and challenged within the specific intellectual and cultural landscape of different subjects and genres; a dynamic that remains underexplored.

It is striking that Brian Maidment's call to consider the association between the medium by which the image is produced and the diverse meanings that can be derived from these mediums has still to be fully explored, particularly in relation to book illustration.<sup>23</sup> Maidment coalesces production and meaning within the genres of the picturesque, the topographical and satire amongst others. The picturesque in Maidment's list, for example, is portrayed through lithographs and aquatints; the topographical through line engraving and the satirical through woodcuts.<sup>24</sup> By viewing illustrations through the lens of their materiality, this thesis acts as a point of intersection between the productive processes by which illustrations are made and their aesthetic characteristics or subject matter. In doing so, I argue that understanding the processes and the material properties intrinsic to these processes is a useful approach in the attempt to reveal the fundamental role illustration played in the design of the page and the book that shaped the way in

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<sup>23</sup> Maidment's call to make the connection between the medium and the print has been answered, though primarily by scholars concerned with single-page prints as opposed to illustrations. See, for example, James Baker, *The Business of Satirical Prints in Late-Georgian England* (London: Palgrave Macmillan, 2017).

<sup>24</sup> Brian Maidment, *Reading Popular Prints 1790-1870*, Second Edition (Manchester, 2001), p. 33.

which the book was read during a period of sustained technical, commercial, and industrial change.

What follows in the remainder of the introduction is a consideration of the ways in which a number of scholarly fields including the history of the book, word and image scholarship as well as illustration studies have informed this thesis. I will consider the interaction between people and processes in the production of the illustrated book as well as the utility of print culture and visual culture for the thesis. Many existing accounts of the techniques and processes used to print illustrations, which are central here, remain grounded in descriptive bibliographical studies.<sup>25</sup> One of the main ambitions is to build upon these accounts in order to investigate the effects these print surfaces had on the format, design, and intellectual output of books primarily belonging to non-fiction subjects.<sup>26</sup> Given that illustrations are vital components and important intersections in the layout of the page and the design of the book, which in turn inform communication circuit of the book first put forward by Robert Darnton, it is curious that illustrations are omitted from Darnton's circuit.<sup>27</sup> I therefore examine illustrations not only as individual sign-makers but also their collective function across volumes and editions. I adopt an interdisciplinary approach in order to understand what it meant to illustrate a book from the late-eighteenth to the mid-nineteenth centuries. In doing so, I seek to establish a methodological framework that will enable me to consider the design and order of the book in more robust ways. To this end, this introduction will consider the utility of social semiotics and multimodality, approaches often used to examine the meaning of complex sign-systems in contemporary media, within an analysis of the evolution of illustration before the onset of the 'golden age' of illustration in the latter half of the nineteenth century.<sup>28</sup>

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<sup>25</sup> These studies have been cited in footnotes 7 and 8.

<sup>26</sup> Fiction and non-fiction were fluid concepts in this period. I use the term 'non-fiction' here to refer to subjects that were not officially categorized as fiction.

<sup>27</sup> Robert Darnton, 'What is the History of Books?', *Daedalus*, III.3 (1983), p. 65.

<sup>28</sup> I use the term 'evolution' as opposed to 'revolution' purposefully here. The idea of the 'illustration revolution' was coined by Michael Twyman. See Michael Twyman, 'The Illustration Revolution' in David McKitterick (ed.), *The Cambridge History of the Book in Britain, Volume 6: 1830-1914* (Cambridge, 2009). The idea of a revolution of the book more generally in this period has

## The History of the Book: Where Does Illustration Fit?

Given that a central preoccupation of this thesis is to examine the practical, commercial, entrepreneurial, intellectual and social contexts derived from the relationship between the materiality of illustration and the material book, the intellectual framework by which this thesis is founded is indebted to the developments in the history of the book. Lucien Febvre and Henri-Jean Martin's ambitious study of the book was one of the first to move beyond a history of the discovery of printing.<sup>29</sup> Chapters that detail the composition of the book, its physical appearance, as well as the establishment of the book trade serve to reveal the wider significance of the invention of the press. The intentions that lay behind their work mirror the primary concerns of this thesis. Febvre and Martin ask what needs the book satisfied, what role books assumed, and what they meant to those who were living in a period of significant innovation within the world of print.<sup>30</sup> These subsidiary questions inform upon their central concern, 'how and why the printed book was something more than a triumph of technical ingenuity[...].'<sup>31</sup> While the material book remains the locus of enquiry for Febvre and Martin, the questions they ask of the book remain highly relevant here.<sup>32</sup> Forty years on from the first edition of *The Coming of the Book* (1976), these questions remain pertinent to the study of illustrations from a production-led approach. In this thesis I explore what roles illustrations occupied within a period of technical innovation and what needs illustration satisfied within the different intellectual and commercial outputs of a range of literary subjects and how they were satisfied based on their material characteristics.

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been recently contested, calling instead for an exploration into themes of evolution. See, for example, Leslie Howsam, 'Thinking Through the History of the Book', *Erudit*, 7.2 (2016), DOI: <http://dx.doi.org/10.7202/1036851ar>. John Buchanan-Brown's decision to examine early-Victorian books was also governed by an interest in what happened before the 'golden age' of illustration, See Buchanan-Brown, *Early Victorian Illustrated Books*, pp. 1-11.

<sup>29</sup> Lucien Febvre and Henri-Jean Martin, *The Coming of the Book: The Impact of Printing 1450-1800*, Geoffrey Nowell-Smith and David Wootton (eds), trans. David Gerard, (3<sup>rd</sup> edn., London, 1997).

<sup>30</sup> *Ibid.*, p. 10.

<sup>31</sup> *Ibid.*

<sup>32</sup> They do include a section on the technical developments in illustration. See *Ibid.*, pp. 90-103.



*The Coming of the Book* charted the history of the book on a course towards interdisciplinarity. Book history formed an intellectual framework in which scholars from different fields including bibliography, sociology, material culture and literary studies identified common intellectual ground, namely the process of how a book communicates information.<sup>33</sup> D.F. McKenzie's *Bibliography and the Sociology of Texts* (1986) underscored the importance of the material form in which texts were printed and the way in which this form shaped and often determined the meanings derived from these texts.<sup>34</sup> Historians of the book, most notably Roger Chartier and Robert Darnton, emphasised the human element of making and meaning within the history of the book. Chartier's examination of the systems that were established in order to regulate print focuses upon the encounter between the text and reader from the perspective of production, reception and appropriation.<sup>35</sup> Darnton's study similarly considered the role of readers in shaping the intellectual output of the book. He argued that 'by reading and associating with other readers and writers, they [authors] form notions of genre and style and a general sense of literary enterprise, which affects their texts, whether they are composing Shakespearian sonnets or directions for assembling radio kits.'<sup>36</sup> The purpose of book history according to Darnton, therefore, is to 'understand how ideas were transmitted through print and how exposure to the printed word affect the thought and behaviour of mankind during the last five hundred years.'<sup>37</sup> The definition outlined here stresses the cyclical relationship between the producers of the book, the readers as well as the book itself.

Whilst I do not deny the fundamental role the book played in shaping the 'behaviour of mankind' as Darnton states, it is not a primary concern here to assess the way in which book illustrations shaped the behaviour of those who came into

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<sup>33</sup> Robert Darnton, 'What is the History of Books?', *Daedalus*, III.3 (1983), p. 65.

<sup>34</sup> D.F. McKenzie, *Bibliography and the Sociology of Texts* (London, 1986).

<sup>35</sup> Roger Chartier, *The Order of Books: Readers, Authors and Libraries in Europe Between the Fourteenth and Eighteenth Centuries*, trans. Lydia L. Cochrane (Cambridge, 1994), pp. 1-24. Chartier's revised account of *The Order of Books* clarifies his position on what he considers the practice of reading to be. See Roger Chartier, 'The Order of Books Revisited', *Modern Intellectual History*, 4.3 (2007), pp. 509-519.

<sup>36</sup> *Ibid.*, p. 68.

<sup>37</sup> *Ibid.*, p. 65.

contact with the book. I therefore find Leslie Howsam's definition given in her recent survey of the historiographical landscape of book history to be more appropriate for the purposes of this thesis. Howsam contends that the history of the book provides an insight into the means by which people materialise knowledge and stories.<sup>38</sup> This definition lends itself to a greater focus on a production-led approach. Like Howsam, this thesis is borne out of a discontent with studies that engage with book history but neglect the materiality of the book in favour of the texts due to the power and impact of the written word over time.<sup>39</sup>

Understanding the mutability of the page and book is crucial to understanding the materiality of illustrations. In chapters three, four and five, for example, the use of wood engraving in geology, topography and history books is considered as a part of a wider commercial imperative of selling these works in periodical parts first printed in newspapers and magazines. The materiality of the illustration was therefore vital to the mutable forms in which the book was designed and arranged.<sup>40</sup> To this end, this thesis approaches the history of the book, not from the perspective of the readers themselves as Darnton has, but how individuals who were responsible for the book's production exploited design and arranged to project a vision of reading according to their ambitions, whether they be social, cultural, intellectual, commercial or popular.<sup>41</sup>

Both the relationship between materiality and meaning within the history of the book as well as the inherent interdisciplinarity of the field lead to one conceptual aim: understanding how the book functioned in different moments in history. This thesis is concerned here with how one particular facet of the book worked and how its role changed over time. By looking at materiality more closely, called for by

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<sup>38</sup> Leslie Howsam, 'Thinking Through the History of the Book', *Erudit*, 7.2 (2016), DOI: 10.7202/1036851ar.

<sup>39</sup> Leslie Howsam, 'The Study of Book History', in Leslie Howsam (ed.), *The Cambridge Companion to the Book* (Cambridge, 2015), pp. 4. See also chapter five of this thesis where history books are analysed in terms of their design and layout.

<sup>40</sup> This forms another central concern of Howsam, which is that the 'fusion of image and text' takes place in different forms that can engender different meanings. See Howsam, 'Thinking Through the History of the Book'.

<sup>41</sup> I argue that in many cases, these ambitions were intricately connected.

Howsam, I will explore how the material surfaces used to print illustrations were influential in shaping meaning, whether that be from the perspective of design, knowledge-transfer, or commercialisation. This is in contrast to accounts that attempt to delineate the field of book history that have tended to privilege the written word. David Finkelstein and Alistair McCleery's volume, designed as an introduction to the history of the book, ask conceptual questions that in many ways are important to this thesis. Questions such as 'What is a book?', 'What is a medium?' are, however, ingrained within the overarching question 'what is a text?'.<sup>42</sup> Throughout seven chapters they trace important themes bound up in the history of the book, including the development from oral to print communication, authorship, and reception through the written word, clearly influenced by the seminal works of Lucien Febvre, Robert Darnton, and Roger Chartier.

The focus on the written word also takes precedence within recent debates over the perceived 'crisis' in book history. Although there is an acknowledgement of the role of the graphic in the production and consumption of books within Howsam's discussion of the mutability of print discussed previously, the predominance of the text within Howsam's attempts to define the 'intellectual space' that book history has become is clear.<sup>43</sup> An account of book illustration, for example, is missing from Howsam's theoretical and historiographical account of the history of the book. The five chapters that make up part two of the volume that examine the materiality of the book, which informs this thesis, are included to satisfy Howsam's contention that the materiality of books is too often overlooked given the power and impact of texts of their time.<sup>44</sup> I do not wish here to downplay the significance of the written word to the history of the book; rather, I aim to approach the book from the perspective of the visual as opposed to the more common

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<sup>42</sup> David Finkelstein and Alistair McCleery, *An Introduction to Book History* (Oxon, 2005), pp. 2-3.

<sup>43</sup> Howsam, 'Thinking Through the History of the Book'.

<sup>44</sup> Howsam, 'The Study of Book History', in Howsam (ed.), *The Cambridge Companion to the Book*, p. 4.

approach, which foregrounds the written text within historical and bibliographical enquiry.

As has been made clear earlier in this introduction, practical histories of the surfaces, techniques and labour used to print illustrations have revealed the complexity behind the production of the graphic elements of the book, including their practical limitations as well as the appropriation of these methods.<sup>45</sup> These studies provide the framework for chapter two of this thesis and inform those chapters that explore the means by which these processes were applied within different literary subjects.

Those accounts dedicated to illustration within broader histories of the book remain grounded in the practical considerations of printing an illustration. Within volumes five and six of *The Cambridge History of the Book* (2009), which surveys the periods between 1695-1830 and 1830-1914, just two of the sixty-seven chapters focus predominantly on illustration.<sup>46</sup> Similarly, only one chapter is dedicated entirely to illustration within the ambitious collection of essays edited by Michael F. Suarez and H. R. Woodhuysen, which survey the global history of the book.<sup>47</sup> The relative marginalisation of illustration is perhaps unsurprising given the editors' objective laid out in the introduction, to 'delineate the history of the production, dissemination, and reception of texts from the earliest pictograms of the mid-fourth millennium to recent developments in electronic books.'<sup>48</sup> While these studies have demonstrated the variety in the production, dissemination and reception of the written word on national, continental and global scales, the scholarly space devoted to the materiality of illustrations remains predominantly concerned with technical and industrial achievements.

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<sup>45</sup> See footnotes 7 and 8. Ad Stijnman's work in particular meticulously details the complexities of engraving and printing from copper.

<sup>46</sup> See Clayton, 'Book Illustration and the World of Prints', in Suarez and Turner (eds), *The Cambridge History of the Book*, pp. 230-247; Michael Twyman, 'The Illustration Revolution', in David McKitterick (ed.), *The Cambridge History of the Book*, Volume 6 (Cambridge, 2009), pp. 117-143. It should be noted here that James Mosley in his chapter on the technologies of the book discusses techniques used to print illustrations. See James Mosley, 'The Technologies of Printing', in *The Cambridge History of the Book*, Volume 5, pp. 182-189.

<sup>47</sup> See Paul Goldman, 'The History of Illustration and its Technologies', in Michael F. Suarez and H. R. Woodhuysen (eds), *The Book: A Global History* (Oxford, 2013), pp. 231-244.

<sup>48</sup> Michael F. Suarez and H. R. Woodhuysen, 'Introduction', in *Ibid.*, p. xi.

## Illustration, Technology and Print Culture

Scholars of print culture more widely have assessed the effects of these print processes in relation to the socio-economic and cultural landscape of urban Britain. The introduction of steam power, the commodification of Victorian culture, improved transportation networks and educational changes have all been analysed in relation to the rise in print production.<sup>49</sup> Gerard Curtis's exploration of the relationship between the production of art and the book has highlighted the role of illustration in the establishment of what he terms 'visual words' by the mid-nineteenth century.<sup>50</sup> While Gerry Beegan similarly points to the Victorian city as the 'place for vision', he emphasises the mechanization of the printed image through photomechanical reproduction as the salient factor in achieving this visual world.<sup>51</sup> Frances Robertson's survey of the changes to the technologies of the book has arguably done the most to bridge the gap between making and meaning. Tracing developments from the age of the steam press to the contemporary Ebook, Robertson attempts to investigate how print mediums have acquired meaning from the beginning of the nineteenth century to today. Her chapter on lithography and the suspicion it aroused from contemporaries as a result of the capacity to copy illustrations quickly and easily establishes the significance of the printing surface as opposed to the final print in the creation of wider cultural meaning.<sup>52</sup>

These studies have been valuable in shedding light on the way in which the shifting landscape of print production shaped people's understanding of the world around them. Robertson's work in particular has shown how processes such as lithography and intaglio engraving engendered different meanings through the very

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<sup>49</sup> The collection of essays edited by Asa Briggs and Peter Burke perhaps goes furthest in the analysis of the relationship between the socio-economic climate of Britain and the increasing ubiquity of book illustration and print culture more widely. See especially, Asa Briggs and Peter Burke, *A Social History of the Media: From Gutenberg to the Internet* (3<sup>rd</sup> edn, Cambridge, 2009), pp. 91-120.

<sup>50</sup> Gerard Curtis, *Visual Words: Art and the Material Book in Victorian England* (Aldershot, 2002), pp. 1-19.

<sup>51</sup> Gary Beegan, 'The Mechanization of the Image: Facsimile, Photography and Fragmentation in Nineteenth-Century Wood-Engraving', *Journal of Design History*, 8.4 (1995), pp. 257-274.

<sup>52</sup> Frances Robertson, *Print Culture: From Steam Press to Ebook* (Oxon, 2013), pp. 58-77.

means by which they were cut, scratched or drawn on the surfaces from which they are printed. The method of steel etching, for example, achieved a high level of status in graphic reproduction not only through the capacity to etch finer lines than copper etching or engraving, but also through the level of trust and professional value it was afforded as a result of its application in the production of bank notes.<sup>53</sup> The status of the print surface was therefore intricately linked to the thing it was designed to produce.

Lithography, a printing process that gradually made its way to England towards the beginning of the nineteenth century, originally received widespread criticism from artists who believed that the medium could not translate the level of artistic detail from the canvas to the stone.<sup>54</sup> Given the capacity of lithography to copy almost any design, contemporary printers lamented the attitude of artists who ‘have thrown up in a fit of impatience that practice of an art [lithography] much more easy of acquirement, and more efficient in its effects than etching, to which many artists have had recourse to multiply their sketches.’<sup>55</sup> The capacity to copy a variety of drawings and print them directly from the lithographic stone brought with it anxieties over both copying in the style of other mediums such as intaglio engraving as well as unauthorised copying of drawings and other prints. Lithography as a printing medium was therefore quite often elided with forgery at the early stages of its application.<sup>56</sup> These examples underscore the importance of the printing medium to considerations of taste, value and professionalism within a changing environment of nineteenth-century print culture.

These studies have succeeded in bridging the divide between technology and the pervasive field of ‘print culture’. Equally, this thesis approaches print culture in terms of the connection between the print medium and the broader culture in which they were utilized. Printed materials are not mere repositories of information but

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<sup>53</sup> *Ibid.*, pp. 18-36.

<sup>54</sup> Technical descriptions of the print methods examined in this thesis are included in the following chapter.

<sup>55</sup> ‘A View of the Present State of Lithography in England’, *Library of Fine Arts, or repository of painting, sculpture, architecture, and engraving*, April 1831, p. 208.

<sup>56</sup> Robertson, *From Steam Press to Ebook*, pp. 58-77.

sites of symbolism, knowledge, and ideology that shaped the culture in which they were printed. Scholars have also held that the establishment of a print culture facilitated other forms of consumption, including the heightened value of the visual within contemporary societies.<sup>57</sup> However, where this thesis departs from print culture as an intellectual framework is the connection to wider cultural fields such as gender and identity, often at the expense of the context of the material production and the print medium.<sup>58</sup> The notion of a print culture, therefore, as opposed to a manuscript culture that preceded it or a digital culture that is in the process of proceeding it, is in danger of reverting back to the implication of fixity that recent scholarship has been careful to depart from, an issue that this thesis aims to address.<sup>59</sup>

Another difficulty arising from the term 'Print Culture' is the wide range of materials that fall under the intellectual field: books, pamphlets, newspapers, periodicals and broadsides to name a few. The field of print culture is, therefore, not defined by high art or expensive folios but is inclusive of more ephemeral printed materials that circulated in everyday life. The volume of printed materials that are at our disposal as historians has led to a perceived crisis in the field and in the very notion of what print culture actually delineates. Given the ubiquity of primary printed material, print culture has been used merely to denote the presence of the different kinds of media listed above.<sup>60</sup> Print culture is therefore conceptualised in two ways here. The first relates to the networks between authors, publishers, artists and engravers; the culture of production.<sup>61</sup> The second relates to the means by which the materiality of printed illustrations and the processes used to reproduce them not

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<sup>57</sup> Sandro Jung, 'Introduction', in Sandro Jung (ed.), *British Literature and Print Culture* (London, 2013), p. 1.

<sup>58</sup> See, for example, Patricia Anderson, *The Printed Image and the Transformation of Popular Culture* (Oxford, 1991). For a discussion of what constitutes a popular print, see Diana Donald, *What is a Popular Print?: An Essay Prompted by the Exhibition 'Tabloid Culture: The Popular Print in England, 1500-1850'* (Manchester, 2000).

<sup>59</sup> Leslie Howsam, 'The Practice of Book and Print Culture: Sources, Methods, Readings', in Jason McElligott and Eve Patten (eds), *The Perils of Print Culture: Book, Print and Publishing History in Theory and Practice* (Hampshire, 2014), pp. 17-18.

<sup>60</sup> Jason McElligott and Eve Patten, 'The Perils of Print Culture: An Introduction', in McElligott and Patten (eds), *The Perils of Print Culture*, pp. 3-4.

<sup>61</sup> See Chapter three of this thesis for more on how these networks were established.

only shaped the way in which different disciplines were communicated through the illustrated book, the culture of reading or viewing. The application of different printing mediums, I argue, both shapes and is shaped by the culture in which they are used.

## People and Processes

Given that I adopt a production-led approach in attempting to explore what it meant to illustrate a book in the late-eighteenth and early-nineteenth centuries, the interaction between techniques and processes and those who utilized these processes, are themes that run through the entirety of this thesis. Indeed, the overarching structure is dictated by this interaction. Whilst chapter one attends to materials and techniques, chapter two engages specifically with entrepreneurial relationships that were formed against the changing technological, industrial and commercial contexts of book production by the mid-nineteenth-century. These relationships, I argue, were intricately linked to the status afforded to the printing medium chosen to illustrate the books in which different actors involved in the book's production converged.

A central aim of chapters three to five is to investigate the manifestation of the interaction between people and process within the cultural, intellectual and social contexts in which the book is produced. Consequently, this thesis touches upon the debate between Elizabeth Eisenstein and Adrian Johns over the role of agency in print. Eisenstein's seminal work on the history of print demonstrated the role of the printing press in establishing the fixity of print and the standardisation of texts.<sup>62</sup> The printing press, as the agent of change, acted as something more than a bearer of messages to new publics; it was responsible for transformations in the social and cultural landscape of Western civilisation. Epochal periods of history

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<sup>62</sup> Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change* (Cambridge, 1980). For more recent works that have been influenced by Eisenstein, see Sabrina Alcorn Barn, Eric N. Lindquist, and Eleanor F. Shevlin (eds), *Agent of Change: Print Culture Studies after Elizabeth L. Eisenstein* (Amberst and Boston, 2007).



including the Renaissance, the Reformation, and the Scientific Revolution, were founded upon the revolutionary power of print in and of itself.<sup>63</sup> Eisenstein argued that the impersonal nature of quantitative change, the methodology by which she examines the importance of the printing press, ‘is no reason to deny its historical significance.’<sup>64</sup>

A closer historical engagement with those invested in the book’s production within scholarship over the past two decades has acted as a critique of Eisenstein’s ascription of agency. Adrian Johns highlighted the importance of authorship, appropriation and piracy in the transmission of knowledge in one of the first sustained challenges to Eisenstein.<sup>65</sup> Where Eisenstein gives power to print itself, Johns points to communities of people in the shaping of knowledge. Johns’s contention that the development and consequences of print are better understood by an exploration into how different communities ‘put the press and its products to use.’<sup>66</sup> Subsequent scholarship has tended to place a greater emphasis on the role of people in the establishment of a print culture and reading practices.<sup>67</sup> Studies that focus on artists, illustrators, authors, and publishers have drawn attention to the creativity in which books were produced and sold, whether that be from a commercial, intellectual or artistic perspective, or indeed a combination of all three.<sup>68</sup>

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<sup>63</sup> The phrase is taken from the critique of Eisenstein’s work by Adrian Johns. See Adrian Johns, ‘How to Acknowledge a Revolution’, *The American Historical Review*, 17, 1 (2002), p. 115.

<sup>64</sup> Elizabeth Eisenstein, ‘An Unacknowledged Revolution Revisited’, *The American Historical Review*, 107. 1 (2002), p. 90. This was written as a response to Adrian Johns critique of her work cited in the previous footnote. See also, Elizabeth L. Eisenstein, ‘[How to Acknowledge a Revolution]: A Reply’, *The American Historical Review*, 107.1 (2002), pp. 126-128.

<sup>65</sup> Adrian Johns sought to reveal the importance of authorship to the transmission of knowledge. See Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago, 1998).

<sup>66</sup> Adrian Johns, ‘How to Acknowledge a Revolution’, p. 117.

<sup>67</sup> Selected examples include, Leslie Howsam, *Past into Print, The Publishing of History in Britain 1850-1950* (London, 2009); James Raven and Leslie Howsam (eds), *Books Between Europe and the Americas: Connections and Communities, 1620-1860* (Basingstoke, 2011); James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of the ‘Vestiges of Natural History of Creation’* (Chicago, 2000); James A. Secord, *Visions of Science: Books and Readers at the Dawn of the Victorian Age* (Oxford, 2014); Mark E. Wildermuth, *Print, Chaos and Complexity: Samuel Johnson and Eighteenth-Century Media Culture* (Newark, 2008).

<sup>68</sup> See, for example, James Hamilton, *A Strange Business: Making Art and Money in Nineteenth-Century Britain* (London, 2014); James Raven, *The Business of Books: Booksellers and the English Book Trade 1450-1850* (New Haven and London, 2007), pp. 250-262; Howsam, *Past into Print*; Richard L. Stein, ‘Dickens and Illustration’, in John O. Jordan (ed.), *The Cambridge Companion to Charles Dickens* (Cambridge, 2005), pp. 167-188; Simon Cooke, *Illustrated Periodicals in the 1860s: Contexts and Collaborations* (London, 2010); Laurie Garrison, ‘The Seduction of Seeing in M.E. Braddon’s *Eleanor’s Victory*: Visual Technology, Sexuality and the Evocative Publishing Context of Once a

The level of significance placed on the role of individuals and groups of individuals in the format and the design of the illustrated book in the proceeding chapters highlights the influence of scholarship that draws attention to the way in which printing techniques were used in practice. In chapter three, correspondence between the geologist Charles Lyell and his publisher John Murray helps to reveal the tensions behind adding illustrations to previously unillustrated editions and adopting new processes within an expanding market for illustrated books. Chapters four and five focus particularly on the mutability of wood engraving and the means by which it was exploited by publishers, authors and artists. Yet whilst I subscribe to Johns's view which places emphasis of people over materials, I also stress caution in marginalising the influence of surfaces and printing techniques in establishing meaning in ways that producers of the book did not intend. I therefore consider the way in which the interaction between people and processes is in a constant state of flux at different points of the book's production and reception.<sup>69</sup>

Given that this thesis is primarily concerned with the materiality of illustrations, I engage with material culture studies in order to place the medium at the forefront of a critical enquiry into the production of the illustrated book. The predominant focus on consumption over production, whether in fields of material, visual or print culture, quite often engenders a greater interest in the appearance of things as opposed to their properties and the different materials that are used in their production.<sup>70</sup> Within the field of illustration, the material surfaces such as wood, steel and stone often become lost as a result of the greater attention paid to the aesthetic and narrative elements of an illustration.<sup>71</sup> I do not wish here to attribute agency to print surfaces 'as a system of action, intended to change the

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Week', *Victorian Literature and Culture*, 36 (2008), pp. 111-130; Simon Cooke, 'A Forgotten Collaboration of the 1860's: Charles Reade, Robert Barnes and the Illustrations for *Put Yourself in his Place*', *Dickens Studies Annual*, 20 (2001), pp. 321-342.

<sup>69</sup> Asa Briggs and Peter Burke similarly attempt to chart a course between Eisenstein and Johns in relation to the development of the media through over time. See, Briggs and Burke, *A Social History of the Media*, pp. 19-20.

<sup>70</sup> Tim Ingold, 'Materials Against Materiality', *Archaeological Dialogues*, 14.1 (2007), pp. 2-9.

<sup>71</sup> There are notable exceptions here. Douglas Fordham assesses the role of aquatint in disseminating ideas about the British Empire. See Douglas Fordham, *Aquatint Empires* (London, Forthcoming).

world rather than encode symbolic propositions about it.<sup>72</sup> Rather, the power of materials for this thesis lies in the way in which they constrain or liberate those who are altering those materials.<sup>73</sup> While lithography was used in many different ways by artists, printers and publishers, contemporaries continued to raise concerns over the inability of artists to take advantage of its utility to produce fine art reproductions.<sup>74</sup> While lithography was thought to liberate those who wished to illustrate their works without relying upon the craftsmanship of an engraver, it was argued, particularly in the early days of lithographic printing, that artists failed to exploit its properties as a method of graphic reproduction.

A greater consideration of ‘the materiality of materials’, to borrow Christopher Tilley’s term, takes into account both the print surfaces and those who took advantage of their materiality.<sup>75</sup> This thesis is, therefore, framed by the contention that the materiality of print surfaces plays an important role in shaping experience.<sup>76</sup> Reviewers of topographical works not only criticised publishers and authors for the changes in the way topography was being illustrated by the 1830s, but also commented upon the properties of the surfaces used to illustrate those works.<sup>77</sup> The application of steel engraving to topography was, on the one hand, praised for the clarity and delicacy that could be achieved in comparison to engraving on copper. On the other hand, it was precisely this level of delicacy that generated criticism over the perceived ‘feminization’ of topography. The polarised opinions of

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<sup>72</sup> Quoted in Alfred Gell, *Art and Agency: An Anthropological Theory* (Oxford, 1998), p. 6. Tim Ingold, who argues for the ‘thingness of things’, disagrees with Alfred Gell’s theory that art ‘achieves’ agency. See Ingold, ‘Materials Against Materiality’, p. 11. For an example of how Gell’s anthropological approach has been used in art history, see Michelle O’Malley, ‘Alterpieces and Agency: The Alterpiece of the Society of the Purification and its “Invisible Skein of Relations”’, *Art History*, 28.4 (2005), pp. 417-441. For a criticism of Gell’s theory of art and agency, see See R.H. Layton, ‘Art and Agency: A Reassessment’, *Journal of the Royal Institute*, 9.3 (2003), p. 452.

<sup>73</sup> Here, I align myself with Christopher Tilley’s articulation of agency in materials. See Christopher Tilley, ‘Materiality in Materials’, *Archaeological Dialogues*, 14.1 (2007), p. 19.

<sup>74</sup> This is discussed in more detail in Chapter one.

<sup>75</sup> See, for example, Jean-Pierre Warner, ‘Technology as Efficacious Action on Objects...and Subjects’, *Journal of Material Culture*, 14.4 (2009), pp. 459-470.

<sup>76</sup> I draw influence here from Karen Harvey’s introduction to material culture studies. Karen Harvey, ‘Introduction: Practical Matters’, in Karen Harvey (ed.), *History and Material Culture: A Student’s Guide to Approaching Alternative Sources* (London, 2009), p. 5.

<sup>77</sup> See Chapter 4 of this thesis.

those who read or ‘viewed’ topographical literature in light of technological changes to illustration were derived from the illustration’s materiality.

Printing techniques are not considered here as agents of change in the way that Eisenstein has argued. Nevertheless, they restrict, liberate and alter the decisions involved in aesthetic qualities of the illustrations as well as the design and format of the book. The interaction between processes and people is therefore constantly in flux. Adopting methodologies and theoretical debates from material culture and anthropology is not new to book history. Book history and material culture have shared relatively close methodological ties. Recent studies have clearly demonstrated the utility of material culture in analysing the way in which the book as a physical object engenders social interactions that are vital in the formation of communal identities.<sup>78</sup> Scholarship of this nature is wholly focused upon the object of the book. While the object of the book is considered carefully in this thesis, so too are the print surfaces used to produce illustrations as well as the pages on which they are printed. This thesis is by no means a study in material culture. I nevertheless consider the material properties of copper, steel, stone and wood in shaping the subject of the books they are designed to illustrate. In doing so, I argue that highlighting the role of the material properties used to print illustrations in shaping the discipline does not remove human agency regarding the illustrated book’s production, but instead allows us to see how producers’ and readers’ choices were delimited by the material forms of production available to them.

### Returning the Print to the Book: Developments in ‘Word and Image’ and Illustration Studies

One of the approaches this thesis adopts is to study illustrations from both within and outside of the book in which they were originally printed. Scholarship

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<sup>78</sup> Ailsa Craic, ‘When a Book is not a Book: Objects as “players” in Identity and Community Formation’, *Journal of Material Culture*, 16.1 (2011), pp. 47-63. For another example of the intellectual relationship shared by book history and material culture, see Brenda Danet, ‘Books, Letters, Documents: The Changing Aesthetics of Text in Late Print Culture’, *Journal of Material Culture*, 2.1 (1997), pp. 5-38.

concerned with book illustration outlined thus far has engendered a greater understanding of the former. Chapters one and two explore the significance of print techniques used to produce illustrations, and how the shifting status of these techniques shaped the relations between various stakeholders of the book. The remaining chapters consider what these processes meant to the design and intellectual output of books belonging to different subject matters. In so doing, illustrations printed in books are also considered as a collective sign system that is fundamental to understanding both the way in which publishers and authors wished their books to be read or ‘viewed’ as well as the role illustrations played in transforming the subject they were used to illustrate.

Bibliographical accounts detailing the changes to printing technologies in this period stop short at revealing the significance of these technologies and print mediums for the contents of the book. Literary studies dedicated to image and text have been fundamental in returning illustrations to the book. Edward Hodnett’s seminal work on the relationship between word and image in eighteenth-century fictional literature underscored the potential to view illustrations with the same intellectual rigour as the text. Hodnett’s dissatisfaction with the lack of scrutiny ascribed to the way in which an illustration ‘functions’ within a book, in addition to the way in which that function is satisfied in relation to the text, has proved influential to the establishment of a field dedicated solely to word and image studies. Word/Image scholarship has become vital to our understanding of the complex interactions between the textual and the visual, which has a significant bearing on the act of reading.<sup>79</sup>

What was particularly illuminating about the review of Thomson’s *Seasons* discussed at the beginning of this introduction was the way in which the addition of illustrations prompted a reconsideration of the written text they were designed to illustrate:

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<sup>79</sup> Edward Hodnett, *Image and Text: Studies in the Illustration of English Literature* (London, 1982), pp. 12-13. Three years after the publication of Hodnett’s book, the first edition of *Word and Image* journal was published and is currently in its 33<sup>rd</sup> edition.

We are not quite sure that we should now like *The Seasons* without their illustrations ... and that little variety in nature... is found for the reader in these pictures that accompany the text – literally accompany, for they are together, and we are inclined to think a slight change in the type of the letter-press, where immediately accompanied by the drawing, would have been an improvement.<sup>80</sup>

The illustrations added to Thompson's work break free from the subordinate position to the text that they have been traditionally assumed to occupy. The reviewer questions the legitimacy of the written word in light of the added illustrations to Thompson's poetry. The placement and position of the illustration was considered to alter communicational capacity of the text. Catherine Golden's edited collection of essays has demonstrated the vitality of the image within the often uneasy collaboration between the textual and the visual in the establishment of both narrative and reader experience. These contributions uncover the way in which images interacted with texts; how they 'worked together with texts and, at times, at cross purposes with texts, creating complexities and tensions.'<sup>81</sup>

The capacity of illustrators and their illustrations to challenge the authority of the written narrative expressed in the letter-press has dominated more recent developments in image/text studies that have sought to reveal the power of illustrations over text in narrative terms.<sup>82</sup> Reading illustrations, as Julia Thomas has argued, necessitates a judgement not only about their similarities to the text but, perhaps more importantly, their differences.<sup>83</sup> Thomas's work has sought to liberate illustrations from traditionally assumed textual constraints in order to stress the interpretative power of reading the visual through the interaction between image and the viewer.<sup>84</sup> This is particularly important in the Victorian period, as

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<sup>80</sup> 'Thomson's Seasons', *Blackwood's Edinburgh Magazine*, p. 675.

<sup>81</sup> Catherine J. Golden, 'Introduction', in Catherine J. Golden (ed.), *Book Illustrated: Text, Image, and Culture 1770-1930* (Newcastle, 2000), p. 8.

<sup>82</sup> See Julia Thomas, *Pictorial Victorians*, pp. 4-5.

<sup>83</sup> *Ibid.*, p. 9. She concludes by arguing there is no 'simple union' between image and text. Rather the relationship between them is dependent on the cultural concerns of the viewer. See *Ibid.*, p. 161.

<sup>84</sup> Peter Burke observes that this interaction is not fixed because illustrations have the potential to occupy a range of positions either bound up in or detached from social reality. See Peter Burke, *Eyewitnessing: The Uses of Images as Historical Evidence* (London, 2001), p. 183.

eighteenth-century novels and other forms of fictional literature were often re-printed with illustrations in order to meet market demands for illustrated works. Alice Colombo, for example, has revealed the way in which the addition of the French illustrator J. J. Grandville's illustrations to a nineteenth-century edition of Jonathon Swift's *Gulliver's Travels* did not merely translate the text but often challenged the authority of the written word.<sup>85</sup> Literary scholars have undoubtedly furthered our understanding of the function of book illustrations by underlining the power of illustration in the construction and subversion of narrative; departing from traditional accounts that examine the way in which the visual was used entirely to support the written word.

The establishment of illustration studies as a scholarly field has placed further emphasis on the considerable role illustrations played at the time they were printed. Twentieth and twenty-first-century editions of Georgian and Victorian literature often omit the numerous illustrations that once belonged to them, therefore losing an integral part of the culture and environment in which it was to be read.<sup>86</sup> Illustration studies were designed to move beyond 'the more limited objectives of bibliographical description and aesthetic appreciation.'<sup>87</sup> In doing so these works reveal the signification of illustrations; both how their meanings are made and their embodiment of Victorian culture.<sup>88</sup>

Similar to these approaches in illustration studies, I demonstrate throughout this thesis that it does not necessarily follow that if illustrations are used to explain, clarify and illuminate, they are therefore subordinate to the written word.<sup>89</sup> We see in chapter three that authors of geological works began to depend upon explanatory

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<sup>85</sup> Alice Colombo, 'Rewriting Gulliver's Travels Under the Influence of J. J. Grandville's Illustrations', *Word and Image*, 30.4 (2014), pp. 404-409. See also, James A. W. Heffernan, 'Love, Death, and Grotesquerie: Beardsley's Illustrations of Wilde and Pope', in Golden (ed.), *Book Illustrated*, pp. 147-194.

<sup>86</sup> Julia Thomas, 'Getting the Picture', *European Journal of English Studies*, 11.2 (2007), pp. 193-206, DOI: 10.1080/13825570701452946.

<sup>87</sup> David Skilton, 'Illustration Studies and the Infinite Archive', *Journal of Illustration Studies* (December, 2013), <http://jois.uia.no/articles.php?article=50> [Accessed 14 May 2018].

<sup>88</sup> Julia Thomas, *Nineteenth-Century Illustration and the Digital: Studies in Word and Image* (Basingstoke, 2017), p. 6.

<sup>89</sup> These descriptors have often been used in order to maintain a hierarchy of the written word over illustration. See Paul Goldman, 'Defining Illustration Studies', in *Reading Victorian Illustration*, p. 15.

illustrations in order to achieve their objectives of democratizing geological knowledge and creating an ecology of knowledge through these illustrations, prompting tensions between author and publisher. This brings into question the assumptions that illustrations are either inherently decorative and ornamental, and are merely supplementary by-products of the written word. In many ways, the written word continues to be considered the primary mode of communication, founded on the presumption that the text is produced before the illustration.<sup>90</sup>

The predominant focus of illustration studies has centred upon fictional literature and art.<sup>91</sup> By choosing to focus primarily on subjects that can broadly be categorized as non-fiction, I seek to redress the balance between fiction and non-fiction in scholarly accounts of illustration. Paul Goldman and Simon Cooke have begun to address this imbalance.<sup>92</sup> Their edited volume on mid-Victorian illustration brings together scholars from varying academic backgrounds including art history, literary criticism and cultural history in order to provide new insights into the interpretative and authoritative role of illustration. These roles are examined within subjects including religion, history and science alongside literary fiction. The study of geology, history and topography in this thesis further reinforces a greater awareness of what illustration meant to books that do not belong to the classic novels of the late-eighteenth and early-nineteenth centuries.

Just as literary scholars have demonstrated the utility of studying illustrations independent of the text in order to highlight the variety of meanings they engender, I will demonstrate the value in considering what illustrations do collectively through their materiality. By examining the larger patterns of change to illustrations, I aim to show that the choice of printing surface had far-reaching implications for the

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<sup>90</sup> Julia Thomas, *Nineteenth-Century Illustration and the Digital: Studies in Word and Image* (London, 2017), p. 6.

<sup>91</sup> See, for example, David Skilton, 'The Centrality of Literary Illustration in Victorian Visual Culture: the example of Millais and Trollope from 1860 to 1864', *Journal of Illustration Studies* (December 2007), <http://jois.uia.no/articles.php?article=30> [Accessed 7 August 2016]; Roy Eriksen, 'Real and Virtual Illustration: Visual Memory and Early-Modern Speaking Pictures', *Journal of Illustration Studies* (December 2013), <http://jois.uia.no/articles.php?article=57> [Accessed 14 May 2018]

<sup>92</sup> Paul Goldman and Simon Cooke (eds), *Reading Victorian Illustration, 1855-1875: Spoils of the Lumber Room* (Surrey, 2012).



disciplines that they illustrated. In doing so I depart from scholarship that centres upon a small or very selective number of illustrations. Studies that focus upon a relatively small range of illustrations have served to shed light on the importance of illustration both to the afterlives of original publications as well as the interpretative role illustrations played in their reception.<sup>93</sup> These studies remain faithful to the well-established methodology borne out of visual culture from which thesis departs, namely a close reading of the contents of the illustrations.

The significance of illustration for this thesis lies, then, in the way in which the materiality of illustrations – their form, size and shape – contribute to the intellectual output of the book and the genre they were designed to illustrate more widely, the reading or viewing of the book as well as the relationship between the printing surface and the graphic contents of the illustrations themselves.<sup>94</sup> Through approaching illustrations in this way I hope to shed new light on the way in the which illustrations work collectively when printed in the book and their impact on the intellectual discipline they are designed to illustrate, in this case, geology, topography, and history.

Visual culture is therefore considered in this thesis as something borne out of production as opposed to aesthetic representation. Representations of things and people contained within illustration are of central interest to historians of visual culture.<sup>95</sup> Illustration, therefore, becomes detached from the physical properties of

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<sup>93</sup> See, for example, Síofra Pierse, 'The Spectatorial Gaze: Viewer-Voyeur Dynamics in Book Illustrations of Diderot's *La Religieuse*', *Journal for Eighteenth-Century Studies*, 39.4 (2016), pp. 599-620; Catriona Seth, 'Picturing *Les Liaisons Dangereuses*: Eighteenth-Century Illustrations of Laclos's Novel', *Journal for Eighteenth Century Studies*, 39.4 (2016), pp. 579-597; Ann Lewis, 'Intermedial Approaches to Marivaux's *La Vie de Marianne*: Text: Illustrations, Film', *Journal for Eighteenth Century Studies*, 39.4 (2016), pp. 621-642; Jonathan Hensher, 'Glimpsing the Devil's Tale? Toward a Visual Narratology of the Fantastic in Illustrated Editions of Cazotte's *Le Diable amoureux*', *Journal for Eighteenth Century Studies*, 39.4 (2016), pp. 663-681; Christina Ionescu, 'The Visual Journey of *Manon Lescaut*: Emblematic Tendencies and Artistic Innovation', *Journal for Eighteenth Century Studies*, 39.4 (2016), pp. 559-577.

<sup>94</sup> Historians of single-sheet prints have begun to make this connection. See, for example, Malcolm Jones, *The Print in Early Modern England: An Historical Oversight* (New Haven, 2010). I object to his contention laid out in the concluding remarks to his work that an illustrated book is made up primarily of text, 'merely illustrated by secondary pictures.' See p. 381. See also, Ben Thomas, 'Noble or Commercial? The Early History of Mezzotint in Britain' in Michael Hunter (ed.), *Printed Images in Early Modern Britain: Essays in Interpretation* (Surrey, 2010), pp. 279-293. Illustrations as signs will be explored further in the section on social semiotic theory.

<sup>95</sup> This is unsurprising according to Mitchell, given that culture is inseparable from representation. See Mitchell, *Iconography*, p. 3.

the book in favour of how they disseminate ideas and knowledge about the wider cultural context within which they are produced. Visual culture studies are therefore pre-occupied by what is represented in a given illustration often at the expense of how it was produced.<sup>96</sup> While the visual representations are important within the subjects analysed in this thesis, particularly in relation to illustrations printed in topography and history books, there is a tendency to marginalise the meaning derived from their production, display and arrangement, something that this thesis seeks to address.

### The Page as a Semiotic Unit: Illustration and Multimodality

Both illustration studies and word and image scholarship have recovered illustration from the traditionally subordinate position it has been assumed to occupy, both in relation to painting and sculpture in art history and the written word more generally.<sup>97</sup> However, as stated previously, although recent scholarship in word and image and illustration studies have succeeded in placing the illustration at the forefront of historical enquiry, there remains an intellectual gap that sits between the materiality of illustrations and both their aesthetic contents and the physical space they occupy in the book.<sup>98</sup> Despite the claim put forward by Christina Ionescu and Renata Schellenberg that more recent developments in book history have succeeded in re-instating the interaction between word and image within the physical boundaries of the book, these studies often revert back to ways in which these two means of communication interpret narrative through narrativity, visuality,

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<sup>96</sup> Elizabeth Kim's examination of the use of trade cards in eighteenth-century Britain, for example, is published in the *Journal of Material Culture* yet her interest in these trade cards lies predominantly in the contradictory representations of different races and what they reveal about discourses on race and ethnicity more generally. See Elizabeth Kim, 'Race Sells: Racialized Trade Cards in 18<sup>th</sup>-Century Britain', *Journal of Material Culture*, 7.2 (2002), pp. 137-165.

<sup>97</sup> Julia Thomas highlights the complex dynamic played out between high art and book illustration. See Thomas, *Pictorial Victorians*, pp. 105-124.

<sup>98</sup> Databases of illustration have gone some way to rectify this. See J. Thomas, P. T. Killick, A. A. Mandal, and D. J. Skilton, *A Database of Mid-Victorian wood-engraved Illustration*; See also *The Illustrations Archive* [<http://illustrationarchive.cf.ac.uk>].

iconography or textuality.<sup>99</sup> This is not entirely unexpected given the similar methodological approach of reading illustrations that word-image scholars adopt.<sup>100</sup> Taking a different approach, one that views illustrations as a series of impressions arranged on the page and the book that are determined by their materiality, can help to provide further insights into the role of illustrations in shaping the reading or viewing of the book.

The concept of the page is therefore important in shedding light on the purpose of illustration to different literary disciplines. I argue that meaning is not just derived from the narrative embedded in the written word and the iconography of the illustration, but also through the relationship between the materiality of the illustration and the physical layout of the page. Legitimate questions have been raised over the value of analysing illustrations within the context of design and layout. The distribution of illustrations could often be decided by a number of individuals involved in the book's production. Furthermore, their positioning was not always based on the words they were designed to illustrate and therefore fails to shed light on the interaction between word and image.<sup>101</sup> However, further analysis between illustrations and the page without a sustained focus on the text can help to shed greater light on the differences between illustrating a text and illustrating a book in this period. The publishers Charles Knight and John Cassell's shared objective to produce 'eye knowledge' prompted the publication of heavily illustrated histories of England.<sup>102</sup> Both publishers adopted wood engraving to illustrate a distinctly social history of England. Yet a closer analysis of the shape, size and distribution of the illustrations reveals a difference in the way in which these publishers achieved this;

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<sup>99</sup> The use of the word 'narrativity' is taken from Christina Ionescu and Renata Schellenberg, 'Introduction', in Christiana Ionescu and Renata Schellenberg (eds), *Word and Image in the Long Eighteenth Century: An Interdisciplinary Dialogue* (Newcastle, 2008), pp. 8-9; 19-20.

<sup>100</sup> See for example, Phillip Allingham, "Reading the Pictures, Visualizing the Text": Illustrations in Dickens and *Pickwick to the Household Edition, 1836 to 1870, Phiz to Fred Barnard*, in Goldman and Cooke (eds), *Reading Victorian Illustration*, pp. 159-178.

<sup>101</sup> Brian Maidment, Julia Thomas, Jonathan Smith, John van Wyhe, and Juliet John, 'Reviews of Digitised Scholarly Resources', *Journal of Victorian Culture*, 13.1 (2008), p. 114.

<sup>102</sup> For more on Knight's desire to produce 'true eye knowledge', see chapter five of this thesis, pp. 243-258.

the former pre-occupied with the relationship between word and image, the other with the architecture of the page.<sup>103</sup>

Recent studies concerned with the page have shown how the book's design and layout was fundamental to the transmission of ideas. By examining paratextual features including bordering, font, illustrations and lettering, Bonnie Mak has shown how these different features embodied a particular message in different editions of early-Medieval books.<sup>104</sup> Mak, in a similar approach to Gerard Genette in his seminal work, aligns illustrations with other forms of paratext.<sup>105</sup> Unlike Mak and Genette, I do not consider illustration as a form of 'paratext' in this thesis. Given that paratextual studies are primarily concerned with the function of verbal and visual productions outside of the main body of text, illustrations have often been categorised under this more general and ambiguous heading. Illustrations however, do not belong to the 'fringe of a printed text,' as the analysis of Knight and Cassell's work in chapter five exemplify.<sup>106</sup> Even at a point when illustrations are printed in tandem with the text in which they are designed to illustrate, collectively they engender a new way of reading that does not always depend on the written word.<sup>107</sup> The significance of the relationship between illustration and the overall design of the page has to some degree been taken into account within the period under consideration. Similar to the approach I adopt in this thesis, these studies do not consider illustration as a form of paratext but rather their role in the establishment of the page as a unit of meaning. Paul Sinnema's approach to the *Illustrated London News* establishes the connection between the economics of production and design and the socio-political culture that informed upon its production.<sup>108</sup> Tom Gretton's analysis of two nineteenth-century weekly newspapers reveals the difficulty in

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<sup>103</sup> This analysis takes place in chapter five. Chapters three and four also highlights the position and distribution of illustrations across the volumes of works considered in those chapters.

<sup>104</sup> Bonnie Mak, *How the Page Matters* (Toronto, 2011), pp. 20-28.

<sup>105</sup> For Genette's definition of 'paratext', for which he includes illustration, see Gerard Genette, *Paratexts: Thresholds of Interpretation*, trans. Jane E. Lewin (Cambridge, 1997), pp. 1-2.

<sup>106</sup> *Ibid.*, p. 2

<sup>107</sup> See, in particular, chapters four and five of this thesis.

<sup>108</sup> Paul W. Sinnema, *Dynamics of the Pictured Page: Representing the Nation in the 'Illustrated London News'* (Aldershot, 1998), pp. 2-11.

analysing meaning in this way through the lens of art history. As Gretton acknowledges, art history often fails to acknowledge commodity forms that places greater emphasis on the material in favour of genre.<sup>109</sup> Gretton therefore considers the size, format and placement of illustrations in these weekly magazines as opposed to the artistic representations contained within them.

Analyses of layout and page design have naturally lent themselves to popular media, most commonly newspapers and magazines. The layout of the front page is vitally important in attracting the attention of the reader and therefore becomes the primary focus of investigation for scholars interested in production and design. Moreover, it is difficult to establish patterns of arrangement and design across an entire magazine. The physical act of turning the page of a newspaper or book immediately hides the information or design of that page. Attempts to understand these patterns are rendered even more unmanageable when considering change over time as Gretton does. The format of the book differs from that of a magazine or newspaper. Information, whether visual or textual, appears abundantly on the front pages of more ephemeral media forms, whereas information on the bound front covers and title pages of books are generally limited to bibliographical information or paratextual features. It is not until the book is opened that information akin to the front covers of magazines and newspapers is revealed. The quantitative and digital approaches to illustrated books in this thesis is well suited to reading illustration in terms of the increasingly significant contribution they made to the design of the page and the arrangement of the book more generally. By visualising these arrangements, we can begin to understand more fully not just what changed in terms of illustrating the book but also the motivations behind design and layout from various agents involved in the book's production.

In order to understand the effect these arrangements had on the imagined reader, intellectual developments in social semiotic theory have highlighted the role

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<sup>109</sup> Tom Gretton, 'The Pragmatics of Page Design in Nineteenth-Century General-Interest Weekly Illustrated News Magazines in London and Paris', *Art History*, 33.4 (2010), p. 682.

of the image in the 'reading' of the page. Given that semiotic theory is primarily concerned with communication and meaning making, and that the history of the book investigates the embodiment of communication in material form, both fields share close intellectual and theoretical ties. Similar to the history of the book, semiotic theory has been traditionally grounded in concerns over authorship and the written word. Intertextuality, the relationship between different written texts, has been afforded prominence in a social semiotic analysis of the book and other forms of communicative media.<sup>110</sup> The reader was thus viewed as the one who 'holds together in a single field all the traces by which the written text is constituted.'<sup>111</sup> Semiotic theory has also been applied to works of art and iconography. Artworks represent a number of 'symbolic values' that produce the context in which they are produced.<sup>112</sup> Semiotics is used to answer questions that ask what works of art represent, what are the means by which they achieve this representation and how do individuals recognise or make connections with these representations.<sup>113</sup>

This thesis, however, is not always concerned with the visual representation contained within the illustration.<sup>114</sup> More emphasis is placed on how they 'work' or 'function' as part of the design strategy of authors and publishers. Multimodality, a branch of social semiotic theory that considers layout as opposed to representation, is useful here. Although multimodality 'attends to a whole range of modes involved in representation and communication', images have played a central role given the interest in contemporary forms of communication such as web-pages as units of semiotic meaning.<sup>115</sup> Multimodal analysis considers the way in which individuals as

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<sup>110</sup> For the various definitions of intertextuality see Graham Allen, *Intertextuality*, Second Edition (2<sup>nd</sup> edn., Abingdon, 2011), pp. 2-5.

<sup>111</sup> Roland Barthes, 'The Death of the Author', in Stephen Heath (ed. and trans.), *Image, Music, Text* (London, 1977), p. 148.

<sup>112</sup> Brendan Cassidy, 'Introduction: Iconography, Text, and Audiences', in Brendan Cassidy (ed.), *Iconography at the Crossroads: Papers from the Colloquium Sponsored by the Index of Christian Art* (Princeton, 1993), p. 5.

<sup>113</sup> Theo Van Leeuwen, 'Semiotics and Iconography', in Theo Van Leeuwen and Carey Jewitt (eds), *The Handbook of Visual Analysis* (London, 2001), pp. 93-94. See also, Mieke Bal and Norman Bryson, 'Semiotics and Art History', *The Art Bulletin*, 73.2 (1991), pp. 174-208.

<sup>114</sup> In chapters four and five I pay greater attention to the contents of illustrations found in the books under consideration in these chapters.

<sup>115</sup> Gunther Kress, *Multimodality, A Social Semiotic Approach to Contemporary Communication* (London and New York, 2010), pp. 6-7.

sign-makers attempt to make their meanings understood within a variety of social contexts.<sup>116</sup> Gunther Kress's formulation of multimodality was conceived in an attempt to move beyond textual or visual boundaries in order to analyse the use of space in representation and communication. His grounding of the visual within social semiotic theory was built upon an opposition to Roland Barthes's position that the meaning behind the visual is always predicated on language.<sup>117</sup> Given that books are inherently communicative, and multimodal analysis considers the interaction between the producer and the viewer, this particular field of semiotic theory provides the theoretical framework for a deeper understanding of how the design of books changed within a period of sustained technological developments within the world of print.

Multimodal analysis is not only concerned with the reader or viewer's interpretation of the visual but also the position of what Kress terms 'the rhetor' within the context of production.<sup>118</sup> The rhetor refers to the producer and considers the purpose of communication, their audience, the resources for communication and the best way in which to arrange these resources in order to convey meaning. The arrangement of resources to convey meaning is of particular interest in this thesis. Creating meaning through composition requires the rhetor to assess the information value of the image, the elements that attract the reader's attention and, perhaps most importantly, the way in which these images are framed.<sup>119</sup>

The reader, therefore, remains central to social semiotic analyses of production and design. Within this multimodal context, producers strive for their meanings to be understood. Doing so necessitates a choice by the rhetor in considering the 'most apt and transparent forms of expression in whatever medium they have to hand.'<sup>120</sup> Given the dearth of evidence regarding acts of contemporary

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<sup>116</sup> Maureen Kendrick, *Literacy and Multimodality Across Global Sites* (London, 2016), p. 4.

<sup>117</sup> Gunther Kress and Theo Van Leeuwen, *Reading Images: The Grammar of Visual Design*, Sixth Edition (London, 2006), p. 16.

<sup>118</sup> Gunther Kress, *Multimodality, A Social Semiotic Approach to Contemporary Communication* (London and New York, 2010), pp. 43-45.

<sup>119</sup> Kress and Van Leeuwen, *Reading Images*, p. 183.

<sup>120</sup> Kendrick, *Literacy and Multimodality*, p. 4.

reading, applying multimodal analysis can help reveal more about how producers of the book intended their works to be read. It is important to stress at this stage that, given the difficulty in sourcing evidence that reveal reader reception, it is beyond the scope of this thesis to discover the contextual setting in which these books were physically read by the reader. Nor do I attempt to gauge precisely ‘who’ was reading the books explored in this thesis. Since this thesis adopts a production and design-led approach to illustrated books, the ‘implied reader’ is considered here in relation to the way in which the various actors conceived their books to be read based on the design, order, and arrangement of illustrations.<sup>121</sup>

Multimodal analysis has predominantly been used to analyse communication in light of the migration from reading and viewing the material book to digital platforms within the context of the media more widely. However, multimodal analysis can be applied equally to any period in which technological developments take place. Kress’s argument that the traditional page engenders a strict order that the reader has to follow is contested in this thesis.<sup>122</sup> I argue that the technique chosen to print illustrations had the potential to disrupt the traditional order of reading. Furthermore, if we accept W.J.T. Mitchell’s assertion that the pictorial turn can be best understood not in a single historical moment but instead marks ‘specific moments when a new medium, a technical invention, or a cultural practice erupts in symptoms of panic or euphoria about the visual’, then multimodality can be equally applied to the period considered in this thesis as it has been in considering the influence of the web page in the twentieth century.<sup>123</sup>

Illustrations embody more than their visual content. They form part of a sign system that became integral to book production by the early-Victorian period. Whilst I accept that illustrations, by definition, are used to illustrate, this dynamic has led to the assumption that they occupy a subordinate role within the intellectual

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<sup>121</sup> The ‘implied reader’ was a model first put forward by Wolfgang Iser in order to differentiate from actual readers. See Wolfgang Iser, *The Implied Reader* (Baltimore, 1974).

<sup>122</sup> Gunther Kress, ‘Gains and Losses: New Forms of Texts, Knowledge, and Learning’, *Computers and Composition*, 22 (2005), p. 9.

<sup>123</sup> W.J.T. Mitchell, ‘Showing Seeing: A Critique of Visual Culture’, *Visual Culture*, 4.2 (2002), p. 173.



makeup of the book and are therefore regarded as an inferior mode of communication. By reading illustrations in relation to the page and the book in addition to the relationship between word and image, I aim to show how the arrangement of illustrations raised new questions and concerns over the disciplines they illustrated.

Approaching illustrations in this way also fosters a critical engagement with the different roles and functions afforded to illustration. In this thesis I consider the difference between illustrating a text and illustrating a book in this period in order to understand the production of the illustrated book within a period defined by its visual culture. Images' relation to text, according to W.J.T. Mitchell, 'reflects, within the realm of representation, signification, and communication, the relations we posit between symbols and the world, signs and their meaning.'<sup>124</sup> This is also true of their relation to the page and their collective arrangement in the book as a whole. These relationships, as Mitchell has argued, are contingent; they are dependent on the mode of experience.<sup>125</sup> By applying social semiotic theory to early-to-mid nineteenth-century illustrated books, one can begin to treat illustrations more rigorously as a salient feature of different sign-systems during a period that underwent dramatic industrial, technological and commercial change.

## Methods and Thesis Outline

This thesis is borne out of a collaborative doctoral award project that engages with a specific collection of illustrations, digitally cropped from a corpus of books held at the British Library. Microsoft, in collaboration with the British Library, digitised 65 thousand titles and 25 million pages of printed books, predominantly taken from the long nineteenth century. This project utilised about ten percent of

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<sup>124</sup> W.J.T. Mitchell, *Iconology, Text, Ideology* (Chicago, 1986), p. 43.

<sup>125</sup> W.J.T. Mitchell, *Picture Theory* (Chicago, 1995), p. 5. It is important to observe here that the term 'image' for Mitchell encompasses a variety of visual forms that are not relevant to illustration for this thesis. These include hallucinations, spectacles and memories, which are not relevant to this thesis. See Mitchell, *Iconology*, p. 9.

collection and were chosen based on the period (there are many more illustrations printed towards the end of the nineteenth century, which is not covered in this thesis). The database for this project totals 5748 titles and 105,244 illustrations. The illustrations from those books were digitally cropped and formatted by the British Library in '.jpeg' files, and were also uploaded onto their Flickr page as part of their objective to release one million images into the public domain. The digitisation project focused upon four broad categories: English literature, geography, general history and philosophy. The titles explored in this thesis predominantly centre upon non-fiction works, particularly history and geography/topography. This project was originally designed to research titles ranging from 1750-1850, but having focussed on the printing methods that were used to reproduce the illustrations, a decision was made to focus upon the period between 1780 and 1860 as this period witnessed considerable developments in the world of print production.

As a point of departure from previous histories, the collection of books and their illustrations has not been consciously selected based on determinations of their artistic or aesthetic merit, the medium by which they are produced, or the subject or genre they illustrate. Moreover, they have not been extracted from books that would ordinarily be categorized as 'illustrated' during a period in which the majority of books only contained a relatively small number of illustrations or remained unillustrated. A collection featuring such a diverse range of illustrations from a number of different subjects can therefore offer both significant advantages and challenges to a historian invested in understanding the cultural, social and commercial significance graphic elements of the book played by the early-Victorian period.

A collection of this nature presents a number of advantages. Firstly, it serves to depart from the privileging of canonical authors, artists, books and reproductive works of art. This is not to say that this thesis does not engage with some of these works; ultimately, the different subjects considered in this thesis have their own canons. They are not, however, afforded privilege over other illustrated works

belonging to the same subject or genre. Secondly, closely related to the above, the dataset does not privilege certain styles of illustration. Although this is not an entirely representative collection of illustrations for the period, largely due to Microsoft's decision to omit digitising books that were deemed too large or too small for their scanners, one can argue that because the illustrations have not been selected based on a specific style or adherence to a specific genre, the collection serves to broaden the very definition of illustration. Decorated letters and bordering, maps, topographical prints, vignettes, diagrams, and historical prints are just a few of the many categories of illustration that are contained in this dataset. Although they vary in quality and communicative impact, they are all valued as illustrations.

This collection also facilitates a departure from analyses of illustrations that feature in fictional literature, particularly the novel. Canonical authors, including but not limited to Walter Scott, Charles Dickens, Anthony Trollope, and George Eliot, continue to attract the scholarly eye of those interested in nineteenth-century book illustration. The books found in this collection have directed my enquiries away from the novel and other forms of fictional literature. In doing so I hope to draw attention to the diversity of illustrations belonging to works broadly defined as non-fiction.

Finally, and perhaps most crucially, the digitisation of these illustrations offers new methods and approaches to the history of book illustration. Both the books and the illustrations were digitized. The illustrations were digitally cropped out of the books and compiled in a separate dataset. In collaboration with JISC historical texts, we were able to gather further metadata about the images, including their size and position on the page (both in pixels). The metadata for these digital images, their size, width, height and position on the page, informed the computational aspect of this thesis, particularly the visualisations found in chapter five, which traces the position of illustrations on the pages of books belonging to histories of England. The size of the illustrations contained in the metadata have

also been important for chapters three and four, and the resulting visualisations provided the starting point for further research for those chapters.

All of the visualisations found in this thesis were created via the programming language R. R studio was chosen for two main reasons. Firstly, because of its accessibility and intuitive design, which is hugely beneficial to those familiarising themselves with humanities computing, and secondly, because of its data visualisation capabilities. There are five types of visualisation used in this thesis that have been derived from R Studio. *Figures 1.1, 1.2, 1.3 and 4.2* are percentage frequency graphs used to trace the trajectory of printing techniques over time in relation to each other, something that has not been visualised for this period previously. *Figure 1.5* visualises a count of where illustrations appear across the book, which helps to understand the role of illustrations in the book as a commercial object. *Figures 1.6 to 1.8, 3.1 to 3.3, 3.5, 3.6, 4.3 to 5.6* as well as *Figure 5.8* all visualise the distribution of illustrations across single volumes or editions. Not only do they highlight the changes to the number of illustrations in books over time, but also the size of illustrations relative to the page, which prompts further questions about the relationship between word, image, page and book. *Figures 3.4 and 4.2* are frequency graphs used to highlight the changes to the sizes of illustrations over time according to the subject they were designed to illustrate. Finally, the figures in chapter 5 (*5.9 to 5.14*) are density graphs that have been chosen to highlight the importance of illustrations to the overall layout and design of the page, which again raises questions over the relationship between word and image on the page. The advantages of these visualisations range from visualising change (or indeed continuity) over time on a large scale to analysing the distribution of illustrations across a single volume, which help to raise further questions about the importance of illustrations for the literary subjects considered in this thesis.

Not only have digital illustration archives holding thousands of illustrations underscored the ubiquity of graphic reproduction in the nineteenth century, they have allowed researchers to ask new questions about illustration that were not

previously possible. They are not merely repositories for illustration, or ‘image banks’ to borrow Julia Thomas’s term; rather they encourage new research questions about illustration.<sup>126</sup> The ability to look at a collection of illustrations extracted from different books and periods that share similar features allows the researcher to make connections that are almost impossible to achieve using more established methods.<sup>127</sup>

Similarly, the employment of methods which include computational analysis, quantitative methods and data visualisation in this thesis underlines the capacity of digital techniques to ask new research questions of illustration between 1780-1860.<sup>128</sup> Digitised illustrations take on new metadata and therefore have their own materiality.<sup>129</sup> As has been outlined previously, the height and width of the illustrations are measured in pixels, which adds further metadata. Their position on the page is determined by measuring the number of pixels they are away from the top left of the page.<sup>130</sup> For example, visualising the centre points of illustrations in chapter five was achieved by measuring the distance from the top left of the page to the top left corner of the illustration (measuring across and down from the top left of the page) and adding half the width and half the height. These added forms of metadata belonging to digitised illustrations allow me to approach illustration from

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<sup>126</sup> Thomas, *Nineteenth-Century Illustration and the Digital*, p. 96.

<sup>127</sup> These illustrations form part of a network in a similar manner to intertextuality. Connections are established that move beyond the boundaries of a single book or genre in order to make wider connections between books and genres. Thomas has termed this ‘affillustration’. See *Ibid.*, pp. 97-101.

<sup>128</sup> All of the data and code used in this thesis, including guides to each dataset, has been published open access and can be found here: DOI 10.5281/zenodo.1412136.

<sup>129</sup> For an insight into the ubiquity of digital materials and methodological questions raised as a result of this growing ubiquity, see Niels Brügger, ‘Digital Humanities in the 21<sup>st</sup> Century: Digital Material as a Driving Force’, *Digital Humanities Quarterly*, 10.2 (2016), n.p. <http://www.digitalhumanities.org/dhq/vol/10/3/000256/000256.html> [Accessed 10 May 2015].

<sup>130</sup> There are three sizes of illustrations used in this thesis: Embellishments, medium or half-page illustrations and plates. The pixel area was calculated by correlating the measurement of the page in millimetres to the pixel size in the xml files (the scans used the same DPI and so the number of pixels per inch was fixed). The size of the pixels and, therefore, the illustrations was determined by physical measurements of the books’ pages (in millimetres). Embellishments are determined by any image below 480,000 pixel area, plates by images that are larger than 1,000,000 pixel area, and half-page or medium illustrations are anything in between. This was particularly helpful for visualising the distribution of illustrations across volumes, as the illustrations were measured as a percentage of the page. Having a considerable amount of data to work with meant that the size of the pages and illustrations could be checked for accuracy. The variation in the size of the page has been taken to account and the position of the illustrations has been normalised against the size of the page that illustrations belongs to. For more information on the metadata see the github page for the data, <https://github.com/BL-Labs/imagdirectory>.

a different perspective. In chapters three, four and five, for example, visualisations of the arrangement of illustrations in books based on their size in relation to the boundaries of the page help to reveal the patterns that emerge not only in the development of the printing techniques themselves, but also in regards to how these developments are embodied within individual books and collections of volumes. They help to reveal what cannot be visualised using established humanities practices.

It is important to stress that the visualisations contained in this thesis were underpinned by a significant amount of manual research. The visualisations found in chapter one, for example were made possible by tagging thousands of illustrations by hand in order to determine the printing techniques used to reproduce them. It was at times difficult to determine the printing technique used based on the digitised image, and so the original illustrations were consulted. If, having consulted the original illustration, I could not easily determine the printing technique, I researched the engraver/etcher of the print and made a judgement of the most likely method. This serves as a crucial reminder that 'digital history' is often not possible without a great deal of manual research.

Despite the undoubted advantages that come with harnessing computational and digital methods, the techniques and data used in this thesis are not without their challenges and limitations. As discussed previously, digital facsimiles of illustrations often render it difficult to determine the printing technique used, which meant that frequent visits to the British Library had to be carried out in order to view the physical books from which the illustrations were cropped. Furthermore, illustrations that were digitally cropped from the books in the collection were determined by anything that was not written text. Therefore, miscellaneous marks such as print stamps and signatures featured in the collection which had to be deleted from the dataset. There were also limitations in terms of the scope of what could be done to the data with the computational techniques used. The size of the books varied considerably, therefore it was impossible to carry out large scale analyses of the position of illustrations on the page and so only single volumes or sets of volumes

belonging to the same work were interrogated in this way. In addition, some of the illustrations are digitally cropped with areas of the page included (particularly vignettes). Consequently, all books where the centre points of the illustrations on the page were of interest had to be checked to see if this approach was viable, which again prevented a large-scale analysis of the position of illustrations on the page.

Nevertheless, harnessing computational and digital techniques helps to visualise changes to book illustrations in ways that have not previously been possible. Recent debates on the value of digital techniques within the field of book history have been raised in relation to the growing number of digitisation projects such as the *ESTC* (English Short Title Catalogue), *Atlas of Early Printing* and *The Internet Archive*.<sup>131</sup> This leads naturally to the pre-supposition that the use of digital and computational techniques is most effective at the end of the research process. The application of these techniques in this thesis, in contrast, provokes new research questions rather than answering pre-conceived ones. By visualising larger patterns of change, further insights can be gained in understanding what it meant to illustrate a book or collection of books belonging to the same discipline in this period. It is important at this point to stress that these techniques are not designed to displace more established approaches to the history of the book and illustration. Archival records of publishers, artists and engravers, periodical reviews, and, perhaps most importantly, the physical books themselves have been consulted in order to engage more closely with the complexity of illustration. These traditional methods are no less important than computational methods, which act as complementary research methods to more established humanities approaches to the book.

These methodologies will be combined in order to evaluate the levels of continuity and change that took place during what has been considered a transformative period in the history of printed book illustration. This thesis is concerned with the significance of the material qualities of print and the diverse

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<sup>131</sup> Matthew Kirschbaum and Sarah Werner, 'Digital Scholarship and Digital Studies: The State of The Discipline', *Book History*, 17 (2014), pp. 406-458.

meanings that can be drawn from the physical processes that were used in the production of the illustrated book. The period between 1780 and 1860 is explored in this thesis as this period witnessed substantive changes to the processes, both technical and industrial, by which illustrations were reproduced. The decision to tag all of the illustrations by print technique between 1810-1850 as opposed to sampling the entire period at five year intervals was made because the initial sampling was not representative enough, particularly given that the period between 1810 and 1850 witnessed significant innovation within the world of print. Therefore, the decision to narrow the period but tag all illustrations between 1810 and 1820 was made. This data underpins the research in all of the following chapters.

Chapters one and two provide the intellectual framework for the remaining chapters. Chapter one in particular evaluates the levels of continuity and change in relation to the development of different printing techniques from 1780-1850. In doing so, it not only provides a quantitative analysis of the frequency of printing techniques, but also serves to test the utility of computational techniques that are utilized later in the thesis. Chapter two offers a complementary analysis detailing the way in which these changes have been embodied within the networks established within the production of the illustrated book. It proposes to assess how these relationships were shaped by the value placed on the medium by which the illustrations were to be printed. In doing so, it aims to break down the general hierarchical structures between those invested in the book's production.

The remaining chapters draw particular influence from Frances Robertson's work, which addresses the multiplicity of meanings that have become attached to print.<sup>132</sup> While Robertson dedicates each of her chapters to a particular printing medium, the remaining chapters of this thesis are ordered thematically by genre. In doing so I consider the meanings that are bound up in the journey between the production of the print and its manifestation on the page of the book. Chapter four

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<sup>132</sup> It should be noted here that Robertson considers all categories of print and not just books. Robertson, *From Steam Press to Ebook*, p. 7.



is concerned with the increasingly salient role of illustration in geological books. It analyses the way in which illustrations displaced the text as the signifier of knowledge, which established tensions between publisher and author. It also proposes to analyse the under-studied intellectual benefits alongside the commercial advantages offered by the invention of stereotyping.

Chapter four explores the transformation by which topographical books were illustrated, particularly from 1825 onwards with the introduction of steel etching and the developments in wood engraving. I highlight the connection between the changes to the methods of illustrating topographical literature and the contexts in which they are published. Similar to geological publications, the chapter traces the way in which the material developments in printing illustrations affected the design of the topographical book. I argue that it was the materiality of the illustrations that led to the establishment of a 'virtual topography' displayed within the pages of the book. The chapter moves on to consider the reaction to these material changes. Lauded as symbols of industrial progress, the introduction of steel and wood also fostered considerable tensions over the value of topography as an intellectual and distinctly antiquarian pursuit.

The final chapter looks more closely at the page as a unit of design in history books between 1780 and 1860. It charts the changes in the methods by which history books, predominantly histories of England, were illustrated within the context of broader developments in nineteenth-century history writing. Focusing predominantly on two 'popular' publishers, Charles Knight and John Cassell, this chapter also serves to show how the philosophies of those publishers in relation to the visual were played out on the pages of their works. An analysis of these works in particular reveals the tensions that lay behind illustrating a written text and illustrating a book in this period.

Together, these chapters aim to reveal the meaning behind the physical properties of the mediums by which illustrations were used and how they were used by producers of the illustrated book. Given that these chapters are predominantly

concerned with change over time within this period, the analyses of certain printing methods, particularly wood engraving, take precedence over others. Yet an insight into how wood engraving was used across three different literary disciplines can help to reveal the diversity of its application. Not only a method used to coalesce word and image, its mutability led to its exploitation that was not always predicated on the written word. The last three chapters are not intended as histories of science, topography and history writing. Rather they are intended to provide snapshots into the way in which illustrations were exploited and arranged in different intellectual contexts. In doing so I hope they can help to reveal something about the subject as well as provide checks against grander narratives of material and technological changes to illustrations. Collectively, these chapters aim to highlight the role of illustration in shaping and even transforming the subject in which they embellish which I hope will be of interest to book and print historians as well as scholars belonging to fields related to the case studies explored later in the thesis.

## Chapter 1: Processes

The emergence of new printing techniques alongside the revival and improvement of older practices throughout the opening decades of the nineteenth century was symbolic of a period defined by contemporaries as an age of industrial and technological progress. The arrival of the mass-produced image through the invention of lithography by Alois Senefelder and the revival of wood engraving by Thomas Bewick around the turn of the nineteenth century provided the necessary foundations for the establishment of the ‘golden age’ of book illustration by the mid-Victorian period.<sup>133</sup>

Whilst it is clear that a number of changes took place in respect of the printing methods and surfaces by which illustrations were reproduced throughout the first half of the nineteenth century, quantitative studies that reveal the trajectory of these changes are lacking in this period. This chapter will therefore adopt quantitative techniques in order to survey the frequency of methods used to print 56,318 illustrations found in 2852 books between 1810 and 1850.<sup>134</sup> As previously stated in the introduction to this thesis, Geoffrey Wakeman was the first to quantify the frequency of printing techniques in the second half of the nineteenth century. By visualizing the frequency of printing techniques, Wakeman highlighted the sustained popularity of lithography, despite the ubiquity of wood-engraved illustrations by the second half of the nineteenth century.<sup>135</sup> Wakeman’s survey provided a snapshot into the increasing variety of illustration throughout the second half of the nineteenth century, which prompted William Morris, the founder of the arts and craft movement, to declare that illustrated books ‘must

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<sup>133</sup> Buchanan-Brown, *Early-Victorian Illustrated Books*, p. 10.

<sup>134</sup> I chose to focus on this period in particular as the introduction of new techniques such as lithography and steel engraving, as well as the revival of wood engraving, takes place throughout the first half of the nineteenth century.

<sup>135</sup> Wakeman, *Victorian Book Illustration*, pp. 159-163.

remain one of the very worthiest things towards the production of which [any] reasonable man should strive.<sup>136</sup>

In a similar approach to Wakeman, this chapter charts the frequency of print techniques during the first half of the nineteenth century using quantitative and statistical methods in order to survey the broader changes to the technologies of printing in this period. Although numerous print historians have provided detailed practical accounts of the printing techniques that emerged in this period, the capacity to visualize these changes in relation to each other provides a useful insight into how their application fluctuated throughout this period.<sup>137</sup> Furthermore, the chapter as a whole surveys these developments within a collection of illustrations that is not defined by the style of illustration, their artistic status, or the genre of the book in which they are printed. A collection of this nature therefore lends itself to a survey of printing techniques that were used for both the production of richly illustrated volumes as well as books that included a small visual component.<sup>138</sup>

Given that this thesis is primarily concerned with the role print surfaces played in shaping literary disciplines during the first half of the nineteenth century, the remainder of the chapter will consider the advantages of programming languages and computational methods to enrich our understanding of the function of illustration from a production and design-led approach. Whilst these methods inform the remainder of the thesis, they help to reveal aspects of both change and continuity within a formative period for book illustration at both the macro and micro level. Such analyses also help to build upon scholarship that has examined

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<sup>136</sup> William Morris, 'The Ideal Book: A Lecture Delivered in 1893', in *The Ideal Book: Essays and Lectures on the Arts of the Book by William Morris*, ed. William S. Peterson (California, 1982), p. 73. It is important to observe here that it was the very ubiquity of illustration that provided a wide degree of execution that prompted Morris to focus on the design of the book as whole while advocating 'proper' illustration.

<sup>137</sup> For an excellent insight into the fallacy that visualisations in digital history merely tell us things we already know, see Lincoln Mullen, *Isn't it Obvious?* (2018), <https://lincolnmullen.com/blog/isnt-it-obvious/> [Date Accessed 7 May 2018].

<sup>138</sup> This chapter is not designed to provide a comprehensive account of every technique used to reproduce illustrations in this period. Many of the scholarly accounts that this chapter builds upon provide exhaustive accounts on the technical and practical accounts of the methods under consideration.

the shifting relationship between the visual and textual in the eighteenth and nineteenth centuries. These studies have enriched our understanding of the developments of narrative as well as the often complex and varying interplay between word and image, which undoubtedly helped to shape cultural imagination and subvert or augment themes and storylines of the book, particularly in relation to the novel where illustration had a lasting effect.<sup>139</sup> However, rather than viewing illustrations in strictly narrative terms, analysis of this nature enriches our understanding of the ‘topography’ of illustration and how that informed upon the overall design of the book.

If the second half of the nineteenth century marked the so-called ‘golden age’ of illustration, the first half of the century certainly laid the groundwork that came to define the Victorian book. As scholars such as Peter Garside, Spencer D. Keralis, Janine Barchas, Richard Hill and Helen Cole have demonstrated in relation to the novel, experimentation with the pictorial in later editions affected not only the reception of the work but also the commercial market for novels more widely.<sup>140</sup> The industrial and technical processes involved in the production of books and illustrations were quite often defined by experimentation in the late-eighteenth and early-nineteenth centuries. This chapter will trace the trajectory of technological developments in print production during a formative period for book illustration during which publishers, authors, artists and engravers had to chart a precarious course between artistic or intellectual distinction on the one hand and commercial viability on the other.

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<sup>139</sup> For an insight into the complex dynamic between narrative illustration and the novel in the Later-Victorian period, see Richard J. Hill, *Robert Louis Stevenson and the Pictorial Text: A Case Study in the Victorian Illustrated Novel* (London, 2016); Julia Thomas, ‘Illustrations and the Victorian Novel’, in Juliet John (ed.), *The Oxford Handbook of Victorian Literary Culture* (Oxford, 2016), pp. 617-636.

<sup>140</sup> See Peter Garside, ‘Print Illustrations and the Cultural Materialism of Scott’s Waverley Novels’, in Sandro Jung (ed.), *British Literature and Print Culture* (London, 2013), pp. 125-150; Richard Hill, ‘The Illustration of the Waverley Novels: Scott and Popular Illustrated Fiction’, *Scottish Literary Review*, 1:1 (2009), pp. 69-88; Spencer D. Keralis, ‘Pictures of Charlotte: The Illustrated Charlotte Temple and her Readers’, *Book History*, 10 (2010), 25-57; Janine Barchas, *Graphic Design, Print Culture, and the Eighteenth Century Novel* (Cambridge, 2003), pp. 99-117.

## Intaglio Techniques: Copper and Steel

Book illustration in the second half of the eighteenth century was predominantly limited to intaglio printing, namely engraving and etching on copper and was often reserved for the high-end market for illustrated books.<sup>141</sup> Intaglio printing involved incising grooves, either through engraving or etching, on the metal plate, predominantly copper in the late-eighteenth century. The metal was incised using either a burin or an etching needle. The ink was then applied to the plate and wiped clean, leaving the remaining ink in the grooves cut out by the engraver.<sup>142</sup> Etching differed from engraving in that it involved the application of acid to ‘bite’ the metal, thus establishing the incised lines ready for inking. The application of an etching ground that covered the surface of the plate prevented the metal being exposed to the acid. The etching needle was then used to scratch away at the surface of the plate, thereby exposing the areas that constituted the illustration. The plate was then submerged in acid, where the exposed metal was then ‘bitten’, which produced the requisite depths ready to hold ink. This process was repeated in order to create different depths, and lines that were sufficiently bitten were ‘stopped out’ in order to prevent further exposure to the acid.<sup>143</sup>

The technique of line engraving was a tremendously laborious and time-consuming practice, usually reserved for books at the highest end of the market. A number of techniques were therefore adopted in order to share the labour and speed up the production process, the most common being the combination of etching and engraving.<sup>144</sup> The process of etching was much more efficient than pure line engraving. One eighteenth-century artist claimed that etching was ten times faster

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<sup>141</sup> Metals such as zinc and iron were also occasionally used. The zinc surface deteriorated more readily than copper and so the latter was preferred.

<sup>142</sup> For the most comprehensive account of the practical considerations involved in engraving, see Stijnman, *Engraving and Etching*, pp. 24-32.

<sup>143</sup> For more detail on the practice of etching, including the different recipes used to create an etching ground, see *Ibid.*, pp. 45-56. For more on different types of etching, such as soft ground and dry point etching, see Griffiths, *Prints and Printmaking*, pp. 71-76.

<sup>144</sup> The technique of stipple etching on copper was also used in collaboration with line engraving and etching. The etcher pierced the etching ground with small dots. The darker the print area, the closer the clustering of dots. Stipple was much more efficient than line engraving. See Griffiths, *Prints and Printmaking*, pp. 77-82.

than engraving.<sup>145</sup> This enabled authors and printers of highly illustrated works to keep production costs manageable. Given the delicate surface of the copper, a print could only be reproduced around 1500 times before the plate became too worn under the pressure of the press, which limited the number of editions.<sup>146</sup> For solely etched plates, the figure was even lower.<sup>147</sup>

Understandably, full-page illustrations were printed using intaglio techniques (*Figure 1.1*). Plates continued to be printed on blank sheets of letterpress, or inserted into the book at the point of binding. The practical difficulty involved in printing intaglio engravings alongside type, which involved running the page through two separate presses, ensured that engravings were predominantly printed on separate sheets and inserted at the point of binding.<sup>148</sup> *Figure 1.1* shows a steady rise in the number of medium or half-page illustrations printed using intaglio methods after 1830. The rise of the engraved vignette, particularly after 1830, was symptomatic of the influence from the continent. Intaglio-engraved vignettes were found predominantly in works of poetry (*Plates 1.1* and *1.2*). Vignettes were generally considered to hold a higher degree of skill in terms of their appearance on the page in comparison to full-page prints. Accordingly, the presence of steel-engraved vignettes steadily became a marker of status and quality. The publisher of Samuel Mullen's collection of poems, which included *The Cottager's Sabbath* and *The Pilgrim of Beauty* (1845), ensured that purchasers of the work were aware of the presence of engraved vignettes. This was also reflected in the periodical columns of reviewers, who stated that the illustrations in Mullen's work were beautifully executed and printed, so much so that the reviewer went on to claim the poems were, for the first

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<sup>145</sup> Griffiths, *The Print Before Photography*, p. 40.

<sup>146</sup> The number of impressions that can be taken from a single copper plate has been a point of contention amongst print scholars. Roger Gaskill originally estimated the number of impressions to be much lower, at between 300 and 500. Antony Griffiths has used contemporary accounts to suggest a higher figure. See Roger Gaskill, 'Printing House and Engraving Shop: A Mysterious Collaboration', *Book Collector*, 53 (2004), pp. 220-222. Griffiths, *The Print Before Photography*, pp. 50-

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<sup>147</sup> The figure was closer to 500 good quality plates with the possibility of printing 500 more of inferior quality. See Griffiths, *The Print Before Photography*, p. 55.

<sup>148</sup> Although copperplate engravings could be printed alongside type, this required two print runs on two different presses, which was both time-consuming and expensive. This was mainly reserved for the most expensive volumes.

time, ‘published’ as opposed to merely ‘printed’.<sup>149</sup> The form and method of the illustration could serve to reinvigorate older editions and transform them into commercially profitable ventures.<sup>150</sup>

As *Figure 1.1* shows, however, the vast majority of intaglio-printed illustrations were printed as full-page illustrations. *Figure 1.2* reveals the relative frequency of full-page illustrations throughout the first half of the nineteenth century. Firstly, it reveals that eighteenth-century techniques such as copperplate engraving and etching continued to be used up until the end of the period under consideration. Etching, though not a prominent technique, remains relatively consistent throughout the period, despite the capacity of wood engraving to mimic the lines of an etching on the woodblock. George Cruikshank in particular continued to etch plates for comical and satirical publications throughout the first half of the nineteenth century. Despite the considerable number of wood engravings in William Harrison Ainsworth’s *Windsor Castle: An Historical Romance* (1847), it was the three etched plates by Cruikshank that were advertised on the title page.<sup>151</sup> Francis Smedley’s *Frank Fairleigh; or Scenes from a Private Pupil* (1850), printed in numerous editions around the mid-nineteenth century, featured a number of Cruikshank’s etchings and again was advertised as such on the title page to each edition.<sup>152</sup> Although he had also turned to wood engraving to reproduce his designs, Cruikshank’s name continued to be tied to etching, which helped to ensure it remained in use by 1850.<sup>153</sup>

What is evident from *Figure 1.2* is the sharp rise in the number of full-page illustrations printed from steel. Steel engraving was celebrated as the epitome of industrial and technological production. The arrival and commercial profitability of

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<sup>149</sup> *The Athenaeum*, 8 February 1845, p. 146. The vignettes were engraved by William Raymond Smith, who received notoriety for his execution of steel-engraved vignettes.

<sup>150</sup> For a comprehensive insight into the rise of the vignette in early-Victorian illustrated books, see John Buchanan-Brown, *Early-Victorian Illustrated Books*, pp. 244-261. Buchanan-Brown has argued that Romanticism’s most important contribution to the book was the integration of image and text. Vignettes, rule borders and typographical features were symbolic of the creation of a romantic book design.

<sup>151</sup> Harrison Ainsworth, *Windsor Castle: An Historical Romance* (London, 1847).

<sup>152</sup> Francis Smedley, *Frank Fairleigh; Or Scenes From a Private Pupil* (London, 1850).

<sup>153</sup> For more on Cruikshank and his utilization of wood engraving, see Buchanan-Brown, *Early-Victorian Illustrated Books*, pp. 74-79.



Relative Frequency (as a percentage) of Intaglio Engraved Illustrations by Size

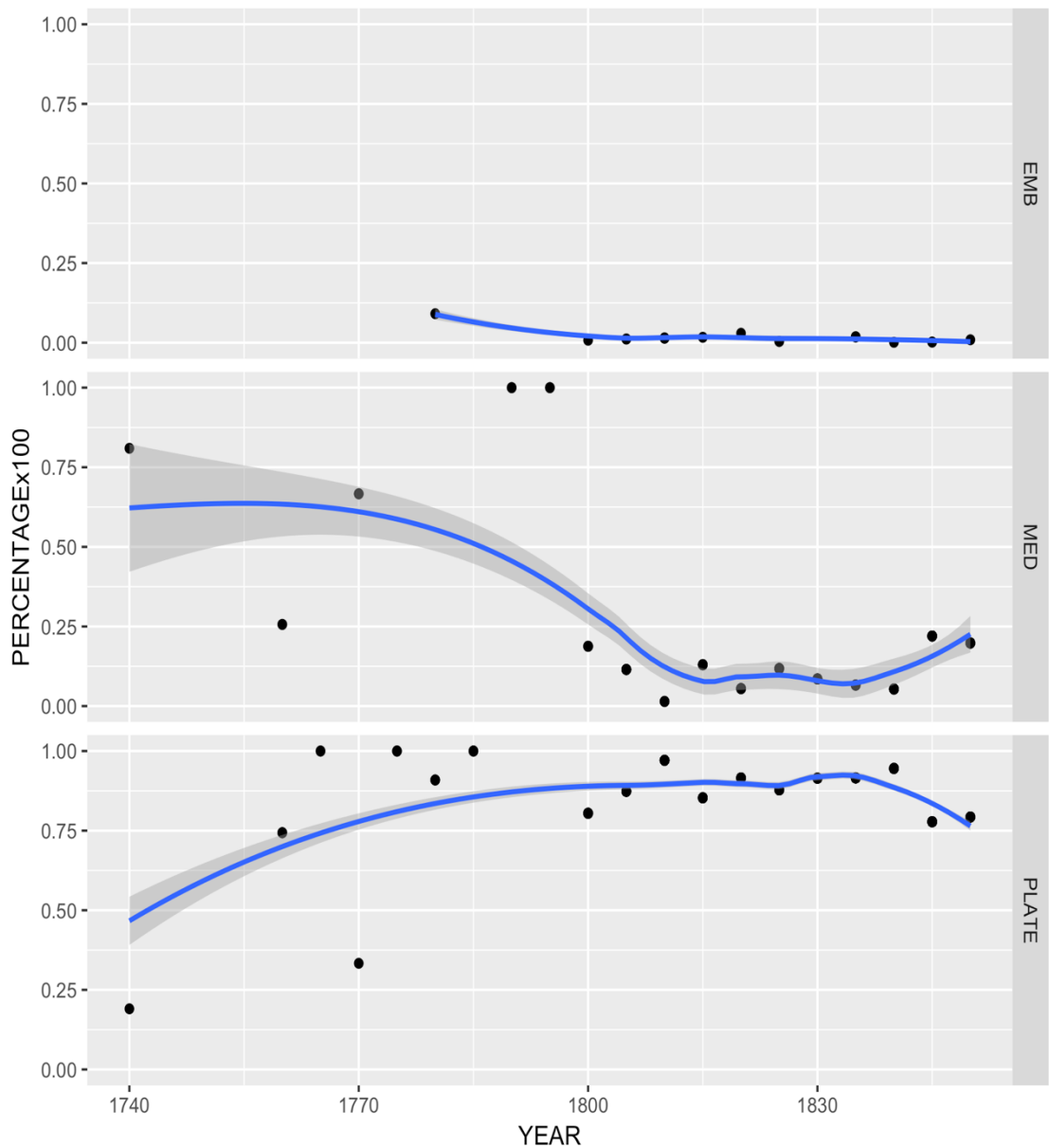


Figure 1.1 Showing the relative frequency (as a percentage) of engraved embellishments (small illustrations, EMB), medium-sized illustrations (MED) and plates (full-page illustrations) of illustrations found in the British Library dataset dated between 1740 and 1850. The source data and code used to create this visualisation and the remaining visualisations in this chapter can be found at DOI 10.5281/zenodo.1412136. The black dots represent the relative percentage of plates, medium-sized illustrations and embellishments for that given year. The grey shaded area relates to the confidence in the blue smoothing curve, which is calculated from a linear model in R Studio (predictdf). The degree of confidence of the shaded area is measured at 95%.

Relative Frequency (as a percentage) of Plates by Printing Method 1810-1850

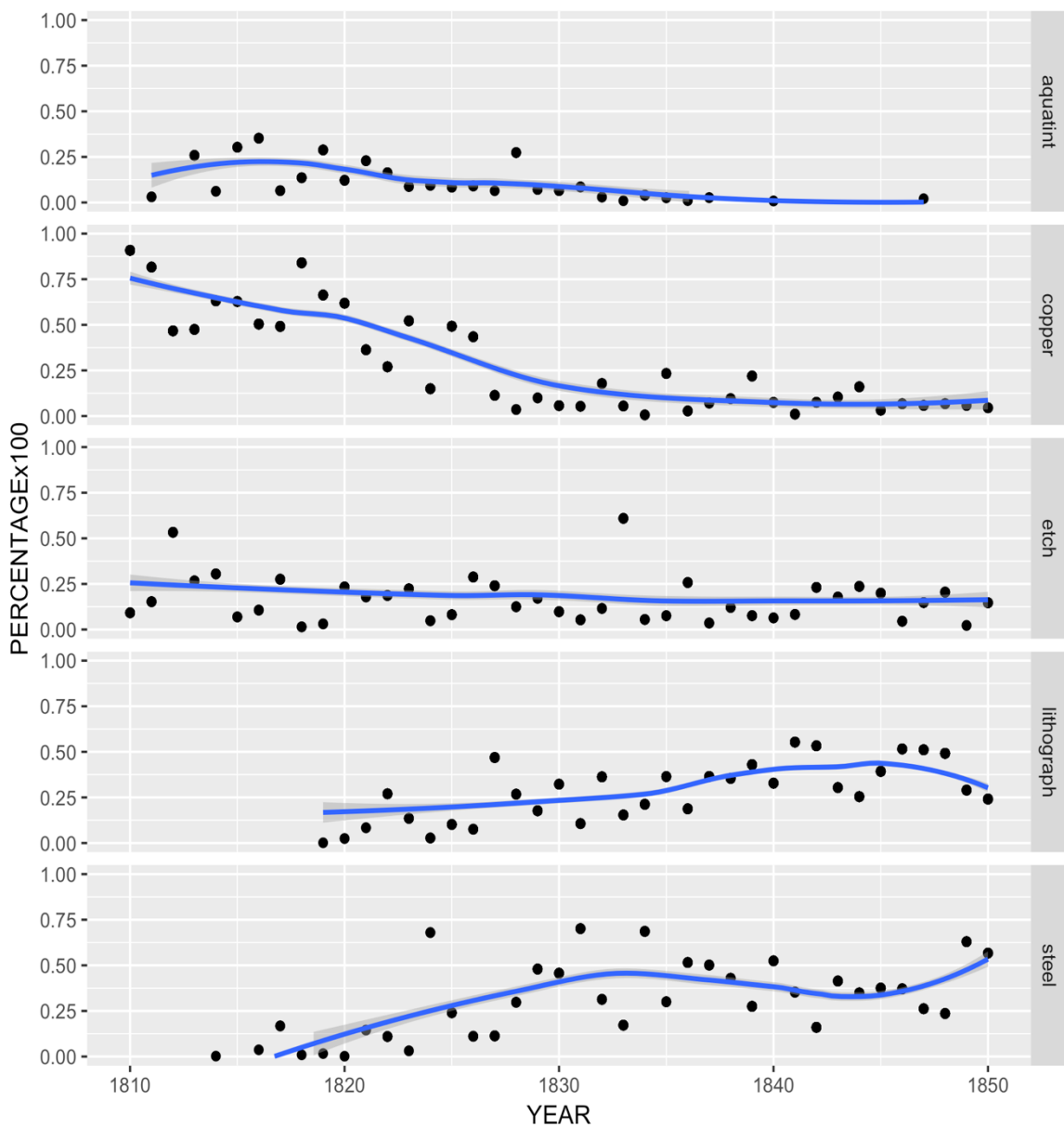


Figure 1.2. Showing the relative frequency of printing techniques used to print full page illustrations 1810-1850. The dots represent the the relative frequency of each printing method in a given year. The blue smoothing line helps to chart the frequency of print methods over time. The graph shows the rise of both steel engraving and lithography from around 1820 onwards.

the Fourdrinier machine by the early stages of the nineteenth century led to the production of softer, machine-made paper, allowed for the fine lines that could be etched and engraved from the steel plate to be transferred clearly onto the page, while the introduction of the iron-press and subsequently the steam-driven press helped to reduce the cost of book production.<sup>154</sup> Furthermore, whilst new tools such as the diamond-point cutter, which improved the uniformity of engraved lines, were fully developed by 1800, it was not until the mid-1830's that steel engraving was established as the predominant intaglio printing technique.<sup>155</sup>

The process of steel engraving often involved little engraving at all. Copper was much softer than steel and so responded to the burin of the engraver, while the hardness of steel required the plate to be etched to allow the engraver to cut deeper lines into the plate.<sup>156</sup> The time it took to complete a steel plate, therefore, depended on the amount of engraving required. Certain elements of the picture were deemed wholly suitable for etching and did not require the burin of the engraver. In landscape prints, for example, trees, rocks and the skyline were left completely to etching, which reduced the expense and time for the plate to be completed.<sup>157</sup>

Steel could endure a much longer print run than copper (up to 50,000 impressions could be achieved from one plate) and so responded to the need to reproduce illustrations for a large number of editions. Publishers Otley and Saunders lauded the clarity of the impressions, claiming that 'elaborate engravings on copper would lose their delicate tints after printing a few hundred copies, but from steel many thousand impressions may be taken without the slightest difference

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<sup>154</sup> Rob Banham has suggested that the production of paper in the United Kingdom has risen from approximately 2.5 pound per capita in 1800 to about 8 pound half a century later. See Rob Banham, 'The Industrialisation of the Book', in Simon Eliot and Jonathan Rose (eds), *A Companion to the History of the Book* (Oxford, 2007), pp. 273-275. With regards to changes to printing presses, it was not until the mid-nineteenth-century that the steam press truly replaced the iron press for book production, despite Koenig's invention in 1807. See James Raven, *The Business of Books: Booksellers and the English Book Trade 1450-1850* (New Haven and London, 2007), pp. 324-326.

<sup>155</sup> Basil Hunnisett, *Steel-engraved Book Illustration in England* (London, 1980), pp. 5-11; Anthony Dyson, *Pictures to Print: The Nineteenth-Century Engraving Trade* (London, 1984), pp. 17-21.

<sup>156</sup> Hunnisett revealed that engravers had encountered great difficulties engraving steel that often resulted in broken burins. See Hunnisett, *Steel-Engraved Book Illustration*, pp. 49-50.

<sup>157</sup> *Ibid.*, pp. 42-49.

between the first and the last'.<sup>158</sup> Similar to the way in which vignettes were advertised, it was common for publishers of books that featured steel-engraved plates to advertise it on their title pages as both a mark of high quality and affordability. An edition of Henry Coubould's *The Book of The Poets* published in 1844 included in its title the fact that it was illustrated with forty-five 'of the most elegant engravings on steel' in order to improve the commercial viability of that edition.<sup>159</sup>

Steel engraving was suited to a number of styles of illustration. Engravers of maps, topographical and landscape drawings, architectural drawings and historical prints all benefitted from the capacity to etch far finer lines while publishers profited from the considerable print run from a single plate. Steel engraving, perhaps more than any other printing method, was considered to signal the industrial, artistic and cultural progress of Britain during the first quarter of the nineteenth century. Although steel engraving was at times lamented for its inability to express the softness of tone that could be achieved by copper, it was nonetheless lauded by contemporaries as a significant marker of progress, often used to exemplify Britain's technological and commercial prowess against the backdrop of developments throughout the continent and across the Atlantic.<sup>160</sup> The chemist and popular science writer Robert Hunt, having witnessed the rise of steel engraving in the 1820s, captured the feeling amongst contemporaries over its influence on art and wider culture more generally. 'A few years since', a reviewer of the art patron Robert Vernon's gallery observed, 'rudely coloured, badly executed, and often vulgar prints were the only things to be obtained by those of the great masses of society. [...] A better order of things is now in progress- works of good art are circulated. [...] From this is arising a refined taste and feeling. [...] Thus steel engraving - like printing from moveable types - ministered to a grand cause.'<sup>161</sup> Steel engraving symbolized not only Britain's artistic standing in the western world, but also played

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<sup>158</sup> Quoted in Buchanan-Brown, *Early Victorian Illustrated Books*, p. 28.

<sup>159</sup> Henry Coubould, *The Book of Poets* (London, 1844).

<sup>160</sup> For more on the contemporary criticism, see chapter five of this thesis. See also Hunnisett, *Steel-Engraved Book Illustration*, p. 7.

<sup>161</sup> 'On the Application of Science to the Fine and Useful Arts', *The Art Journal*, July 1850, pp. 231-232.

a role in confirming her standing as the technological, industrial and cultural centre of Europe, which is explored further in chapter four.

### A Democratic Art: The Emergence of Lithography 1820-1850

Although steel engraving rose dramatically as the first half of the nineteenth century progressed, the invention of lithography by Alois Senefelder in 1796 rivalled the intaglio method as the most popular method of graphic reproduction for full-page illustrations (See *Figure 1.2*). Despite contemporary claims that lithography had failed to achieve the level of popularity that it did across the continent, particularly in Germany and France, the graph above highlights its prominent use in illustrated books from around 1820 onwards.<sup>162</sup> The slow uptake of lithography into Britain was levelled at the country's prominent artists, who looked down with suspicion over the capacity of lithography to replicate the strokes of the artist's brush on the lithographic stone.<sup>163</sup> Indeed, the negative reaction from artists persisted well into the 1820s and 1830s. One of the contributors of the London publisher Matthew Arnold's monthly periodical *The Library of the Fine Arts, or Repertory of Painting*, observed that the hesitancy shown towards lithography was down to the 'prejudices of too many English artists' that resulted from their deficient use of the crayon.<sup>164</sup> In addition to the accusation that British artists looked upon lithography with suspicion in terms of its potential to produce aesthetically accomplished prints, doubts were also raised as to whether lithography could compete with the

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<sup>162</sup> 'A View of the Present State of Lithography in England', *Library of the Fine Arts, or Repertory of Painting, Sculpture, Architecture, and Engraving*, April 1831, 201-202. The slow arrival of lithography to Britain is further emphasised by the fact that there were only two lithographic presses working in England in 1816. See Michael Twyman (ed.), *Henry Bankes's Treatise on Lithography, Reprinted From the 1813 and 1816 Editions* (London, 1976), p. xviii.

<sup>163</sup> D. J. Redman was the first lithographic printer in England and in 1813 printed Thomas Barker's *Forty Lithographic Impressions of Rustic Figures*. He went on to print many lithographs together with Charles Hullmandel who, alongside Georg Engelmann, were at the forefront of the revival of the lithograph from 1818 onwards and remained the most prominent lithographic printers of the nineteenth century.

<sup>164</sup> *Library of the Fine Arts*, April 1831, p. 208.

‘numerous body of clever engravers’ that were reflective of Britain’s artistic reputation both at home and on the continent.<sup>165</sup>

Yet despite these concerns, the relative frequency of full-page printing methods points to the widespread use of lithography from 1820 onwards (see *Figure 1.2*). The striking rise of lithographic prints within this collection perhaps points to the diversity of illustrations contained therein. The capacity to design almost anything on stone at a far more efficient rate than intaglio engraving rendered lithography useful for a wide range of subjects, including the written text, so much so that it was often considered ‘improper printing’.<sup>166</sup> Its flexibility as a printing medium had considerable advantages for publishers of books who wished to illustrate a number of different subjects. Illustrations found in topographical works, scientific publications, art journals and music books amongst others often included lithographed prints, reflecting the range of lines and marks that could be drawn on stone. The capacity to draw almost anything on a lithographic stone was of great use to artists and authors who wished to include a number of different styles and subjects within a single publication.<sup>167</sup> A writer for the *Edinburgh Magazine* argued that, amongst the many advantages offered by lithography, the primary advantage lay in ‘the diffusion of knowledge in a variety of branches, and through an infinite number of channels, which have hitherto been impracticable from the expense of copperplate engraving.’<sup>168</sup>

The opposing trajectories in the frequency of steel engravings and lithographic prints are not attributed so much to the quality of lithography over steel but rather of the diverse range of marks that can be drawn on the lithographic stone by both amateurs and professionals. This is not only reflected in the

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<sup>165</sup> ‘The State and Prospects of Lithography’, *The Art-Union*, July 1839, p. 98.

<sup>166</sup> For more on lithography as ‘improper printing’, see Michael Twyman, *Early Lithographed Books: A study of the Design and Production of Improper Books in the age of the Hand Press* (London, 1990).

<sup>167</sup> Depictions of buildings, landscape scenes, diagrammatic illustrations and maps were all produced through lithographic printing at this time. Lithography provided a particularly useful printing alternative for map-making. For more on the making and commercial value of maps, see Mary Sponberg Pedley, *The Commerce of Cartography: Making and Marketing Maps in Eighteenth Century France and England* (Chicago, 2005), pp. 35-73.

<sup>168</sup> ‘On Lithography’, *Edinburgh Magazine and Literary Miscellany*, May 1819, p. 449.

publisher's decision to use lithography for a variety of different subject matters, but also the way in which all those connected to book production could exploit the diversity and efficiency of the medium. The first edition of Henry Bankes's *Treatise of Lithography* addressed the amateur artists who wished to reproduce their own pieces of work. He argued that lithography reproduced the work of the artist in a much more natural way as opposed to intaglio etchings and engravings, '[which] are, at the best, but translations from one language into another and never can give the spirit of the original.'<sup>169</sup>

Bankes's address to the amateur artist is reflective of the role lithography played in the democratisation of print producers. Printing from stone relied upon the immiscibility of water and oil. The artist's image was drawn onto the stone using a waxy substance, most commonly a crayon before the whole lithographic stone was chemically treated with gum arabic in order to establish the areas where the ink will take to the greasy drawing. Once the stone was damped with water, the stone was then inked, which revealed the original drawing while leaving the other parts of the stone ink-free ready for printing.<sup>170</sup> As lithography was a planographic printing technique, printing from a flat surface as opposed to intaglio or relief, compositors and engravers were not necessary. It was observed, for instance, that it took the artist approximately six to eight days to trace a design on copper, as opposed to the 'two to three' days it would take to complete the drawing on stone.<sup>171</sup> Subsequently, lithography offered a more efficient method of graphic reproduction that brought the artist in closer contact to the facsimile print of his/her work.

The democratic spirit that lithography evoked is evident in a comparison between three books that feature numerous lithographs published in the 1820s.

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<sup>169</sup> Michael Twyman (ed.), *Henry Bankes's Treatise on Lithography, Reprinted from the 1813 and 1816 Editions* (London, 1976), p. 9.

<sup>170</sup> Lithographs commonly needed to be printed around ten times before a true impression could be taken. Michael Twyman's work on lithography remains the most detailed account of the practical and technical history of the printing technique. see Michael Twyman, *Lithography 1800-1850* (Oxford, 1970).

<sup>171</sup> *The British Review, and London Critical Journal*, June 1820, p. 381. Another reviewer claimed that 'an eminent artist of the city' completed a lithographed print in 13 hours which, he argued, would have required 'two months' constant labour' if it was engraved on copper. See *The Edinburgh Magazine and Literary Miscellany*, May 1819, p. 449.

Comparing a lithograph produced by Louis Haghe (*Plate 1.3*), one of the foremost lithographers of the nineteenth century, with those produced by the novelist Richard Cobbold (*Plate 1.4*) and the travel writers Thomas and Sarah Bowditch (*Plate 1.5*) reveals the considerable variety of execution that could be achieved by printing on a lithographic stone. The difference between the prints found in William Bayley's volume lithographed by Haghe and those lithographed by Cobbold exemplifies this variety in execution. Haghe's lithograph reveals the potential of this print method to replicate the strokes of the painter's brush through different levels of shading and texture. In contrast, Cobbold's illustrations demonstrate the difficulty the author had in replicating his artwork through the immiscibility of ink and water on the stone. The poor quality of the illustrations was considered detrimental to the work, with one newspaper claiming that the illustrations accompanying the text 'are decidedly a disgrace to the book'.<sup>172</sup>

Cobbold's illustrations also reflected the concerns raised by commentators over the varying degree of execution that could be achieved through lithography. The 'hasty strikes' and 'dashes of the crayon' on the stone by the amateur or unpractised artist were seen to be symptomatic of the artist's failure to acknowledge the subtle differences between drawing on stone as opposed to paper.<sup>173</sup> Despite the criticisms levelled at Cobbold's illustrations, they nevertheless highlight the accessibility of lithography to those who were not connected to the professional domain of print production.

Perhaps the greatest examples that demonstrate the relationship between lithography and the amateur are the lithographs found in Thomas Bowditch's *Excursions in Madeira and Porto Santo* (1825). Bowditch was a writer and his wife, Sarah Bowditch, was a naturalist and writer. Both were keen travellers who studied natural science and made several expeditions to Africa.<sup>174</sup> Sarah not only drew but also

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<sup>172</sup> *The Bury and Norwich Post; Or, Suffolk and Norfolk Telegraph, Essex, Cambridge, & Ely Intelligencer*, 21 February 1827, Issue 2330.

<sup>173</sup> 'History and Processes of Lithography' *Library of Fine Arts*, February, 1831, p. 49.

<sup>174</sup> Donald deB. Beaver, 'Lee, Sarah (1791-1856)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2007 [<http://www.oxforddnb.com/view/article/16310>, accessed 6 Aug 2015].



lithographed the plates found in her husband's work.<sup>175</sup> Although the quality of the print again fails to match that of the professional lithographer, it exemplifies the way in which new techniques served to democratise print production.

The democratisation of print producers made possible by lithography, in addition to the variety of images that could be printed, reflected in its increasing popularity after 1820. The sophistication of the steam-powered press in the second half of the nineteenth century ensured that lithography became widely regarded as 'the democratic art'.<sup>176</sup> Yet these examples, together with the evident rise in the frequency of lithographic prints from 1820 onwards, suggest that lithography as a 'democratic art' had already been established. As is revealed in *Figure 1.2*, lithography became a prominent printing technique that rivalled intaglio methods; this despite the concern raised by contemporaries that the process struggled to compete with the 'numerous body of clever engravers', which remained a marker of Britain's technological, artistic and commercial growth during the early decades of the nineteenth century.

### The Revival of Wood-Engraving and the Mass-Produced Image 1790-1850

As has been well established, the revival of wood engraving by Thomas Bewick towards the end of the eighteenth century restored confidence in the medium for book illustration.<sup>177</sup> Bewick's method of using tools of the engraver to carve against the grain meant that images with far finer lines could be printed and so improved its standing as a reputable form of book illustration. Moreover, the printing of the image required minimal pressure as the engraving was inked on the face, which meant the block lasted for thousands of prints. Those influenced by Thomas Bewick, namely Samuel Palmer, Edward Calvert and Edmund Evans,

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<sup>175</sup> Once the stone was prepared, it was passed on to Charles Hullmandel, perhaps the best lithographic printer of the nineteenth century.

<sup>176</sup> Burant, 'The Visual World in the Victorian Age', p. 113.

<sup>177</sup> For more on the life and work of Thomas Bewick, see Jenny Uglow, *Nature's Engraver: A Life of Thomas Bewick* (London, 2006).

ensured that the reputation afforded to wood engraved illustrations continued long after the death of Bewick in 1828.<sup>178</sup>

Wood engraving as an art form had, by the end of the Napoleonic Wars, become a well-respected printing method.<sup>179</sup> Yet, it was only until after 1830 that it was transformed into a widespread form of graphic reproduction, adopted by those less concerned with artistic prowess but more practical and financial considerations. New markets for illustrated literature, particularly after the repeal of the taxes on knowledge, placed a far greater emphasis on wood engraving as a financially and practically viable alternative to intaglio and planographic methods. John Gilbert, one of the most prolific draughtsman and wood engravers of the nineteenth century, was admired for his ability to remain consistent in his execution; ‘there is no sign of haste [...] there is nothing which suggests that greater excellence would have attended greater elaboration.’<sup>180</sup> *The Penny Magazine* and *The Saturday Magazine*, two print runs both began in 1832, featured a number of wood-engraved illustrations, answering the demand from an increasingly literate public for a visual element to their reading.

Wood engraving, perhaps more than any other print medium by 1840, stood at an ideological crossroads between between artistic accomplishment and practical necessity within the market for illustrated books before the onset of the ‘heyday’ of wood engraving and the influence of the Pre-Raphaelite artists in the 1860s.<sup>181</sup> The rise of the serial part-issue and richly illustrated newspapers and magazines, all of which can be placed within the broader category of ‘illustrated journalism’, were all dependent on the ubiquity of wood engraving and the rise of the ‘pictorial illustration.’<sup>182</sup> John Limburd, the editor of *The Mirror of Literature, Amusement and Instruction*, highlighted the rise in both the number and accuracy of illustrations in

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<sup>178</sup> See Kenneth Lindley, *The Woodblock Engravers* (Newton Abbot, 1970), pp. 34-53.

<sup>179</sup> Buchanan-Brown, *Early Victorian Illustrated Books*, p. 12.

<sup>180</sup> Rodney K. Engen, *Dictionary of Victorian Wood Engravers* (Cambridge, 1985), p. 99. Chapter 2 explores the conditions and the status claims of wood engravers and draughtsmen in more detail.

<sup>181</sup> For more on wood engraving in the 1860s, see Paul Goldman, *Victorian Illustrated Books*.

<sup>182</sup> For more on the trajectory of illustrated journalism during the first half of the nineteenth century, see Brian Maidment, ‘The *Illuminated Magazine* and the Triumph of Wood Engraving’, in *The Lure of Illustration*, pp. 17-40.

addition to the variety of subjects that could be illustrated alongside the written text as a result of wood engraving's revival: 'a ceremony, a festival, or an execution, is now so recorded and delineated, that posterity may not only read of them, but almost see them.'<sup>183</sup> The practical, commercial and financial advantages offered by printing wood-engraved illustrations on the same press as type have been well established.<sup>184</sup> The capacity to print illustrations alongside type on the same press has naturally engendered a greater appreciation of the practical integration of word and image. As Wakeman stated, wood engraving lent itself to 'the smaller illustration that can be printed with the letterpress and produce a harmonious whole in book design.'<sup>185</sup> Uniting word and image subsequently led to claims of superiority of wood engraving over intaglio engraving.<sup>186</sup> The similar depths of the printing types and lines of wood engravings, which were engraved in relief as opposed to intaglio, afforded numerous financial, commercial and intellectual advantages.<sup>187</sup>

Yet despite Kenneth Lindley's assertion that attempts to present wood engraving as an artistic medium for the reproduction of art nearly led to its extinction, illustrations not necessarily categorized as reproductions of art were nonetheless commended for the level of artistic feeling that could be achieved through this medium.<sup>188</sup> John Jackson, a wood engraver who was previously apprenticed to Thomas Bewick, argued that in an age of mechanical reproduction, the correct use of lines was the most important consideration of the engraver, 'as upon their proper application all indications of form, texture, and conventional colour [are] entirely dependent.'<sup>189</sup> Lines, therefore, were not introduced merely 'to display the mechanical skill of the engraver; they ought to be signs of an artistic

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<sup>183</sup> *The Mirror of Literature, Amusement, and Instruction*, 20 May 1843, p. 305.

<sup>184</sup> Chapters three, four and five all discuss wood engraving within the context of the literary subject they were designed to illustrate. Together, they reveal the different ways in which wood engravings were used and applied within different intellectual, commercial and aesthetic contexts.

<sup>185</sup> Wakeman, *Victorian Book Illustration*, p. 20.

<sup>186</sup> The Chambers brothers, one of the most celebrated publishers of cheap illustrated literature, claimed that the harmony between small illustrations and type rendered wood engraving the most superior printing medium. See *Chambers's Edinburgh Journal*, 2 January 1836, p. 338.

<sup>187</sup> Yet these advantages were by no means fixed. Chapters three, four and five highlight the variety of ways in which wood engraving was used across different literary subjects.

<sup>188</sup> Lindley, *The Woodblock Engravers*, p. 35.

<sup>189</sup> John Jackson and William Chatto, *Treatise on Wood Engraving, Historical and Practical* (London, 1829), p. 663.

meaning, and be judged of accordingly as they serve to express it with feeling and correctness.<sup>190</sup> Thus despite Walter Benjamin's contention, in his seminal essay *Art in the Age of Mechanical Reproduction* (1935), that the aesthetic power or the 'aura' of the artwork could not be replicated within mechanized print, establishing artistic feeling through the textures and different depths was salient to many early-Victorian wood engravers.<sup>191</sup>

The artistic merit of wood engraving is reflected in the appraisal of the editor and journalist Cyrus Redding's *England in the Nineteenth Century* (1842). The two-volume edition was richly illustrated, featuring both wood and steel engravings. Whilst the written text was praised for its clarity and lucid style, the excellence of the illustrations were considered the most valuable aspect of the book.<sup>192</sup> Furthermore, reviewers chose to commend the clarity, character and skill of execution found in the wood engravings as opposed to the more delicate and elaborate steel engravings.<sup>193</sup> Perhaps more significantly, commentators expressed their admiration for the 'artistical [sic] feeling in the picturesque subjects' of the wood engravings as opposed to those illustrations printed on steel. Although the wood engravings in Redding's volume served to unite word and image, the reviewer's decision to praise the sense of artistic feeling in these engravings suggests that artistic potential superseded their commercial and practical value.

Whilst the printing of word and image on the same press was undoubtedly one of the most advantageous properties of wood engraving, this narrative often draws on the assumption that wood engraving established a 'harmonious whole' between word and image.<sup>194</sup> Yet by adding wood engraving to the relative frequency of full-page illustrations between 1810 and 1850, one could argue that the function of wood engraving did not lay solely in establishing a harmony between word and

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<sup>190</sup> *Ibid.*, p. 664.

<sup>191</sup> Walter Benjamin, *Art in the Age of Mechanical Reproduction*, trans. J. A. Underwood (London, 2008), pp. 7-8.

<sup>192</sup> Chapter four will go into further detail on the arrangement of illustrations printed in this work.

<sup>193</sup> 'England in the Nineteenth Century', *The Examiner*, 9 April 1842, p. 228.

<sup>194</sup> As discussed in the introduction, scholars including Julia Thomas and Catherine Golden have revealed the often uncomfortable relationship between word and image in wood engraving.

image (*Figure 1.3*). Bolting numerous woodblocks together while each engraver worked on a separate part of the block rendered large wood engravings both artistically and practically viable.<sup>195</sup> As is clear, from around 1840s onwards, there is a noticeable rise in the relative frequency of ‘full-page’ wood engravings in comparison to other intaglio and planographic methods, suggestive of the capacity of wood engraving to rival these methods in establishing a significant visual element to the book. Artists and illustrators of novels and other forms of literary fiction utilized larger-scale wood engravings not to merely illustrate the text but to interpret, express or even challenge the words of the author.<sup>196</sup>

The artistic reputation of wood engraving before 1850, however, is perhaps exemplified in the choice of illustration for Henry Ince’s *Wonders of the World in Nature and Art* (1839). In the preface, the authors stated that the work is ‘embellished with spirited Engravings, derived from authentic sources, which, if regarded as highly-finished specimens of art, or vivid pictorial illustrations of the subject, it will be found superior to most contemporary productions.’<sup>197</sup> Given that all of the illustrations were made from wood engraving, the author’s distinction between artistic specimens and pictorial aids is indicative of the potential of wood engraving to rival the artistic status afforded to intaglio methods before the ‘heyday’ of wood engraving in the 1860s.<sup>198</sup>

By surveying the changes to print techniques used for book illustration using quantitative techniques, it has been possible to chart their trajectory in relation to each other, thus providing a greater insight into the points at which these printing techniques rose to prominence as well as the points at which they were challenged by the emergence of new or revived methods. Furthermore, by assessing the

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<sup>195</sup> William Harvey, one of the pupils of Thomas Bewick, was one of the first to attempt a wood engraving of this nature in 1821. His engraving took three years to complete and underwent a limited print run due to poor printing. See Engen, *Victorian Wood Engravers*, pp. 115-116.

<sup>196</sup> Thomas, ‘Illustrations and the Victorian Novel’, in John (ed.), *The Oxford Handbook of Victorian Literary Culture*, pp. 617-636; Michael Steig, *Dickens and Phiz* (Bloomington and London, 1978).

<sup>197</sup> Henry Ince, *The Wonders of the World in Nature and Art* (London, 1839), p. iv.

<sup>198</sup> Goldman, *Victorian Illustrated Books 1850-1870*.

Relative Frequency (as a percentage) of Plates by Printing Method 1810-1850

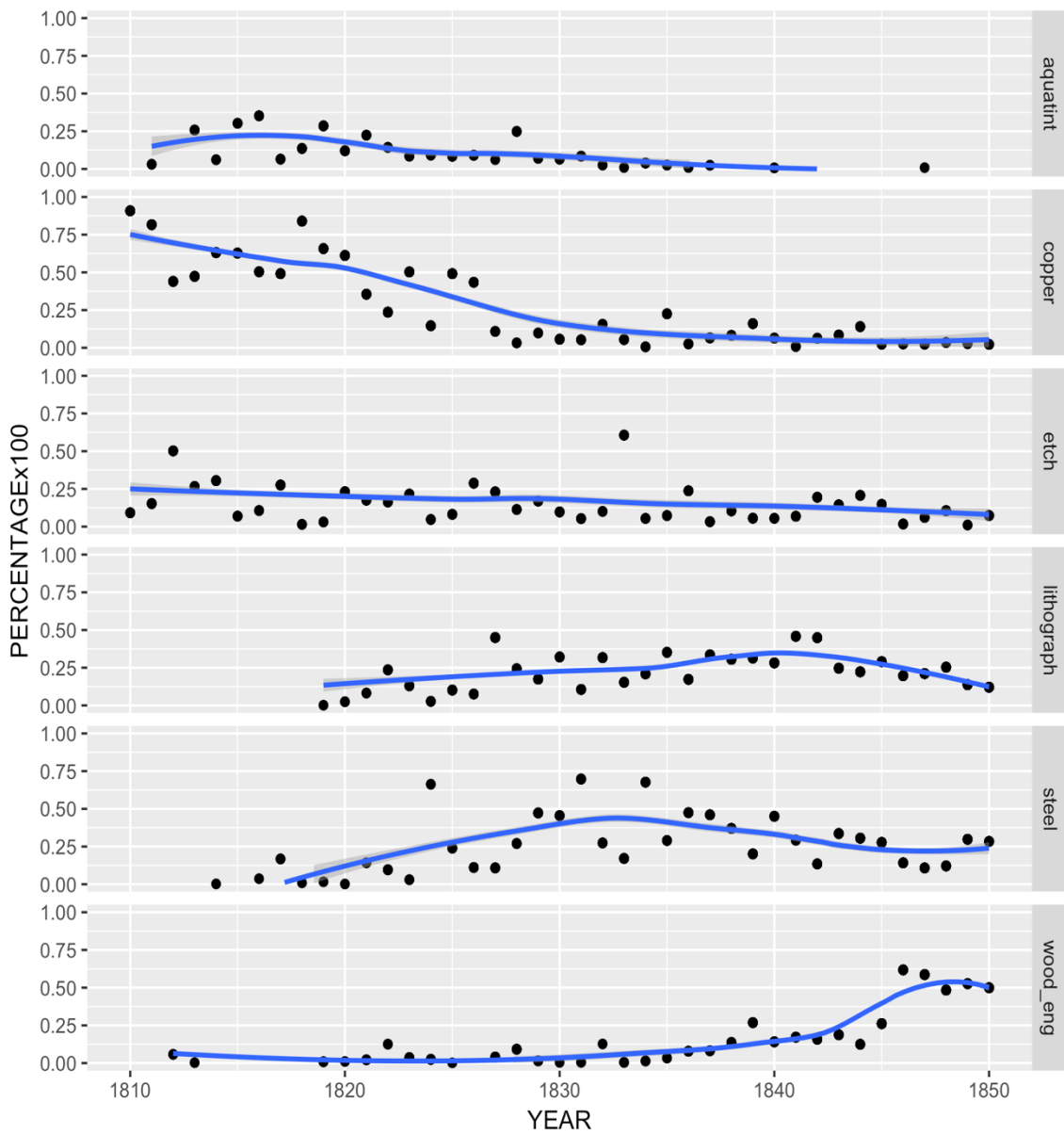


Figure 1.3. Showing the relative frequency of printing techniques used to print full page illustrations 1810-1850. Similar to Figure 1.2, the dots represent the relative frequency of illustrations made by each printing method in a given year. The smoothed line helps to chart the relative frequency of print methods over time. By including wood engraving, the graph shows how wood engraving became a suitable alternative to intaglio plates after 1840.

development of wood engraving relative to the frequency of full-page illustrations, it is possible to chart its trajectory in a way other than its potential to unite word and image. More generally, assessing the trajectory of different printing techniques within a collection not necessarily classified as ‘art’ offers a further insight into the democratisation of printing and the diverse range of execution that could be achieved by these print mediums. While the chapter has thus far been concerned with the broader development of printing techniques in the period, the remainder of the chapter considers the potential of computational techniques and programming languages to understand more fully how these changes manifested themselves within the book itself.

### Placing the Illustration(s) Back into the Book: Assessing Change and Continuity

The chapter thus far has surveyed the trajectory of techniques used to print illustrations in a broad range of books during the first half of the nineteenth century. Whilst a macroscopic approach that traces the trajectory of print methods is important to a more rounded understanding of the broader technological, industrial and commercial contexts in which illustrations were printed, the quantitative approach adopted above does not necessarily enrich our understanding of the role illustrations play when they are printed and bound in the book. Ryan Cordell has demonstrated the advantages of coding programmes to understand the larger structures of the material basis of literary production.<sup>199</sup> In a similar approach to Cordell, the remainder of the chapter reveals the potential of programming languages to explore the role of illustration within larger material structures of book production. As Katy Börner has argued ‘observe what is at once too great, slow, or complex for the human eye and mind to notice and comprehend’.<sup>200</sup>

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<sup>199</sup> Cordell associates the composition of a coding script with the composition of type, arguing that by treating code as a craft process we can begin to uncover the value of coding for book history and the humanities more widely. Ryan Cordell, ‘Programmable Type: The Craft of Printing, The Craft of Code’, <http://ryancordell.org/research/programmabletype/> [Accessed April 3 2018].

<sup>200</sup> Katy Börner, ‘Plug-and-Play Macroscopes’, *Communications of the ACM*, 54:3 (2011), p. 60. Tim Hitchcock suggests that, having surveyed the history of the term ‘macroscope’, Börner’s is the best

Börner's contention feeds into Franco Moretti's work on *Distant Reading*, a conceptual approach to large corpuses of literature, in which he states that reading more when faced with hundreds of different literatures and languages 'seems hardly to be the solution.'<sup>201</sup> Distant Reading has allowed Moretti to assess the force of the literary market through the length of book titles. As the market expands, literary titles contract, which not only fundamentally changes the presentation of the book but also changes the relationship between publishers and the commercial market.<sup>202</sup> Working from the macroscope, Moretti provided new insights into the socio-economic dependencies within eighteenth and nineteenth-century literature.

Computational and programming tools, therefore, can be integrated within a wider understanding of how illustrations contributed to the design and layout of both the page and the book in order to build upon the quantitative study of print techniques explored earlier in this chapter. *Figure 1.4* reveals the trajectory of printed illustration in relation to the area of the page they occupy. The prominence of full page illustrations throughout the period is highlighted by the density of the points running along the top of the graph. The density of illustrations that occupy under 30% of the page from 1840 onwards underlines the significance of wood engraving to illustrated books by the early-Victorian period.

Large-scale data analyses exemplified by *Figure 1.4* not only help to reveal the changes to book illustration amidst the broader landscape of technological changes in the early-nineteenth century, but also evince a degree of continuity despite the

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definition. See Tim Hitchcock, 'Big Data, Small Data and Meaning', *Historionics* (2014), <http://historyonics.blogspot.co.uk/search?updated-min=2014-01-01T00:00:00-08:00&updated-max=2015-01-01T00:00:00-08:00&max-results=3>, [Date Accessed July 30 2015].

<sup>201</sup> Franco Moretti, *Distant Reading* (London, 2013), pp. 45-49. For an excellent insight into the history of Distant Reading as well as its advantages and limitations as a conceptual and methodological framework, see Ted Underwood, 'A Genealogy of Distant Reading', *Digital Humanities Quarterly*, 11.2 (2017), n.p.

<http://www.digitalhumanities.org/dhq/vol/11/2/000317/000317.html> [Accessed 22 March 2018]; Shawna Ross, 'In Praise of Overstating the Case: A Review of Franco Moretti, *Distant Reading*', *Digital Humanities Quarterly*, 8.1 (2014), n.p.

<http://www.digitalhumanities.org/dhq/vol/8/1/000171/000171.html> [Accessed 15 February 2015]

<sup>202</sup> Franco Moretti, 'Style, Inc. Reflections on Seven Thousand Titles (British Novels, 1740-1850)', *Critical Inquiry*, 36:1 (2009), pp. 134-158. For another excellent example of the way in which the concept of 'Distant Reading' has been employed, see Ryan Heuser and Long Le-Khac, *A Quantitative Literary History of 2,958 Nineteenth-Century British Novels: The Semantic Cohort Method* (Stanford, 2012), retrieved from <http://litlab.stanford.edu/LiteraryLabPamphlet4> [Accessed 12 July 2016].



technological and industrial changes that were taking place in this period. As Michael Twyman has observed, the graphic book was not particularly new in the nineteenth century, but rather it was the dramatic pace of change from the eighteenth to the nineteenth century in which the graphic book emerged.<sup>203</sup> The inclusion of frontispieces and illustrated title pages formed a key part of publishers' commercial strategy designed to ensure a profitable commodity and satisfactory financial return on their investment.

As can be seen from *Figure 1.5*, the number of illustrations that appear throughout the book gradually increase, particularly from 1810 onwards. Given the technological changes that took place at this time, this is not necessarily surprising. What is striking, however, is that publishers continued to place a high degree of value on the frontispiece.<sup>204</sup> Books printed throughout the Early-Modern period relied on frontispiece engravings to attract the gaze of the reader during a period when the production and printing of illustrations was relatively limited and therefore reserved for expensive volumes. Printers were aware of this necessity as early as the seventeenth century: 'at the beginning of the book...many people would like to see some engraving [...] it amuses the reader greatly, it attracts the buyer, it decorates the book, and does not add much to the price.'<sup>205</sup> James Raven has found that such was the importance attached to frontispieces for publishers that their commercial necessity outweighed the elegance and quality of their design and execution during a period where technological development was still in its infancy.<sup>206</sup> The frontispiece was particularly important to the development of the novel throughout the eighteenth century. Such was the interest in the first edition of Eliza Haywood's *Love in Excess; or, The Fatal Enquiry* (1719), that a frontispiece was

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<sup>203</sup> In a similar approach to the one taken in this thesis, Twyman uses the term 'graphic' to denote features within the book that are intended to be seen. See Michael Twyman, 'The Emergence of the Graphic Book in the Nineteenth Century', in Robin Myers and Michael Harris (eds), *A Millennium of the Book: Production, Design and Illustration in Manuscript and Print* (Delaware, 1994), pp. 135-136.

<sup>204</sup> The frontispiece has generally been acknowledged to have the greatest significance between 1500 and 1700. See Margery Corbett and R.W. Lightbrown, *The Comely Frontispiece: The Emblematic Title Page in England 1550-1660* (London, 1979).

<sup>205</sup> Quoted in Antony Griffiths, *The Print Before Photography*, p. 185

<sup>206</sup> James Raven, *The Business of Books*, p. 252.

commissioned by the publisher William Chetwood for the second edition in order to stimulate further interest in the work.<sup>207</sup> Despite the increasing number of illustrations in books during the first half of the nineteenth century, authors were reminded of the importance of frontispieces and title pages for the reader, ‘for it is but by a mean, ill proportioned vestibule that a spectator can be invited to survey the chambers and fixtures within a house, so it by an engaging and promising title-page [...] that the attentive perusal of the work may be compassed by an author.’<sup>208</sup> In the plan laid out in an advertisement to *The Poetical Works of Walter Scott* (1833), the main selling point of the work was not the number of illustrations but that each volume was to be embellished with frontispieces and vignette titles.<sup>209</sup> Of William Henry Bartlett’s *Jerusalem Revisited* (1855), it was observed that ‘the promise of the frontispiece and vignette is kept up throughout the volume. It is an interesting book to look through and a useful book to read.’<sup>210</sup> The frontispiece often remained the only noteworthy aspect of the book despite the proliferation of illustration. Referring specifically to the frontispiece and introduction to Eliza Cook’s poem *Melaia* (1839), the poet Elizabeth Barratt recalled ‘the sight of the book and its whole tone amused me very much. For the rest I could read nothing in it worth reading.’<sup>211</sup> Both the practical and commercial advantages offered by frontispiece embellishment ensured that it remained an important marketing strategy despite the proliferation of book illustrations by 1860.

Large-scale analyses of the size of illustrations as well as their arrangement across the book reveals the degree of continuity of change on a macroscopic level.

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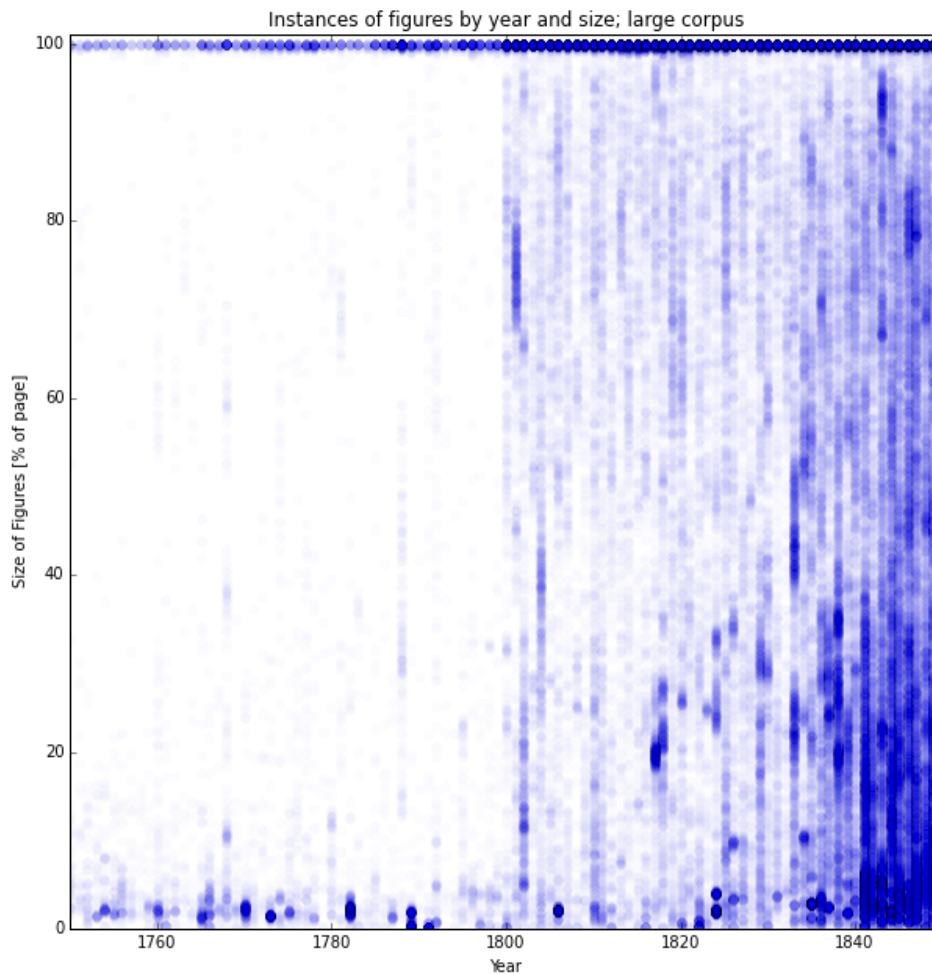
<sup>207</sup> Helen Cole, ‘From the Familiar to the New: Frontispiece Engravings to Fiction in England from 1690 to 1740’, *Journal for Eighteenth-Century Studies*, 39.4 (2016), p. 494.

<sup>208</sup> *The New Monthly Magazine and Literary Journal*, January 1821, p. 636.

<sup>209</sup> *The Examiner*, 31 March 1833, p. 207. For more on relationship between illustration and the posthumous reception of Scott’s fiction, see Richard Maxwell, ‘Walter Scott, Historical Fiction, and the Genesis of the Victorian Illustrated Book’, in Maxwell (ed.), *The Victorian Illustrated Book*, pp. 1–51.

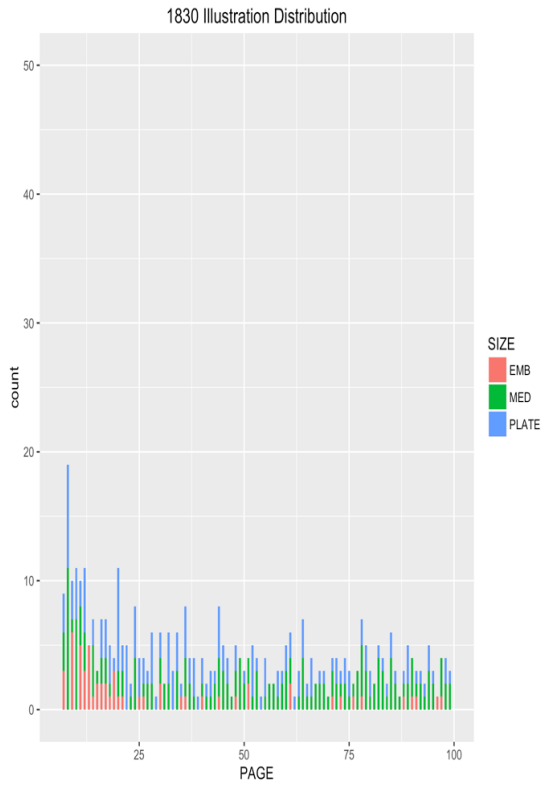
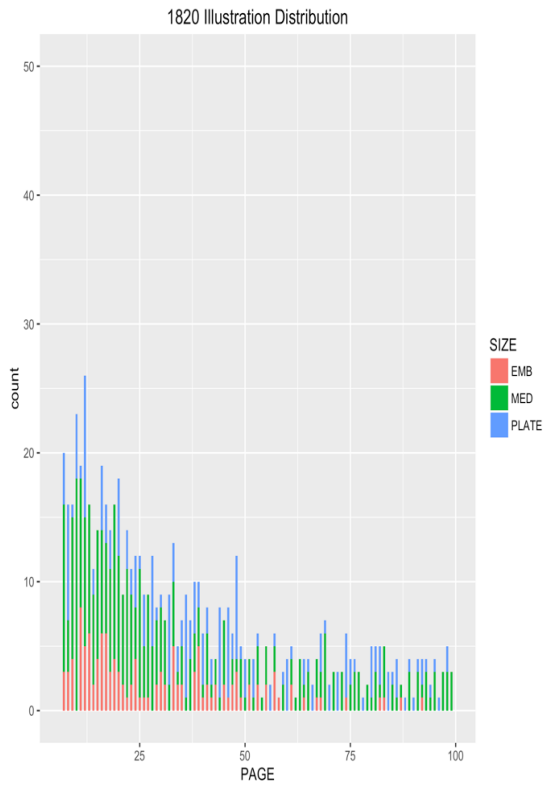
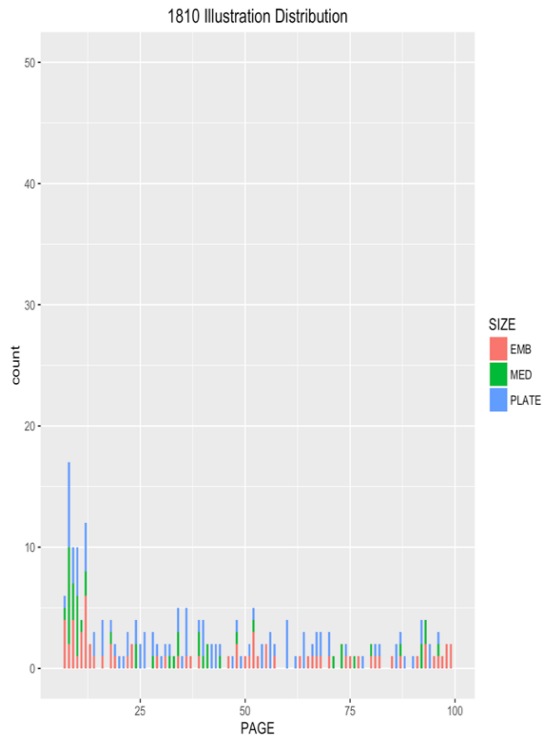
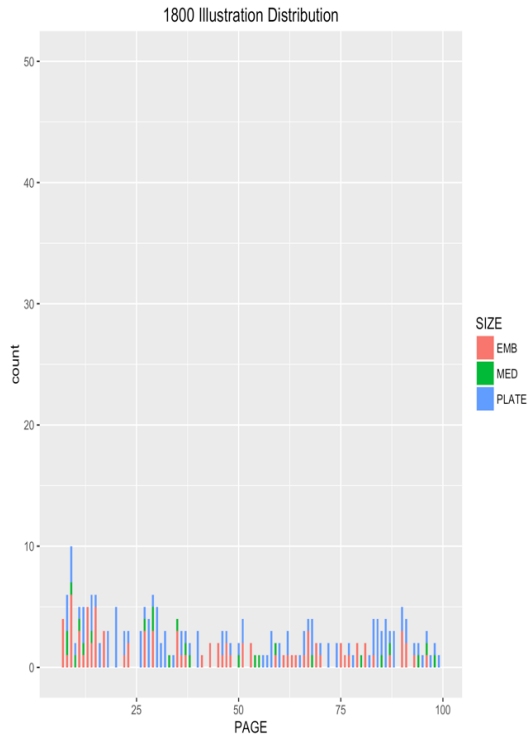
<sup>210</sup> *The Leader and Saturday Analyst*, 6 January 1855, p. 20.

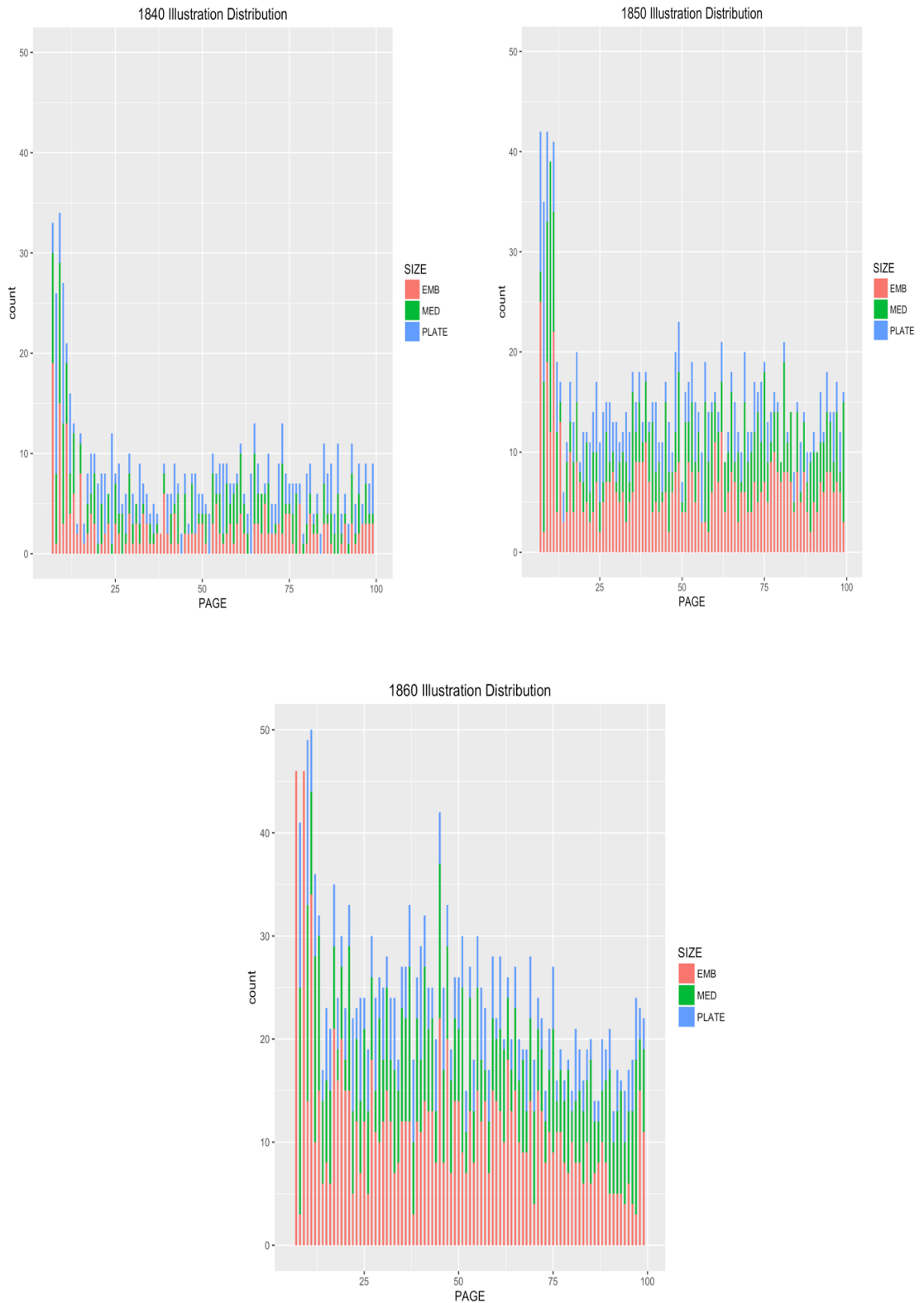
<sup>211</sup> Philip Kelley and Ronald Hudson (ed.), *The Brownings’ Correspondence*, (Winfield, 1986), 4, pp. 214–215, [http://www.open.ac.uk/Arts/reading/UK/record\\_details.php?id=16548](http://www.open.ac.uk/Arts/reading/UK/record_details.php?id=16548), [Accessed 12 July 2017].



*Figure 1.4.* Point map showing the instances of figures in the British library dataset of illustrations (large corpus) based on their size in relation to the percentage of the page between 1750 and 1850. This was part of a project collaboration with JISC Historical Texts where the metadata from the British Library collection of book illustrations (used in this thesis) were interrogated in order to visualize the size of the illustration in relation to the size of the page. Each blue dot represents an illustration, and is found on the map according to its size as a percentage of the page (shown on the Y axis). Thanks must go to members of JISC Research Data Spring for helping to produce this graph. For further details of the raw results and write-up for this graph see: <https://github.com/UCL-dataspring/>

### Count of Illustrations (embellishments, medium or half-page illustrations, and plates) Across the First 100 Pages of Books Over Time





*Figure 1.5* Showing the frequency of illustrations across the pages of illustrated books between 1800 and 1860. The Y axis represents the number of plates (in blue), medium-sized illustrations (in green) and embellishments (in red) found on a particular page of the book, whilst the X axis represents the page number. It should be observed that the graphs reveal the appearance of illustrations across the first 100 pages only given the range of books that feature in the collection.

Understanding the practical significance of changes to reproductive printing techniques for the book enables us to visualise the broader social and commercial implications of these processes. That publishers continued to value the frontispiece and title page as a means to maximise the commercial potential of their works is demonstrative of the degree of continuity within the overall design and packaging of the book, despite the demand for richly illustrated books by the mid-nineteenth century. Given the pace of change to illustration and printing more widely in this period, quantitative and computational analyses allow for a wider study into the degree by which these sweeping changes were manifested in the book itself.

Whilst such analyses evince the broader patterns of continuity and change to book illustration, they fail to reveal how individual books, sets of volume or multiple editions are shaped by these changes. The idea that truth can be revealed through quantitative models, which forms the methodological mantra that *distant reading* is founded upon, tends to limit our understanding of the level of creativity and imagination belonging to those tasked with the production of the illustrated book.<sup>212</sup> Analyses of this nature are incapable of demonstrating the diverse shapes, sizes and forms of illustration that changed from edition to edition, which can either reinforce or challenge the broader patterns outlined in larger-scale analyses. Put simply, these forms of analyses fail to reveal ‘the power of the particular’, to borrow Tim Hitchcock’s phrase.<sup>213</sup> Norbett Bachleitner’s analysis of the editions of Arthur Schnitzler’s illustrated books highlights their individuality.<sup>214</sup> Subsequent editions of the same books are not presented identically, but are rather in ‘a continuous flux of metamorphoses’ that respond to different audiences and therefore vary in shape and size.<sup>215</sup>

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<sup>212</sup> Kathryn Schultz, ‘What is Distant Reading?’, *The New York Times*, June 24, 2011, <https://www.nytimes.com/2011/06/26/books/review/the-mechanic-muse-what-is-distant-reading.html> [Accessed 3 March 2018].

<sup>213</sup> Tim Hitchcock, ‘Big Data, Small Data and Meaning’, *Historionics* (2014), <http://historyonics.blogspot.co.uk/search?updated-min=2014-01-01T00:00:00-08:00&updated-max=2015-01-01T00:00:00-08:00&max-results=3>, [Accessed July 30, 2015].

<sup>214</sup> Norbett Bachleitner, ‘Illustration and the Book as Cultural Object: Arthur Schnitzler’s Works in German and English Editions,’ in Evanghelia Stead (ed.), *Reading Books and Prints as Cultural Objects* (Basingstoke, 2018), pp. 209-230.

<sup>215</sup> *Ibid.*, pp. 211-212.

A comparison between the editions of Oliver Goldsmith's most celebrated novel *The Vicar of Wakefield* published between 1780 and 1850 underlines the potential of programming and computational analysis to understand the role of illustration within the overall design and arrangement of the book and the wider context of the changing landscape of print production. Such analyses can allow us to move beyond a comprehension of not just what changed, but also the degree of change with regards to the use of illustration across new volumes and editions. Moving beyond the established contention that publishers incorporated illustrations in new editions of older works in order to reinvigorate the book within an increasingly competitive market for illustrated literature, one can begin to visualise the degree of change: the number of illustrations, their size, and their distribution throughout the volume.

The striking differences in the way in which the 1780 and the 1845 editions of *The Vicar of Wakefield* were illustrated points to the increasingly salient role the visual component played within both the narrative and the commercial output of the book. The first, published in 1780, shows the interplay between small decorative woodcuts and copperplate engravings throughout the book (*Figure 1.6*). The ten copperplate engravings served to illustrate the more noteworthy and dramatic scenes of the novel. Furthermore, the graph also reveals that the small number of illustrations printed in this edition are clustered towards the beginning of the novel and are used in order to engage the reader's attention, who then had to read on in order to understand how the illustration contributed to the written narrative.<sup>216</sup>

In the 1809 edition, Thomas Bewick was tasked with providing wood-engraved illustrations in an attempt to reinvigorate sales. Illustrations remained sparse, however, with just seven vignettes printed across the two volumes. Similar to the 1780 edition, the illustrations were set up in order to encourage the reader to find out which part of the text the illustrations were related to. Three of the seven

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<sup>216</sup> Cole has suggested this was a common ploy used by publishers of eighteenth-century novels. See Cole, 'From the Familiar to the New', pp. 194-196.

illustrations were printed on the title pages to volumes one and two and reprinted later in accordance with the text they were designed to illustrate. The sparsity of illustrations in both the 1780 and 1809 volumes and the importance of placing the illustrations in order to capture the reader's attention during a period when the technological developments explored earlier in the chapter, remained in their infancy.

The number and distribution of illustrations in the 1845 edition published by Willoughby and Co. (*Figure 1.7*) helps to visualise the pace of change, particularly through wood engraving, that took place in printed illustration during the first half of the nineteenth century. Willoughby's edition was published two years after an illustrated edition of the same work, in which the noted painter and illustrator William Mulready was tasked with illustrating the edition. The 32 half-page wood engravings printed in Van Voorst's edition were symptomatic of the role illustrations played in dictating the course of the narrative as opposed to merely illustrating the text in this period.<sup>217</sup> The journeyman tailor Thomas Carter, having finished *The Visions of Don Quevedo* (1832), relied heavily on its plates for narrative: 'It was, of course, a book from which I could get but little information in the way of reading. The plates, however, told a tolerably clear story'.<sup>218</sup> Similarly, Mulready's illustrations were praised for speaking to the mind of the reader; 'the mind of the artist commutes directly with that of the intelligent reader, conveying impressions of character and events as by instinct, and with much more vividness than any letter-press could do'.<sup>219</sup> All of the illustrations were printed a couple of pages before the written narrative related to that illustration, which gives emphasis to the role of the wood engravings not as illustrations of the text but rather in their capacity to lead and dictate the narrative.

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<sup>217</sup> It is perhaps interesting to note that the list of illustrations is bound before the contents page, which underscores the value placed on Mulready's illustrations for Van Voorst's edition.

<sup>218</sup> Thomas Carter, *Memoirs of a Working Man* (London, 1845), p. 176, [http://www.open.ac.uk/Arts/reading/UK/record\\_details.php?id=7616](http://www.open.ac.uk/Arts/reading/UK/record_details.php?id=7616), [Date accessed: 13 July 2017].

<sup>219</sup> 'The Vicar of Wakefield', *The Eclectic Review*, March 1843, p. 350.



Willoughby's edition displayed similar features to Van Voorst's, but included many more illustrations. The diverse sizes of the illustrations printed in the former's publication points to the higher diversity of illustration found in Willoughby's edition. The illustrations that occupy between 50% and 75% of the page according to *Figure 1.7* were used to picture the salient aspects of the narrative, while those that occupy around 25% of the page were predominantly made up of decorative head and tailpieces. Illustrated lettering was also employed throughout the volumes. The artistic merit of the illustrations was far inferior to that of Mulready's more expensive volume, yet Willoughby's edition was made an example in order to show 'what cheap literature can accomplish in thus illustrating that admirable and justly popular work.'<sup>220</sup>

A further comparison between Willoughby's edition and that of the New York publisher Daniel Appleton, whose firm published an edition of Goldsmith's novel in 1850, reveals a much more regimented arrangement and design of the illustrations (*Figure 1.8*). The smaller vignettes that are used to illustrate this edition are deployed as visual aids to the text. Unlike Willoughby's edition, all of the illustrations in Appleton's edition are included to provide visual aids to the text. The variety of wood engravings used in Willoughby's edition, which served to drive the narrative as much as illustrate the text, is not mirrored in Appleton's volume. All the illustrations conformed to the same style, namely pictorial illustrations of the written text. Whereas the illustrations used in both Willoughby and Van Voorst's were employed as something other than pictorial aids, the position of the image in relation to the written text on the pages of Appleton's edition is suggestive of the continued reliance on the written word to drive Goldsmith's narrative.<sup>221</sup>

A brief comparison between various editions of Goldsmith's *The Vicar of Wakefield* reveals the advantages of using computational techniques that visualise

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<sup>220</sup> 'Goldsmith and his "Vicar"', *The Mirror of Literature, Amusement, and Instruction*, 4 October 1845, p. 209.

<sup>221</sup> Chapters four and five will explore in further detail the significance of the page and the position illustrations occupied across volumes belonging to topography and history books.

the topography of illustrations across different volumes. The stark difference between the use of illustration in the 1780 edition and the 1845 edition underlines the pace of change that took place within the world of print. Computational analyses of this nature also helps to reveal the subtle differences in the way different editions that were published towards the end of the period under consideration. The editions published by Willoughby and Appleton both featured a considerable number of wood engravings, symptomatic of the trend to reinvigorate older works of fiction. Yet a comparison between the overall arrangement and distribution of these illustrations helps to provide further insights into the function of illustrations within those particular editions.

What these comparisons of single editions reveals more generally from a methodological perspective is the capacity of small-scale analyses to reveal ‘what is too complex for the human eye and mind to notice and comprehend’, a phrase often reserved for macroscopic analyses.<sup>222</sup> The physical act of turning the page immediately hides a number of details that contribute to the overall design of the book, particularly the size of the illustration and their location on the page. It is very difficult, therefore, to visualise how illustrations function as a conceptual whole. Coding through the size of illustrations in relation to the page helps to provide further insights into the salient role illustrations played within the physical and intellectual design of the book.

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<sup>222</sup> Börner, ‘Plug-and-Play Macroscopes’, p. 60.

Illustration area by page for The Vicar of Wakefield, 1780

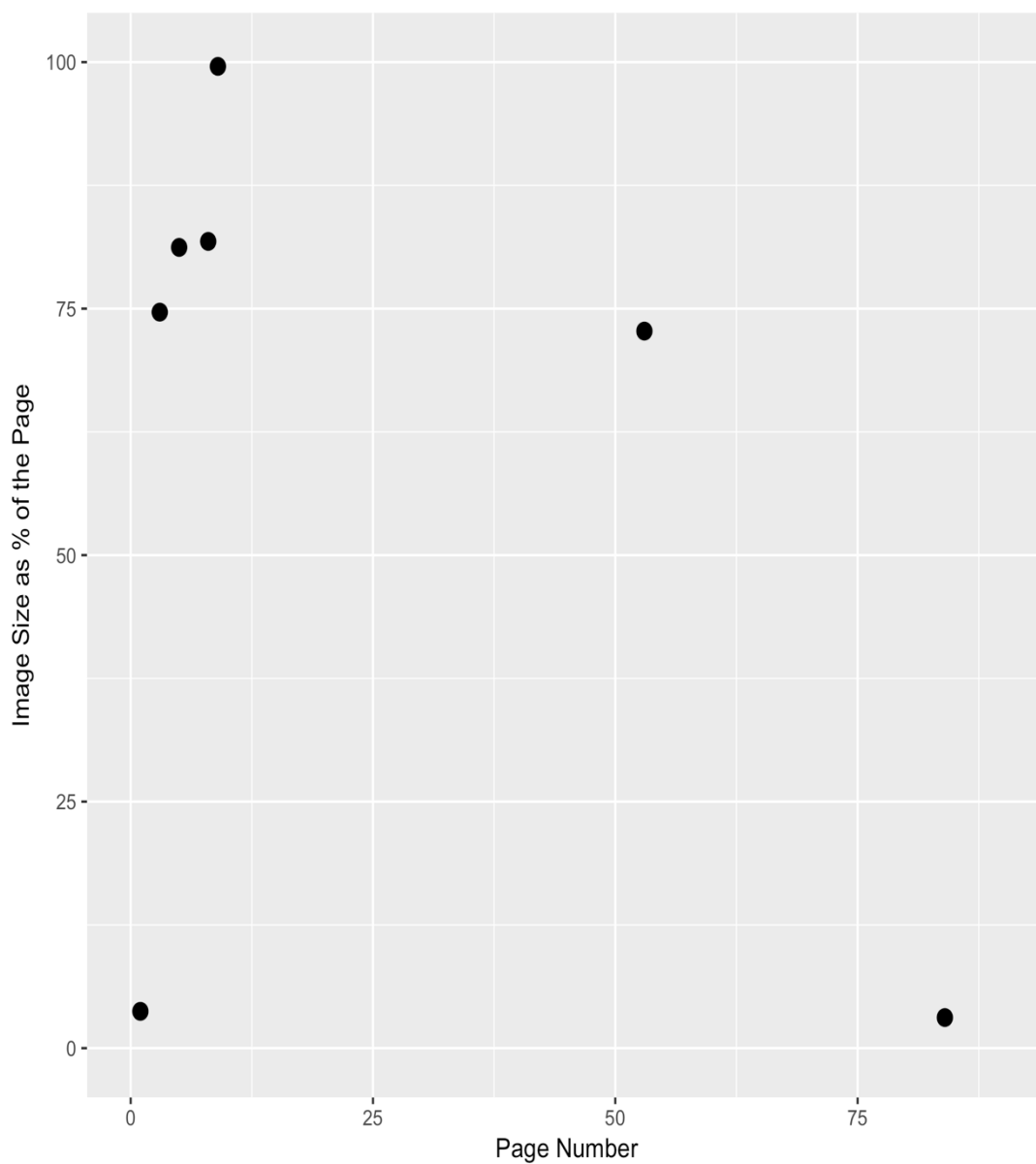


Figure 1.6. Showing the Illustration area by page for *The Vicar of Wakefield* (1780). The black dots represent the illustrations found in the book and are plotted depending on their size in relation to size of the page. This is also true of Figures 1.7 and 1.8.

Illustration area by page for Vicar of Wakefield, 1845

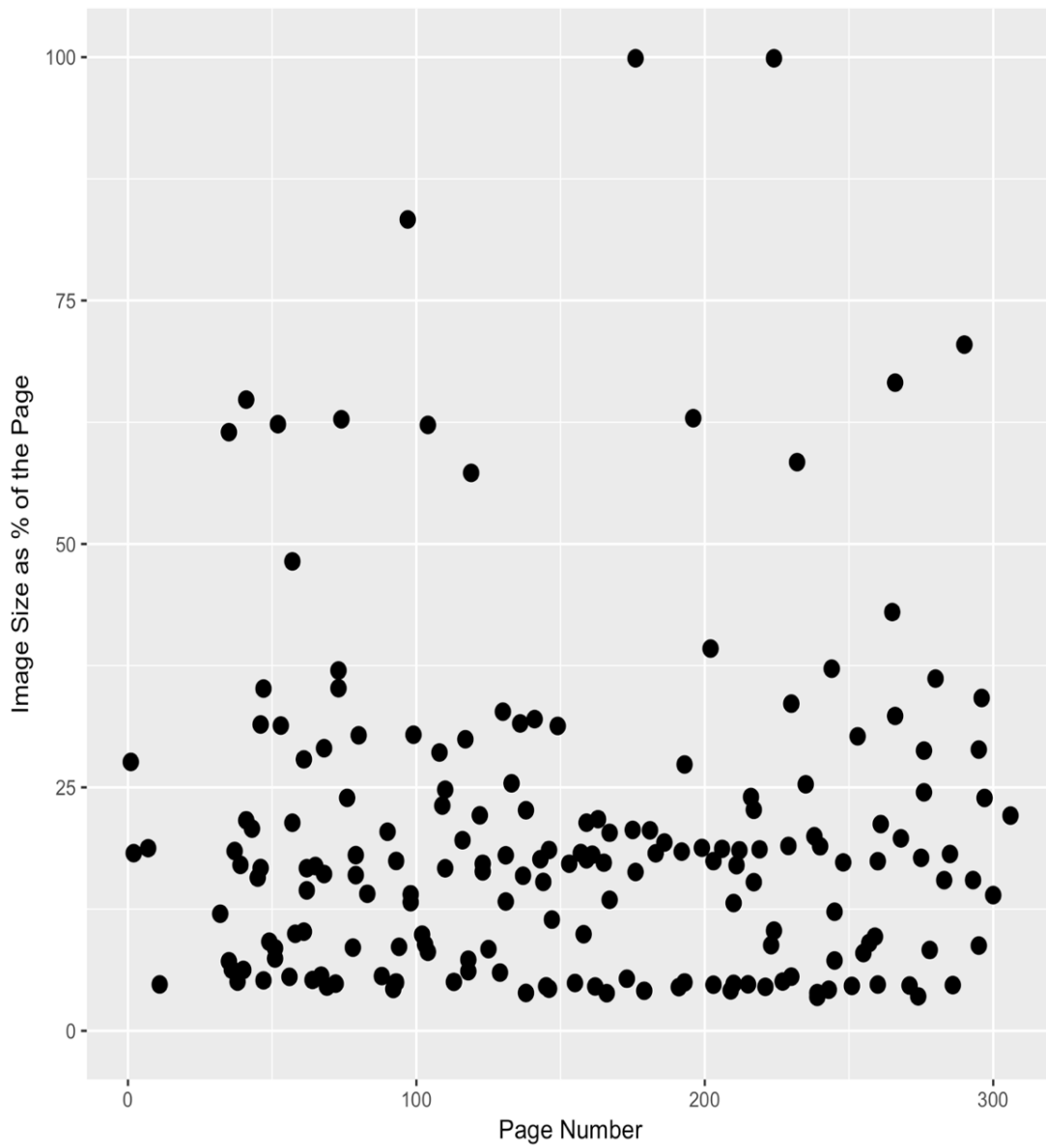


Figure 1.7. Showing the illustration area by page for *The Vicar of Wakefield* (1845)

Illustration area by page for Vicar of Wakefield 1850

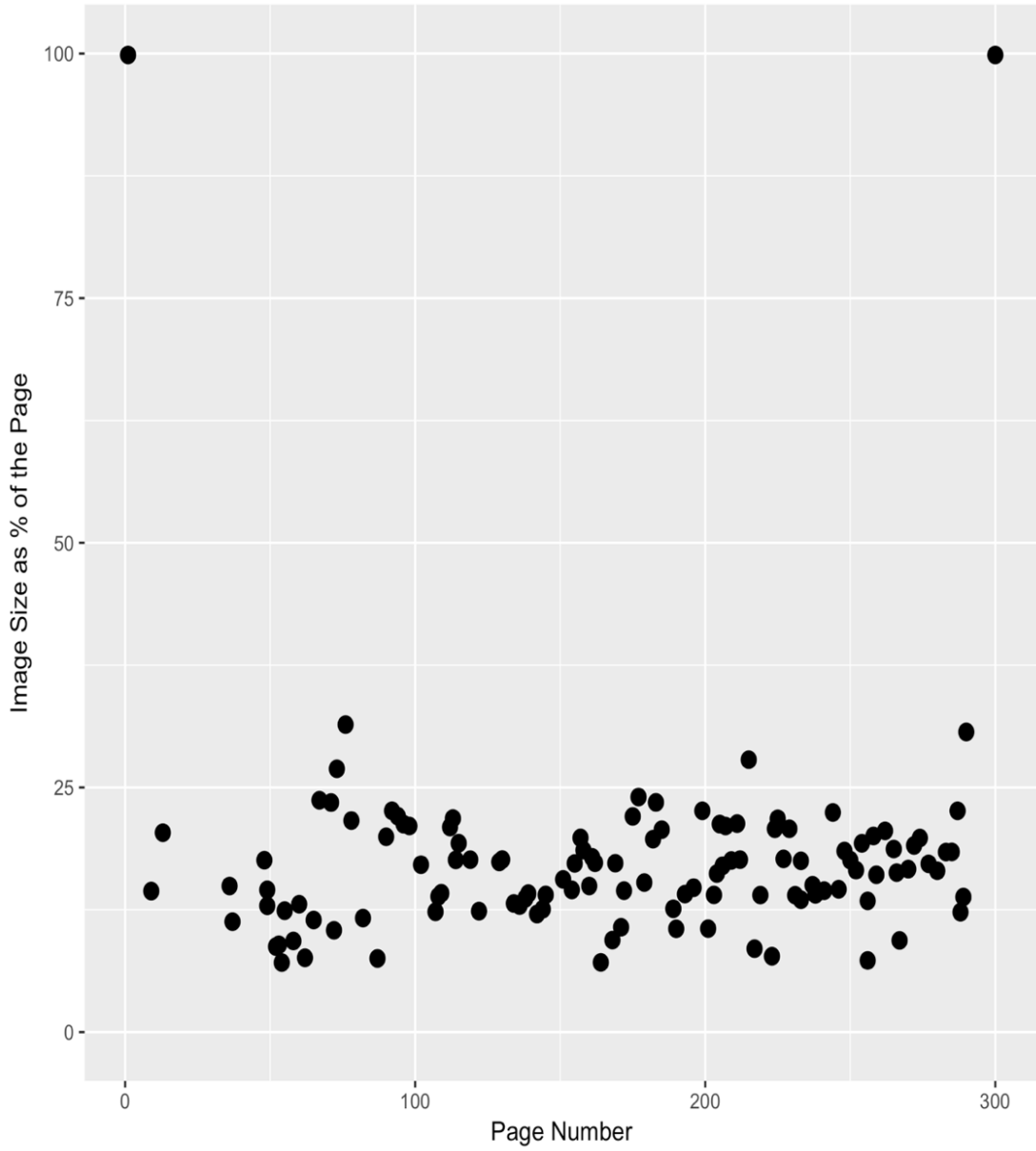


Figure 1.8 Showing the illustration area by page for *The Vicar of Wakefield* (1850).

## Copying and Reprinting

While the previous section has stressed the acknowledgement of spatial arrangement in understanding the importance of illustration to the overall intellectual and physical design of the book, developments in computer vision techniques in recent years have enabled scholars to piece together ecologies of illustrations based on similar visual features. Content-based image retrieval software has allowed scholars to interrogate similar visual characteristics across large historical datasets.<sup>223</sup> Contemporary publishers often sought to promote their works based on the novelty of their illustrations. John Murray once voiced his complaints to the printers Whitehead and Co. for printing tinted wood engravings before the publication of his work for which they were originally designed: ‘You thus deprive that work of the advantage which the novelty of the application would have obtained for it’.<sup>224</sup> Given that Murray’s work was predicated on the originality of the illustrations, he went as far as to threaten Whitehead that he would never publish another work with the firm again if he did not withdraw the tinted wood engravings from circulation.

Despite the value attached to innovation and novelty with regards to new illustrations, the practice of copying and reprinting was relatively common, particularly as a consequence of the revival of wood engraving after 1830. Given that a copy of the illustration merely needed to be pasted on the face of the woodblock ready for engraving, wood engraving provided a much simpler alternative to copying intaglio plates.<sup>225</sup> Given the number books that featured at least some form of illustration during this period it is almost impossible to locate copies of illustrations

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<sup>223</sup> I have used the content-based image retrieval API ‘Pastec’ throughout my research. Ryan Bauman used it to search the extensive dataset of images housed in the Rijksmuseum. For more on Pastec, including usage instructions see [http://ryanfb.github.io/etc/2015/11/03/finding\\_near\\_matches\\_in\\_the\\_rijksmuseum\\_with\\_pastec.html](http://ryanfb.github.io/etc/2015/11/03/finding_near_matches_in_the_rijksmuseum_with_pastec.html); see also <https://gist.github.com/drjwbaker/17351599854801f9891c7e0211eed32e>.

<sup>224</sup> National Library of Scotland (Afterward NLS): John Murray Letter Book, MS 41911, f. 34, Letter from John Murray to Whitehead and Co., 31 January 1840.

<sup>225</sup> Griffiths, *The Print Before Photography*, pp. 115–116.

across random volumes and editions using the more established method of physically scanning through the books.<sup>226</sup>

Computer vision methods can point to the fact that Charles Knight frequently re-printed his illustrations in a number of his publications. Knight often used the wood engravings printed in his five-volume topographical publication entitled *London*, which was intended to provide the public with something ‘wholly different than had ever preceded it’, in a number of his subsequent works.<sup>227</sup> The eight-volume work *The Pictorial History of England*, first published 1842 and republished in 1846, features many of the same illustrations, the only changes being made to the captions, which were careful in the later publication to stress the provenance of the source from which the illustrations were designed.

Authors could adapt the illustrations for the purpose of their new publications. Reprinting illustrations was an extensive practice in topographical works during a period that underwent sustained technological change but also social and cultural transformation. As will be explored in further detail in chapter five, illustrated topographical books became immensely popular by 1850. Topographical books were objects that the reader could derive as much pleasure from viewing the book as reading it. John Fisher Murray, author of numerous guidebooks, frequently reprinted illustrations from his older volumes in new publications.<sup>228</sup> The artist William Bartlett, one of the foremost topographical illustrators of the nineteenth century, published a number of works relating to his travels around the world. As he stated in the preface to the *Nile Boat; or, Glimpses of the Land of Egypt* (1849), Bartlett was intent on supplying to the reader authentic illustrations using the Camera Lucida as opposed to the ‘lively impressions of actual sights’ found in other works on Egypt.<sup>229</sup> Whilst the written text of Bartlett’s volume was observed to have

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<sup>226</sup> Using APIs such as Pastec also helps to illustrate the advantage of a large dataset featuring a collection of illustrated books that are not categorized via any intellectual categorization of genre, artistic status, financial value etc.

<sup>227</sup> Charles Knight (ed.), *London*, Vol. 1 (1841), no pagination.

<sup>228</sup> Examples include *The Environs of London* (London, 1842) and *A Picturesque Tour of the River Thames* (London, 1845, reprinted 1849).

<sup>229</sup> William Henry Bartlett, *The Nile Boat; or, Glimpses of the Land of Egypt* (2<sup>nd</sup> edn., London, 1849), pp. iii-iv.

no claim to originality, the illustrations, which comprised of wood and steel engravings, were drawn by Bartlett 'upon the spot'. His intention to stress the originality of the illustrations in the preface to this work may in part have been the consequence of the propensity to reprint illustrations in his other publications from earlier works.

Furthermore, these illustrations took on different roles in each book. A number of illustrations printed in Bartlett's *Forty Days in the Desert, on the Track of the Israelites* (1849) and *Walk About the City and Environ of Jerusalem* (1844) were reprinted in *Scripture Sites and Scenes* (1849). The steel engraved vignette of Mount Tor, for example, originally printed in his *Forty Days in the Desert*, which was intended to amuse and entertain readers, was reprinted along with a portion of the text in *Scripture Sites and Scenes*, intended for the 'Bible student' and younger readers. Contrary to his previous work, the illustration in *Scripture Sites* was used to denote the religious significance of the site as opposed to its topographical features. The mutable nature of illustrations ensured that reprinting was a viable and effective strategy in the successful publication of new works of a similar nature.

Authors and publishers often re-engraved illustrations from well renowned sources in order to add both value and a sense of authority to their works. Works of global geography became a source of great interest and amusement to readers intrigued by places traversed by an increasing number of explorers and travellers. Yet many of those works that claimed to be new and novel relied upon the illustrations printed in older, canonical works. Cavendish Pelham's *The Travels and Voyages of Captain Cook, Mungo Park, La Perouse and Others* (1808) was printed together with *A Geographical Description of the World*. The intention of the work was to combine the narratives of the most prominent travellers of the period. The two-volume work was printed with over one hundred copper engravings, many of which were copied and re-engraved in further narratives of travels around the world. It was stressed in the title page of George Alexander Cooke's *Modern and Authentic System of Universal Geography*, published two years after Pelham's work, that in order to



render the work more interesting it was embellished with numerous engravings ‘executed in a superior style of elegance, forming a complete series of superb embellishments’, many of which were taken from Pelham’s work.<sup>230</sup>

Illustrations originally found in Pelham’s work continued to be printed in a number of subsequent accounts detailing the world’s geography. Publishers who claimed to have produced a novel volume distinct from the saturated market for illustrated books of this nature continued to copy older illustrations, most likely due to financial considerations. Some authors were transparent in their adoption of earlier accounts. The Unitarian minister John Platts, author of *The Manners and Customs of all Nations* (1827), was unapologetic for his use of earlier works. Whilst suggesting his work was an altogether ‘new compilation’, he admitted that his work featured abstracts from earlier articles and books on the subject. It featured less than twenty engravings, the majority of which were taken from Pelham’s work.<sup>231</sup>

Other authors were keen to inform the reader that their works were entirely new and original. In the preface to the first volume of *The World as it is: A New and Comprehensive System of Modern Geography* (1849), William Cooke Taylor acknowledged the perception that they ‘were unnecessarily about to add to the number of books, which may already be said to be almost without end; and to enter an oath which had been sufficiently trodden and explored’.<sup>232</sup> The criticism they levelled at these works already in print was that they failed to observe the contemporary state of the world. The novelty of their work thus lay in their insistence that they had provided a contemporary account of the different regions of the globe. Yet a number of the illustrations printed in the work were taken from the very books Taylor claimed to be opposed to, including Pelham’s account of Captain Cook’s *Voyages* and George Alexander Cooke’s *Modern and Authentic System of Universal Geography*. Despite the claims to novelty and originality during a period

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<sup>230</sup> George Alexander Cooke, *Modern and Authentic System of Universal Geography; being a complete and universal history and description of the whole world*, Volume 1 (London, 1810), p. 4.

<sup>231</sup> John Platts, *The Manners and Customs of all Nations* (London, 1827), n.p.

<sup>232</sup> W.C. Taylor and Charles Mackay, *The World as it Is: A New And Comprehensive System of Modern Geography, Physical, Political and Commercial*, Vol. 1 (London, 1849), n.p.

defined by fast-paced technological change, authors and publishers continued to depend upon older illustrations to add interest to their volumes.

Illustrations were not necessarily confined to the same subjects or genres from which the illustrations originally belonged, which further underlines the advantages of employing computer vision tools to discover visually similar illustrations within a diverse collection of books. Canonical works of poetry by celebrated authors, most notably Lord Byron and Walter Scott, often found afterlives in altogether different volumes so as to ensure the commercial viability during a period when poetry was declining in popularity.<sup>233</sup> *Scott and Scotland*, published in 1845, featured thirty-one highly finished steel engravings by renowned engravers including John Kermott and Charles Heath. Although the publishers assured their readers that ‘there will be little found of repetition’ from their decision to take their scenes and stories from ‘the great romancer’ that was Walter Scott, the majority of the illustrations were reprinted from previous works of Scott including *The Abbott*, *The Maid of Neidpath* and *The Monastery*. The same illustrations were also printed in *The Historical Album*, published nine years earlier. Here, the illustrations had no other function other than to provide decorative adjuncts to the text. Despite the romanticized vision of Scott’s landscape and scenery, the author claimed that the illustrations served to ‘fix attention to truth’.<sup>234</sup> The author was careful to add that the illustrations were not connected to the subject; rather they would merely ‘be found pleasing additions to the “Historical Album”’.<sup>235</sup> The same illustrations were also printed in other works including the anonymously published *The Sea Book* (1850). They were described by the author as ‘faithful delineations of subjects they are intended to illustrate; from paintings by some of the first artists of the day, and executed on steel by some of the finest engravers,’ yet were merely

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<sup>233</sup> For more on the impact of printing technologies and the decline of poetry, see Lee Erickson, *The Economy of Literary Form: English Literature and the Industrialisation of Publishing, 1800-1850* (London, 1996), pp. 19-49.

<sup>234</sup> Anon., *The Historical Album; Or Scenes and Sketches in British History* (Leeds, 1836), p. ix.

<sup>235</sup> *Ibid.*

copied from the works of Walter Scott.<sup>236</sup> Illustrations originally printed in the works of canonical authors often found afterlives in other works as a means of providing a visual element to their works in the face of an increasing demand for illustrative literature.

### Establishing Different Forms of Copying?

While computer vision tools can shed light on copying and reprinting on a broader and more diverse level than established methods of leafing through volumes and editions by hand, it is impossible to determine what forms copying and reprinting took. Were they plagiarised, for instance? Or were authors and publishers authorised to reprint illustrations from other volumes? These questions can only be addressed through the traditional capacities of the historian.

Despite the protection afforded by the introduction of new copyright laws throughout the eighteenth and nineteenth centuries, it was often difficult to prevent given the abundance of illustrated books by the mid-nineteenth century. The business of selling prints was quite often defined by copying, whether innocently or through attempts by publishers to undercut the market. Publishers of prints would unashamedly copy prints or issue prints that were similar in design.<sup>237</sup> The revival of wood engraving, as both an economic and aesthetic alternative to intaglio and lithographic illustrations, only served to increase the practice of copying and reprinting. Publishers attempted to have plagiarized illustrations removed from subsequent editions of the works they were illustrating, often by appealing to the publisher directly as opposed to issuing legal proceedings against them. In a letter from John Murray to fellow publishers Bradbury and Evans, Murray complained of the similarity between the book they had just published, Sir Gardner Wilkinson's *Domestic Habits of the Ancient Egyptians*, and the work he published for the same author (*Manners and Customs of the Ancient Egyptians*,

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<sup>236</sup> It is perhaps interesting to observe that within the list of illustrations, the name of the artist and engraver was different to the names signed below the prints.

<sup>237</sup> Griffiths, *The Print Before Photography*, pp. 114-128.

published in six volumes between 1837 and 1841). Murray had allowed Wilkinson to write an introduction to the Egyptian Collections in the Crystal Palace and provided him with some of his wood engravings to adorn the work. Bradbury and Evans published this under an almost identical title to that of Murray's. Murray then successfully appealed to Bradbury and Evans to change the title and remove the wood engravings from their work.<sup>238</sup>

New editions of the same work published throughout the nineteenth century led to the plagiarism of engravings from contemporary works. Maria Eliza Rundell's *A System of Domestic Cookery*, published in numerous volumes first by John Murray and later by Longman throughout the nineteenth century, was widely regarded as the first popular English cookbook of the first half of the nineteenth century. In 1845, the poet Eliza Acton, together with Longman, published *Modern Cookery for Private Families*. It was heralded as an influential book that established itself as a standard recipe book for the remainder of the century and beyond. Yet many of the illustrations that featured in the work had been copied from Rundell's work. Murray complained that 'about a dozen' of his engravings were used in Acton's book, 'copied line for line from my book.'<sup>239</sup> Murray expressed his regret over his artist's decision to copy two of Acton's wood engravings and assured the publisher that he would remove the two illustrations from the next edition. As a rebuttal to Longman's complaint over the two illustrations, Murray stressed that he might have complained 'with some justice when Miss Acton's book appeared, that she had so closely copied my cookery in sign, type, arrangement, illustrations, not only the same class of subjects- but the very cuts copied line for line, and arranged similarly on the page, that an inexperienced person might have mistaken her books for Mrs. Rundell's.'<sup>240</sup> Despite the claims to novelty and originality by publishers and authors who needed to stand out within a competitive market for illustrated

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<sup>238</sup> NLS: John Murray Letter Books, MS 419212, ff. 280-281, Letter from John Murray to Bradbury and Evans 26 January 1857.

<sup>239</sup> NLS: John Murray Letter Book, MS 41912, f. 137, Letter from John Murray to Longman, 3 June 1851.

<sup>240</sup> *Ibid.*

books, the reliance on reprinting, adapting and at times copying of old illustrations was fundamental to their commercial strategy.

The revival of wood engraving, particularly from 1830 onwards contributed to plagiarism both on a continental and trans-Atlantic scale. Murray frequently declined to publish books on the basis of the ‘present state of literature, subject as every new work is to pillage from periodicals and newspapers, and the risque of foreign piracies.’<sup>241</sup> Charles Knight was one of the market leaders in providing illustrated works to a large readership. As alluded to earlier in the chapter, Knight’s illustrations had afterlives in a number of his subsequent publications. The relative simplicity of copying the designs on wood, together with the subject matter of the engravings, resulted in mass plagiarism on the continent and America. The American author and publisher Robert Sears’s 1847 work *A New and Popular Pictorial Description of England, Scotland, Ireland, Wales and the British Isles* featured a number of wood engravings copied from similar histories printed in France, Germany and England, publishers of which had taken illustrations from Knight’s works. In the preface, Sears explained that a large proportion of the work was devoted to London due to its centrality to English history. The majority of the illustrations that were copied from Knight were taken from his edited volume *London* (1841), which perhaps explains the predominant focus on the capital. Alfred Manguet’s *Histoire D’Angleterre* (1844) also copied a number of Knight’s engravings. Manguet’s volume served as a departure from previous histories of England published in France by utilizing both word and image to detail its history. Technological improvements made to wood engraving provided the impetus to publish new works across the continent and the Atlantic based on their capacity to copy illustrations found in popular publications that preceded them.

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<sup>241</sup> As will be shown in Chapter five, the contrary was also true whereby book illustrations were often copied from periodical literature. NLS: Murray Letter Books, MS 41911, f. 15, Letter From John Murray to John Romilly, 10 June 1839.

## Conclusion

This chapter has explored the degrees of continuity and change within the context of the shifting landscape in print production and illustration from the end of the eighteenth to the mid-nineteenth century. The rise of steel-engraving and lithography, while considered markers of industrial, technological and cultural progress in Britain, also engendered debates surrounding the democratisation of printing via planographic techniques as well as the fine balance between the status of intaglio printing and the commercial viability of the illustrated book. Charting the trajectory of wood engraving has revealed that this print medium traversed an uneasy path between artistic distinction and its speed and practicality before the heyday of wood engraving from 1860 onwards. Furthermore, the employment of quantitative methods has allowed me to explore the trajectory of these different printing techniques in relation to each other. In so doing, it has been possible to trace the frequency in which these mediums were used, and thus provides a contextual foundation when assessing the printing techniques used in books belonging to different subjects in chapters three, four and five.

Rather than limiting analysis to the changes to print methods in the period, I have shown how these changes were manifest within the books themselves on both the macro and micro level, which has demonstrated the levels of continuity and change within the design of the illustrated book. Despite the zeal by which contemporary commentators celebrated the growing ubiquity of illustration, particularly after 1830, there remained a strong degree of continuity from previous practices of illustrating the book. The illustrated title page and frontispiece, both salient features of eighteenth-century illustrated books, remained integral to the design of the book up until the mid-nineteenth century, despite the considerable rise in the number of illustrations printed later in these books. The common practice of copying illustrations in this period also suggests that, despite contemporaries' claims to innovation and novelty, publishers, authors and artists relied upon copying older illustrations to embellish their volumes, often in attempts

to realise commercial success within an increasingly competitive market for illustrated books.

Finally, from a methodological perspective, this chapter has served to elucidate the advantages of uniting digital and computational methods with established humanities practices within both a macro and micro perspective. This reinforces the contention put forward by David Armitage and Jo Guldi that harnessing digital and computational methods helps to ‘extend our grasp of the past in ways that supplement rather than supplant the traditional capacities of historians.’<sup>242</sup> Uniting both computational and established practices enables us move beyond the accepted norm that books became more profusely illustrated in order to comprehend more fully exactly *how* books were illustrated and how the materiality of illustrations included in these books informed upon the overall design and arrangement of the book. Three of the four editions of Goldsmith’s *Vicar of Wakefield*, for example, feature in-text wood engravings. Yet the subtle differences in the size and arrangement of the illustrations found in these books provide an insight into the different function the graphic elements of such works satisfied. These subtle differences are difficult to gauge through the traditional practices of the historian, which underscores the advantages of the methods employed here in revealing what illustrations as a collective of signs actually does to the design and arrangement of the illustrated book.

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<sup>242</sup> David Armitage and Jo Guldi, ‘*The History Manifesto: A Reply to Deborah Cohen and Peter Mandler*’, *The American Historical Review*, 120.2 (2015), p. 548.

## Chapter 2: Between People and Processes: Authority, Status and Civility within the Production of the Illustrated Book, 1780- 1850

John Britton, one of the foremost topographers of nineteenth-century Britain, recalled with fondness the relationships he established during his considerable career in the book trade:

Of those whose works and conversation have afforded me both pleasure and instruction, but who have “shuffled off their mortal coil”, I name the following with mingled feelings of pleasure and pain: the former arising from having known such men, and the latter from the conviction that I can never see them again.<sup>243</sup>

Britton proceeded to extol the virtues of artists, engravers, sculptors and architects with whom he had forged strong business relationships throughout the first half of the nineteenth century. He recounted over fifty artists and engravers that he had acquired the services of to complete his vast number of topographical publications.<sup>244</sup> Britton’s recollections not only help to reveal the often dynamic relationships between various agents in the production of the book during a period defined as ‘art’s industrial revolution’, but also highlight the often fragile nature of these relationships against the backdrop of a fluctuating literary market.<sup>245</sup> Britton’s recollections of his literary career help to reveal the complex dynamic between those invested in the production of the book. James Raven has rightly contended that the changing relationships between those intricately connected to the book trade are just as salient as the changing technologies of printing and illustration.<sup>246</sup>

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<sup>243</sup> John Britton, ‘Testimonies of Friendship’, found in the appendix to T.E Jones, *A Descriptive Account of the Literary Works of John Britton, From 1800-1849* (London, 1849), p. 125.

<sup>244</sup> Given Britton’s position within the art market within the first half of the nineteenth century, he undoubtedly encountered many others who he fails to mention in his memoirs.

<sup>245</sup> James Hamilton, *A Strange Business: Making Art and Money in Nineteenth-Century Britain* (London, 2015), p. 1.

<sup>246</sup> James Raven, ‘The Industrial Revolution of the Book’, in Leslie Howsam (ed.), *The Cambridge Companion to the History of the Book* (Cambridge, 2014), p. 144.



The previous chapter has surveyed the development of the significant changes to illustration, revealing the impact these had both within the pages of the book and the wider circulation of illustrations in the period. While the next three chapters seek to ground material changes to illustration within the intellectual and commercial contexts of the subject they were designed to illustrate, it is the purpose here to recognise the significance of these changes within the business arrangements of those invested in the production of the illustrated book. A deeper understanding of the business networks in relation to book production within the context of new printing mediums for reproducing illustrations allows for a greater insight into the often precarious financial position authors, publishers, artists and engravers found themselves. This chapter therefore explores how relations between those invested in the production of the illustrated book were shaped by changing technologies of illustration. During a period when unillustrated books far outnumbered those that were richly illustrated, what follows is a critical analysis of how the steady rise of illustrated books served to enhance or undermine the status of those invested financially, artistically and intellectually in the success of the book.

While concepts of status and respectability are important to this chapter, particularly in respect of the shifting status of wood engraving between 1790 and 1850, I argue that notions of civility and sociability were also vital to these networks and were intricately connected to the status attributed to the printing medium used to illustrate the book within the broader context of an increasingly capitalised world of publishing from the 1820s onwards. Matthew Sangster, in his study of the lives of authors in the Early-Romantic period, has drawn attention to the importance of social as well as financial capital in order to survive amidst the uncertain world of professional writing.<sup>247</sup> By extending these networks to include artists and engravers, I argue that both social and cultural capital, either recognised within the business

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<sup>247</sup> Sangster has argued that being solely categorized as an author at the beginning of the nineteenth century as opposed to a man or woman of consequence who happened to write had the potential to be 'socially calamitous'. See Matthew Sangster, 'Living as an Author in the Romantic Period: Remuneration, Recognition and Self-Fashioning', Ph.D Thesis (Royal Holloway University, 2012), pp. 22, 229-239.

arrangements themselves or through the authorship of the book itself, remained integral to the production of the illustrated book, despite an increasingly capitalist market.

Scholarship concerned with business and financial arrangements within the production of the book has tended to marginalize the influence of artists, draughtsmen and engravers within the entrepreneurial networks of book production. Studies dedicated to business relations within the publishing and bookselling trades have taken as their primary focus the relationship between publisher and author.<sup>248</sup> These stakeholders of the book have widely and justifiably been considered the foremost authorities in the production and distribution of the book. Those who have included artists and illustrators have tended to focus primarily on the commercial rise of the novel after 1840, in which the artist played a more crucial role in the decisions over the way in which the book was illustrated and even constructed.<sup>249</sup> Valuable as these studies have been in shedding light on the shifting balance of authority in relation to the power of the text, they do not evaluate the changing business relations at the point of the book's production. There has been a tendency to neglect the multifarious relationships that were formed between publisher, author, illustrator and engraver within an increasingly competitive market for illustrated books. Gordon Fyfe has sought to address this imbalance by emphasising the shifting relationship between artist and engraver by the middle of the nineteenth century, which afforded the reproductive engraver a

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<sup>248</sup> Terry Belanger, 'Publishers and Writers in Eighteenth-Century England,' in Isabel Rivers (ed.), *Books and their Readers in Eighteenth-Century England* (Leicester, 1982), pp. 5-25; David Foxon and James McLaverty, *Pope and the Early Eighteenth-Century Book Trade* (Oxford, 1991); David Finkelstein, *The House of Blackwood: Author-Publisher Relations in the Victorian Era* (Pennsylvania, 2002); Robin Myers and Michael Harris (ed.), *Author/Publisher Relations During the Eighteenth and Nineteenth Centuries* (Oxford, 1983); Mary O'Connell, *Byron and John Murray: a Poet and his Publisher* (Liverpool, 2014).

<sup>249</sup> The seminal work on the relationship between the visual and commercialization of the novel is Kathleen Tillotson's work, *Novels of the Eighteen-Forties* (Oxford, 1956). For more recent accounts, see Thomas, *Pictorial Victorians*, pp. 53-77; Phillip V. Allingham, "Reading the Pictures, Visualizing the Text": Illustrations in Dickens From *Pickwick* to the *Household Edition*, 1836-1870, Phiz to Fred Barnard', in Goldman and Cooke (eds), *Reading Victorian Illustration*, pp. 159-179. John Harvey, *Victorian Novelists and their Illustrators* (New York, 1971); Anthony Burton, 'Cruikshank as an Illustrator of Fiction', *Princeton University Library Chronicle*, 35 (1974), pp. 93-128.

more creative role in the execution of the illustration.<sup>250</sup> Celia Anna Fox has looked at the tensions that arose from the struggle of engravers to gain professional recognition within the commercial output of the Royal Academy during the first half of the nineteenth century.<sup>251</sup> These studies, however, are primarily concerned with relationships between engravers and those connected to the high arts. Moreover, both have limited their study to the production of prints. More recently, Michael Harris has explored the ways in which engravers responded to the taste for the visual and aesthetic within the London print trade in the mid-eighteenth century.<sup>252</sup> However, Harris stops short at charting the responses to mechanical and technological changes from the eighteenth to the nineteenth centuries.

James Hamilton's illuminating study has sought to bring together the key players involved in what became a thriving art market in the nineteenth century, from art curators and dealers to painters, engravers and their publishers.<sup>253</sup> Hamilton's study, however, is primarily concerned with the art market, which naturally engenders a greater focus on single sheet prints as opposed to the illustrated book. Furthermore, Hamilton's chapter on engravers is wholly dedicated to intaglio engravers, unsurprising given his focus on single prints. By examining both the status claims and business relations for both intaglio and wood engraving, it is possible to provide a more telling insight into how technological and material changes to illustration had a bearing on the entrepreneurial nature of book production, as well as the business arrangements between those involved in its design and production.

By situating the role of the engraver, artist and illustrator within the wider commercial network of those involved in the book trade during the first half of the

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<sup>250</sup> Gordon J. Fyfe, 'Art and Reproduction: Some Aspects of the Relations Between Painters and Engravers in London 1760-1850', *Media, Culture and Society*, 7.4 (1985), pp. 399-425.

<sup>251</sup> Celia Anna Fox, 'The Engravers' Battle for Professional Recognition in Early Nineteenth-Century London', *London Journal*, 2 (1976), pp. 2-31.

<sup>252</sup> Michael Harris, 'Scratching the Surface: Engravers, Printsellers and the London Book Trade in the Mid-Eighteenth Century', in Robin Myers, Arnold Hunt, Giles Mandelbrote & Alison Shell (eds), *The Book Trade and its Customers, 1450-1900: Historical Essays for Robin Myers* (London, 1997), pp. 95-114.

<sup>253</sup> Hamilton, *A Strange Business*.

nineteenth century, it is possible to trace the increasing value of those concerned with the pictorial aspect of the book in a period that witnessed the trajectory of books move 'from few and expensive to many and cheap.'<sup>254</sup> Business arrangements between publisher and engraver have often been characterised by the dominance and authority of the former and in many ways this was the case. The correspondence between publisher and engraver within the accounts of the publishing firm Moon, Boys and Graves underline this authority. In many of the agreements drawn up by Graves and his partners, set rates were afforded to the engravers tasked with producing the prints within the strict time constraints drawn out by their publishers. Over thirty engravers and lithographers were included in the agreements drawn up by Graves, including Thomas Landseer, William Miller and Louis Haghe. These agreements were drawn up by the publishers and the method of payment was determined by the time taken to complete the engravings. The historical engraver James Henry Watt, in a letter to Henry Graves complaining about the latter's then publishing partner Richard Hodgson and in acknowledgement of the receipt to him for a print he was soon to complete, highlighted the incentive of staggered payments: 'your intention (to provide periodical payments) if faithfully fulfilled will stimulate me to make vigorous exertions to finish the plate quickly'.<sup>255</sup> However, this strict hierarchical system did not always reflect the business arrangements and relations between editors, authors, artists, and engravers. As the transactions and arrangements of the topographer John Britton reveals, arrangements were much more open to negotiation and were built upon civil as opposed to capitalist sentiments, which will be explored in more detail later in the chapter.

John Jordan and Robert Patten, in one of the first historiographical accounts of the history of publishing, stressed the often contradictory approaches theorists of the book have taken: authorial agency, the demands and incentives of the

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<sup>254</sup> For a useful account on the trajectory of the British book market throughout the nineteenth century, see Simon Eliot, 'From Few and Expensive to Many and Cheap: The British Book Market, 1800-1890', in Eliot and Rose (eds), *A Companion to the History of the Book*, pp. 291-302.

<sup>255</sup> British Library (afterwards BL): Graves Papers, Papers of Henry Graves and Co., Printsellers and Publishers, ADD MS 46140, Folio 116, Letter from James Henry Watt to Henry Graves, 4 October 1839.

publisher, developments in printing technology and marketplace incentive.<sup>256</sup> One of the aims of this chapter is to synthesise these apparently contradictory approaches, in order to provide a more dynamic picture of the ways in which those involved in the production of the book exercised different degrees of authority and influence, during a period that gave rise to considerable changes to the market for books. The chapter seeks to explore the relationships between the foremost stakeholders of the book, who have often been characterised by a growing commercial and capitalist spirit that came to dominate the book trade. I examine the response of engravers, artists, authors and publishers in particular to the growing concern regarding commercial potential within the pages of the book by the middle decades of the nineteenth century. Within this environment of technological and industrial change to the book and print trades, I aim to reveal the survival of civil and cordial relationships built upon foundations of friendship that was ultimately reflected in the transactions between these various actors involved in the business of the illustrated book's production.

The chapter begins by providing an overview of the changing status of the two contributors to the production of the book that have widely been acknowledged to be the main brokers, the author and the publisher, assessing the shift in authority against the backdrop of changing legislation, particularly changes to copyright laws that placed further strain on author/publisher relations.<sup>257</sup> The second part of the chapter serves to complicate business arrangements between author and publisher through the interactions between engraver, author and artist

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<sup>256</sup> John O. Jordan and Robert L. Patten, 'Introduction: Publishing History as Hypertext', in John O. Jordan and Robert L. Patten (eds), *Literature in the Marketplace: Nineteenth-Century British Publishing and Reading Practices* (Cambridge, 1995), p. 1.

<sup>257</sup> It should be observed that the role of the bookseller was often categorized under the responsibilities of the publisher as the nineteenth century wore on. I do not consider the role of the bookseller as an individual in this chapter as they do not contribute to the design and production of the book.

The bookseller publisher was often at the centre of the economic and commercial decisions involved in the book's production and distribution as opposed to the bookseller printer. The bookseller publisher often carried the financial risk. For the purposes of this chapter, I will be using the term 'publisher' to refer to the entrepreneurial publisher bookseller of the eighteenth century. For a discussion on the types of publisher in the eighteenth century see James Raven, *The Business of Books*, pp. 4-5; Adrian Johns, 'Changes in the World of Publishing', in James Chandler (ed.), *The Cambridge History of English Romantic Literature* (Cambridge, 2009), pp. 376-377, pp. 383-384.

in the transactions of John Britton's topographical publications. Britton's memoirs in particular reveal the value ascribed to personal friendships and cordial relationships in order to create a successful and commercially viable illustrated edition. The chapter will end with an assessment of the complex status of wood engraving from the era of Thomas Bewick to the onset of the mass-produced image through wood engraving after 1830. As James Raven has been careful to stress in his comprehensive account of publishing and bookselling in the early modern period, printing and publishing were not always defined by progress as was so eagerly stressed by contemporaries.<sup>258</sup> This is reflected in correspondence and business records of both publishers and engravers.

Given that this chapter aims to assess the changing attitudes and relationships between various producers of the book, the sources used comprise mainly of business accounts and correspondence of those closely connected to the book trade. Thomas Bewick's correspondence with his printer Sarah Hodgson reveal the power struggle over the financial considerations of bookselling at a point when technological changes to illustration were in their infancy. The correspondence of the wood engraver Thomas Gilks allows us to assess the status claims of those involved in the production of wood-engraved illustrations during a period of industrialisation and technological change. Memoirs and autobiographies have also been used to ascertain the opinions and judgements of those whose careers were dominated by the book trade. Finally, periodical reviews have been used to assess the value judgements placed on the book and those who produced it by commentators outside the circle of production. Together, the different forms of material consulted here help to provide a greater understanding of the dynamic attitudes, relations and status claims between the primary stakeholders of the book from the perspective of those both embedded within the production of the book and those outside of these relations and transactions.

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<sup>258</sup> James Raven, *The Business of Books*, p. 13.

## 'The noses of the one are tickled, and the stomachs of the other filled': The Shifting Balance of Authority Between Author and Publisher

In 1852, one of the contributors to the *Art Journal* captured the influence of publishers on the literary market:

[Publishers of books and prints] are men who possess, to a very great extent, the means of advancing or withholding the best interests of the community [...] and a high prerogative was theirs when exercised in a right and elevated spirit, inasmuch as their hands are instruments by which the public mind is operated upon; they are, indirectly educators of the people.<sup>259</sup>

By the middle decades of the nineteenth century, publishers were arguably the most vital individuals within an established capitalist and commercialized market for books. The popular publisher and author Charles Knight reflected upon the transformation in literary publishing throughout his career, and the subsequent changes in the dynamic between publisher and author: 'The whole commerce of literature is, happily, so changed', he claimed, 'the buyers of books and the vendors of books have become so numerous; the competition for the power of securing literary merit, [...] has so enlarged, - that the publishers have now to seek the authors - if they be worth seeking.'<sup>260</sup> Like Knight, the Chambers brothers were under no illusions as to what was required in order to make a book sell within a fiercely competitive market. 'Any author', they believed, 'who would not be contented with only writing his book, and then letting it go into the world to sink or swim as fortune might direct, could never hope to make another bargain in the Row.'<sup>261</sup> James Hamilton has observed that the connection manifested between author and publisher was essentially one of the simplest and straightforward means of carrying

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<sup>259</sup> *The Art Journal*, May 1852, p. 163.

<sup>260</sup> Charles Knight, *Passages of a Working Life During Half a Century: With a Prelude of Early Reminiscences*, Volume 2 (London, 1864), p. 17.

<sup>261</sup> Chambers refers here to Paternoster Row, where many publishers set up their premises. *Chambers Edinburgh Journal*, 30 April 1836, p. 109. For further insights into the geographical importance of Paternoster Row, see James Raven, *Bookscape: Geographies of Printing and Publishing in London Before 1800* (London, 2014), pp. 57-62.

a product to its user.<sup>262</sup> Just how this relationship manifested itself in light of changing authorial status is the purpose of the following section.

The eighteenth century witnessed a transformation in the printing and publishing trades. Yet this was not characterized by mechanical and industrial changes but rather that the increased literary output from the 1770s onwards was driven by the changing tastes of the propertied elite.<sup>263</sup> Publishing by subscription remained the primary means by which books were produced and distributed by 1750. This often allowed the author, providing they owned enough capital, to maintain control over their publications. Celebrated writers including Samuel Richardson and Alexander Pope often published in this way.<sup>264</sup> Subscription publishing enabled the author to receive the full price for each copy sold. Reputation was essential in order to acquire the requisite number of subscribers to invest in the work, which naturally meant that only the most established of authors were successful in this method of publishing. Pope in particular was regarded by Samuel Johnson to have the greatest chance of success using this method. 'He was in the full bloom of reputation' he recounted, 'and was personally known to almost all whom dignity of employment, or splendour of reputation, had made eminent.'<sup>265</sup> Richardson and Daniel Defoe were regarded as the greatest author/publishers of the eighteenth century. Richardson was subject to praise from Charles Knight nearly a century later for his ability to recognise changes to the market for books without relying on his literary expertise, something of which too many authors had been guilty: 'you never neglected the duties of your station, to surrender yourself to the temptations that beset the man who depends upon authorship alone for holding a firm standing in social life.'<sup>266</sup>

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<sup>262</sup> Hamilton, *A Strange Business*, p. 247.

<sup>263</sup> James Raven, *Publishing Business in Eighteenth-Century England* (Woodbridge, 2014), p. 39.

<sup>264</sup> Pope had experimented with subscription publishing upon completion of his translation of Homer's *Iliad*.

<sup>265</sup> Arthur Murphy, *The Works of Samuel Johnson, With an Essay on his Life and Genius*, Vol. 2 (New York, 1834), p. 229.

<sup>266</sup> Charles Knight, *Shadows of the Old Booksellers* (London, 1865), p. 146.



Social standing was integral to successful writing and publishing careers throughout the eighteenth century and the early-nineteenth century. Samuel Johnson was one of the first to recognize the vicissitudes of combining the roles of author and publisher via subscription publishing, owing mainly to the indignity that derived from the author being involved in all aspects of the trade: 'He that asks a subscription soon finds that he has enemies. All who do not encourage him defame him.'<sup>267</sup> Yet the decline in this form of publishing did not necessarily signal the end of authors' authority. The poet William Cowper actively encouraged his fellow authors to delegate the commercial duties to the publisher/printer, which could also lead to intellectual as well as financial benefits. In a letter to his friend and co-author of his *Olney Hymns* (first published in 1779), Reverend John Newton, he expressed his surprise that his publisher Joseph Johnson had put forward corrections to his work. 'I had rather submit to chastisement now than be obliged to undergo it hereafter', he remarked. 'If Johnson, therefore, will mark with a marginal Q, those lines that he or his object to as not sufficiently finished, I will willingly retouch them, or give a reason for my refusal.'<sup>268</sup> Cowper's publisher, then, had a contributory role in the literary as well as financial output of the work, something that Cowper encouraged. In a further letter to Newton, he wrote of the healthy relationship he formed with Johnson. Although he confessed that he knew little about the role of booksellers and printers having been warned to treat them with caution by his contemporaries, he firmly believed in the advantages of collaboration between author and publisher: 'perhaps it would be as well for authors in general, if their booksellers, when men of some tastes, were allowed, though not to tinker the work themselves, yet to point out the flaws, and humbly to recommend an improvement.'<sup>269</sup>

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<sup>267</sup> Murphy, *The Works of Samuel Johnson*, p. 230.

<sup>268</sup> Letter from William Cowper to the Reverend John Newton, July 7 1781, in T. S. Grimshawe, *The Life and Works of William Cowper, Now Completed by the Introduction of His Private Correspondence* (London, 1836), p. 270.

<sup>269</sup> Letter from William Cowper to Reverend John Newton, August 25 1781, in John Johnson, *Private Correspondence of William Cowper with Several of his Most Intimate Friends*, Vol. 1 (Boston, 1824), pp. 58-59.

Reputable authors, then, were able to exercise and maintain a degree of control over their publications. Yet the majority, particularly towards the end of the eighteenth century, could not maintain the same level of authority. Knight attributed this to the ‘mutual jealousies’ that were formed between author and publisher against the backdrop of an increasingly competitive market for books. The author resented the idea that the labour involved in producing the book held just as much value as the intellectual output.<sup>270</sup> The main difference between subscription publishing and collaboration with a publisher was primarily one of risk. Without agreeing to the sale of the manuscript to the publisher, the author faced the possibility of financial ruin. The publisher required a great deal of capital to invest in a particular edition in a work before any form of profit was realised. Given that the risk was greater for the publisher than that of the author, the former often exercised authority over the production and circulation of the publication. The evaluation of the market was essential in order to realise a profit for all investors of the work. This was exploited by an ever growing number of publishers. James Raven estimates that the number of booksellers and printers had risen fourfold by 1800.<sup>271</sup> The establishment of large publishing firms such as Cadell, George Robinson and John Cooke brought with them an increasingly commercial outlook to book production which contributed to the transfer of authority from the author to the publisher.<sup>272</sup>

Changes to copyright law also provoked this shift. In many ways the new copyright laws passed in the nineteenth century were designed to recognise the rights of the author within the sale of the publication. The 1814 and 1842 copyright acts were the first to officially recognise the rights of authors within the sale of the publication. Copyright of the publication under the first act was extended from fourteen years to twenty-eight years, and the latter declared that the copyright of every book published in the lifetime of its author would last for the remainder of

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<sup>270</sup> Knight, *Shadows of Old Booksellers*, p. x.

<sup>271</sup> Raven, *Bookscape*, p. 1.

<sup>272</sup> James Raven, *Publishing Business*, pp. 39-41.

his or her lifetime.<sup>273</sup> Eighteenth-century copyright laws were also designed to restrain the power of booksellers. The second half of the eighteenth century was characterised by attempts made by booksellers to control perpetual copyright. Agitators for perpetual copyright argued that authors would cease producing new works for the market. Opponents claimed that it would lead to a monopolisation of books by booksellers.<sup>274</sup> Booksellers failed in their attempts to pass perpetual copyright laws through the House of Lords.

Despite the introduction of various copyright legislation, the majority of authors continued to suffer within an expanding commercialised market. This expansion was encapsulated in the disdain amongst contemporaries regarding the social standing of nineteenth-century publishers, which was seen to reflect the capitalist spirit of the age. ‘The qualifications of scholarship and gentle birth’, it was observed in 1848, ‘once thought essential for a publisher, were [...] remitted as the sphere of speculation widened. Our publishers of the eighteenth century were no longer the Martells, the De Wordes, the Graftons of our day.’<sup>275</sup> The reviewer here evokes a sense of democratisation within the world of publishing within an increasingly capitalist print market.

The shifting balance between author and publisher is perhaps most clearly detected in the former’s lamentation of the need to surrender copyright to the publisher borne out of the desire to avoid potential financial ruin. A strong sense of injustice within the business relations between author and publisher was particularly prevalent during the early-to mid-nineteenth century: ‘As the Gods get nothing but smoke for their offering, and the priests the meat, so authors get fame and booksellers the profit of their works; the noses of the one are tickled, and the stomachs of the other are filled.’<sup>276</sup> The publisher Robert Cadell, for example, was able to establish himself as one of Britain’s most recognised publishers as a result of

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<sup>273</sup> John Feather, *A History of British Publishing* (London, 1988), pp. 169-171.

<sup>274</sup> See Ronan Deazley, *Rethinking Copyright: History, Theory, Language* (Cheltenham, 2006), pp. 19-24.

<sup>275</sup> ‘Publishers and Authors’, *Fraser’s Magazine for Town and Country*, 38.226, October 1848, p. 414.

<sup>276</sup> *The Mirror of Literature, Amusement and Instruction*, 1.1, 7 March 1846, p. 160.

Sir Walter Scott's *Waverley Novels*. A large part of Cadell's commercial success, a success Scott was unable to match from the original productions of his work, was Cadell's exploitation of Scott's copyrights.<sup>277</sup> Lord Byron perhaps perfectly encapsulated the feeling amongst the literati of the day. In a letter to his friend and fellow author Leigh Hunt, he expressed his dissatisfaction at the price the innovative firm of the Murray family offered for the copyright of Hunt's *Story of Rimini*. Byron scathed at the agreement set forth by Murray but blamed the conditions of the trade as opposed to Murray himself: 'I doubt not he will deal fairly by you on the whole: he is really a very good fellow, and his faults are merely the leaven of his "trade" – "the trade!" the slave trade of the unlucky writer.'<sup>278</sup> The rise in the number of publishers as the nineteenth century progressed served to drive down the price of books, providing a further strain on the financial income of the author.<sup>279</sup>

In his attempts to remunerate the author, Murray was the first to introduce the half-profits system whereby the author would receive half the profits from the sale of the work. Yet this was still greeted with scepticism. As late as 1890 the editor Sir Samuel Squire Sprigge articulated and laid out his grievances against the half-profits system: 'What have the publishers done for a book that they absorb half the profits? The fact of their publishing a book does not make it popular. The half-profit system [...] can only be recommended in cases where the sale is certain to be so limited that the publisher, by honest "half-profit" charge, gets no more than reasonable return for his time and trouble.'<sup>280</sup> He detailed a number of instances whereby the half-profits system was abused by publishers. Authors were often

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<sup>277</sup> Peter Garside, 'Rob's Last Raid: Scott and the Publication of the *Waverley Novels*', in Michael Harris and Robin Myers (eds), *Author/Publisher Relations*, p. 114.

<sup>278</sup> Letter from Lord Byron to Leigh Hunt, 20 January 1816, in *The Autobiography of Leigh Hunt* (London, 1850), p. 329. For an account of Byron's tumultuous relationship with his publisher, see O'Connell, *Byron and John Murray*.

<sup>279</sup> The publisher Thomas Tegg, for example, forged a career from purchasing books out of copyright and remaindered books with the copyright and sold them at greatly reduced prices. See J.J Barnes and P.P Barnes, 'Reassessing the Reputation of Thomas Tegg, the London Publisher, 1776-1846', *Book History*, 3 (2000), pp. 47-51.

<sup>280</sup> Sir Samuel Squire Sprigge, *The Methods of Publishing* (London, 1890), p. 52.

unaware of both the total cost of publication as well as the profits that derived from it. The publishing trade thus continued to be viewed with suspicion by authors.

The first half of the nineteenth century, then, gave rise to the authority and control of the publisher within the commercial market of the book trade. The different forms of remuneration from book sales introduced during the opening decades of the nineteenth century, whether receiving a fixed rate from the sale of the copyright to the publisher or through the half-profits system, reinforced the control and authority of the publisher. Authors increasingly relied upon their publishers to take on the risk of the publication in order to prevent financial ruin. Publishers were able to exploit this within an increasingly competitive and capitalist market for books and firmly established themselves as the leading figures in the manufacture and commercialisation of the book. This period also oversaw the rise in illustrated books. The remainder of the chapter seeks to situate those responsible for the production of the visual within these changing relationships between various stakeholders of the book.

### *Testimonies of Friendship: Engraver, Author, Publisher Relations and the Status of Intaglio Engraving*

In a letter to John Murray congratulating him on the production of his new periodical entitled *The Institute*, the writer Isaac D'Israeli gave an assessment of the market for books and literature.

[...] doubtless the times are highly favourable to patronize a work skilfully executed, whose periodical pages would be at once useful for information, and delightful for elegant composition, embellished by plates, such as have never yet been given, both for their subjects and their execution. [...] Literature is a perpetual source opened to us; but the Fine Arts present an unploughed field, and an originality of character.<sup>281</sup>

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<sup>281</sup> Letter from Isaac D'Israeli to John Murray, August 5 1805, in Samuel Smiles, *A Publisher and his Friends: Memoir and Correspondence of John Murray, with an account of the Origin and Progress of the House, 1768-1843*, Vol. 1 (London, 1891), p. 48.

As has been made clear in chapter one, illustration had long been an intrinsic feature of bookselling in England. Books printed in the Tudor and Stuart periods were often found to contain frontispiece and woodcut illustrations in order to heighten their saleability. Artists such as Richard Corbould and Edward Edwards were increasingly relied upon by the end of the eighteenth century to design frontispieces for large publishing families such as Cadell and John Cooke.<sup>282</sup> Moreover, there was an increasing recognition of the interplay between image and text around the turn of the nineteenth century. Authors, artists and engravers including William Blake, Thomas Bewick, and Thomas Rowlandson recognised the collaborative value of art and text within the subject matter of the book. The works of Rowlandson and Blake acted as responses to the technological changes within the book trade.<sup>283</sup> These gradual technological changes had lasting effects for a number of different genres. For the first time, poets began to rely on illustration to reinvigorate the commercial potential of their works. Celebrated poets such as Robert Southey and William Wordsworth exploited the rising popularity of ‘views’ to market their work to readers enticed by the visual.<sup>284</sup> It was common for rival publishers to add illustrations to subsequent editions of works in order to improve its value in a competitive market.<sup>285</sup> The value of illustration was clear to both publishers and authors.

As D’Israeli alluded to, the first half of the nineteenth century was, in part, defined by changes to the art world in the face of commercial, societal and aesthetic shifts.<sup>286</sup> This environment could prompt negative reactions to the influx of reproductive prints. The engraver Joseph Strutt was forced to contest the claim that

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<sup>282</sup> Raven, *Publishing Business*, 59. For an investigation into the increasing importance of frontispieces in the early modern period, see Corbett, *The Comely Frontispiece*.

<sup>283</sup> David Punter, ‘Romantics and Early Victorians’ in Boris Ford (ed.) *The Cambridge Guide to the Arts in Britain, Vol 6: Romantics to Early Victorians* (Cambridge, 1990), p. 17.

<sup>284</sup> Tim Fulford, ‘Virtual Topography: Poets, Painters, Publishers and the Reproduction of the Landscape in the Early Nineteenth Century’, *Romanticism and Victorianism on the Net*, 57-58 (2010), pp. 1-31.

<sup>285</sup> Walter Scott’s Waverley novels were testament to this. See Peter Garside, ‘Illustrating the Waverley Novels: Scott, Scotland and the London Print Trade, 1839-1836’, *The Library*, 11.2 (2010), 168-196. See also Richard Hill, *Picturing Scotland through the Waverley Noels: Sir Walter Scott and the Origins of the Victorian Illustrated Novel* (London, 2010).

<sup>286</sup> Letter from Isaac D’Israeli to John Murray, August 5 1805, in Samuel Smiles, *A Publisher and his Friends*, p. 48.

engravers ‘deserve not the name of artists; and [are] nothing more than copyists [...] what the poet has to do with respect to the idiom of the language, the engraver has also to perform in his translation, for so it may be called, of the original picture upon copper.’<sup>287</sup> The engraver John Landseer echoed Strutt’s contention, asserting that ‘engraving is no more an art of copying painting than the English language is an art of copying Greek or Latin.’<sup>288</sup> Gordon Fyfe has suggested that the conflict that arose between artists and engravers was directly borne out of the new aesthetic possibilities derived from these technological changes.<sup>289</sup> However, these changes to the book trade did not mark the end of transactions that relied upon civility and cordiality. An examination of the author and antiquarian John Britton’s dealings with various tradesmen in the production of his topographical works helps to reveal the salience of civility and respectability within a market geared towards industrial and technological change.

In many cases throughout the first half of the nineteenth century, engravers were employed on a contractual basis at a set rate. The publisher Henry Graves employed almost all of his engravers in this way. Engravers could on occasion dictate the terms of their employment. In a letter to the artist S. P. Denning concerning the price for engraving *Lady Milton’s Infant*, the line engraver George Thomas Doo dictated the price (set at a considerable 250 guineas) in order for him to complete the plate. Even then, the engraver was careful to make clear that he would not consider the engraving finished until the artist was satisfied.<sup>290</sup> They also, on occasion, attempted to alter the terms of the agreement. The mezzotint engraver Samuel Cousins wrote to his publisher Thomas Boys pleading with him to raise the price of the engraving from forty guineas to forty-five and to promise that the payment would be ready upon completion of the work ‘instead of offering me some

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<sup>287</sup> Joseph Strutt, *Biographical Dictionary of Engravers* (London, 1780), p. 18.

<sup>288</sup> Quoted in Hamilton, *A Strange Business*, p. 215.

<sup>289</sup> Gordon J. Fyfe, ‘Art and Reproduction: Some Aspects of the Relations between Painters and Engravers in London, 1760-1850’, *Media, Culture and Society*, 7.4 (1985), p. 404.

<sup>290</sup> BL: Graves Papers, Add MS 46140, f.70, Letter from George Thomas Doo to S. P. Denning, April 7 1837.

of your long bills.’<sup>291</sup> In 1827 Josiah Taylor wrote to the lithographer J.D. Harding about the possibility of producing two lithographs of the cathedrals of Winchester and Durham. Whilst assuring Taylor that the print would be completed as soon as possible he claimed that ‘...as the piece is not by any means adequate to the labour bestowed on it I cannot finish the other in the same elaborate degree unless you increase the price to 20 guineas.’<sup>292</sup>

Many engravers were content with this business relationship. Engravers could build a career upon set rate employment with successful publishers and authors. Samuel Carter Hall and his wife, Anna Maria Hall were noted for their accommodation of a number of artists and engravers. They provided employment for a considerable number of engravers through the production of a number of illustrated works as well as the popular *Art Union Journal* throughout the mid-nineteenth century. In a signed address by thirty-six engravers to Mr and Mrs. Hall, the authors were thanked for producing works that have been a ‘very eligible and important source of employment for Line Engravers; [...] all our transactions with you have been conducted in the most kind and appreciative spirit, and to our mutual satisfaction.’<sup>293</sup> Regardless then of the hierarchical structure that could be established by authors and editors, relations between different trades involved in the book’s production could engender a strong degree of civility. As art became more central to the commercialisation of the book, so too did those tasked with producing it. None were more aware of this than John Britton.

Britton’s desire to produce topographical works featuring illustrations that were both aesthetically rich and topographically accurate was borne out of his encounter with the author and engraver Samuel Ireland in 1798. Referring to Ireland’s *Views on the Warwickshire Avon*, published in 1795, he expressed dissatisfaction at both the letterpress and the embellishments, which appeared to

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<sup>291</sup> BL: Graves Papers, Add MS 46140, f.47, Letter from Samuel Cousins, to Thomas Boys, No Date.

<sup>292</sup> BL: Add MS. 42576, Letter from J.D Harding to Josiah Taylor, 1827 (no precise date).

<sup>293</sup> *The Art Journal*, March 1855, p. xiv.



him ‘very indifferent, if not bad, and induced me to fancy and hope that I might, with a little study and practice, produce something equally entitled to public patronage.’<sup>294</sup> He achieved this in part through his often cordial encounters with various publishers. Britton himself had experienced the tensions that could arise from different areas of the book trade. The publication of his *Beauties of England and Wales* (1801 and 1815), was marked by continued disputes between author, artist and publisher.<sup>295</sup> Such were the disputes that after the publication of the tenth volume Britton approached the publishing firm Longman over the possibility of publishing the remainder of the volumes. It was at that point in his literary career when he encountered Owen Lees, an employee of Longman. ‘Never was there a man’, Britton suggested, ‘who more fully and truly acted the character of “Harmony” on the great stage of the world, than Owen Rees. In an extensive intercourse with authors and artists, with booksellers and other tradesmen, indeed, with all classes of society, he was bland, courteous, candid, and sincere.’<sup>296</sup> Longman’s shares in Britton’s *Beauties* as well as a number of his other works ensured that Britton and Rees formed a strong friendship.

This friendship extended outside of the book trade environment, which further emphasises the sociability of those connected to the book’s production. He often accompanied Rees to the staged dinners arranged by the Longman firm, which welcomed artists, authors and engravers. Another individual Britton also reserved special praise for, and whom he had attended numerous social dinners with, was the artist and publisher Rudolph Ackermann. Britton reserved particular praise for Ackermann’s ‘liberal and enterprising disposition [...] who manifested a corresponding liberality and enthusiasm in all his business speculations and intercourse with artists and literati.’<sup>297</sup> Amidst concerns over the the quality and

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<sup>294</sup> *Ibid.*, p. 136.

<sup>295</sup> Thomas Rees and John Britton, *Reminiscences of Literary London from 1790 to 1853. With Interesting Anecdotes of Publisher, Authors and Book Auctioneers of that Period* (New York, 1896), p. 87.

<sup>296</sup> *Ibid.*, p. 44.

<sup>297</sup> Britton exemplified this by detailing the friendship formed between Ackermann and the author William Combe, where he was often a dinner guest and even contributed towards his funeral and tombstone. See *Ibid.*, p. 140.

sophistication of print due to the decline of paper quality and the increasing speed in which a book could be brought to the market, social and civil transactions were important to ensuring the successful production of what were expensive topographical editions.

The value of social capital in the face of the uncertain and volatile conditions for book production in the 1820s was fundamental to those invested in the success of the book.<sup>298</sup> These economic uncertainties rendered it difficult to find a publisher to invest in his proposals. Britton was forced to take the risk of publishing his *Picturesque Views of English Cities* (published in four parts between 1826-1827) himself, which, as James Hamilton has observed, confirmed his role as a mediator between artist and patron.<sup>299</sup> Fully aware of the effect economic uncertainties would have on the intaglio engraving trade, Britton diverted from his original plan to have drawings produced for his *Picturesque Views* printed as lithographs, choosing instead to 'give occupation to many line engravers, whom the circumstances of the time had left without employment.'<sup>300</sup> Britton provided an incentive to the engravers, who were eager to obtain commissions, by offering the engraver of the best plate a copy of the volume complete with India proofs and etchings, which was eventually awarded to the copperplate engraver John Le Keux for his engraving of Durham.<sup>301</sup>

Financial arrangements in Britton's subsequent publications reveal the increasing recognition of the role of artists and engravers. This recognition resulted in arrangements whereby artists worked with the authors as opposed to working for them. *Illustrations of the Public Buildings of London; With Historical and Descriptive Accounts of Each Edifice*, published in two volumes between 1823 and 1828, was dismissively described as 'the first attempt to make architectural engravings cheap and popular.'<sup>302</sup> It featured over 140 illustrations and over 700 pages of literary

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<sup>298</sup> John Murray, for example, suffered enormous losses in the 1820s. The economic vicissitudes of 1825 resulted in large scale overprinting. See Raven, *The Business of Books*, p. 304.

<sup>299</sup> Hamilton, *A Strange Business*, p. 205.

<sup>300</sup> T.E. Jones, *A Descriptive Account of the Literary Works of John Britton, 1800-1849* (London, 1849), p.

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<sup>301</sup> *Ibid.*, p. 43.

<sup>302</sup> This was in fact far from the case. The expense incurred in the production of drawings and prints for this meant that a significant loss was made. See *Ibid.*, pp. 48-49.

content. Rather than being paid a rate for the drawings, the artist Augustus Pugin received an equal share of the profits and copyright alongside Britton and Josiah Taylor, a printer who specialised in architectural publications. Britton's acknowledgement of the artistic merit of these publications was reflected in his dealings with those tasked with producing it.

These business arrangements were also extended to engravers. The shares in the production and publication of one of Britton's early publications, *The Fine Arts of the English School* (1809-1812), for example, was divided between Britton, the publishers Longman, Josiah Taylor and the engraver William Bond. Longman received the greatest share at two fifths, while the remaining shares were divided equally between Bond, Britton and Taylor.<sup>303</sup> It was observed that the 'good sense and practical taste' of Britton was most clearly displayed in his choice of engravers, 'the majority of whom have risen to the highest reputation in their several lines of art.'<sup>304</sup> One such was John Le Keux. Britton and Le Keux forged both a strong business affiliation as well as a close personal relationship. Le Keux engraved over 250 plates for *Architectural Antiquities* and *Cathedral Antiquities* (1814-1835). Such were their execution that it was the engraver who improved the status of the artist; 'they gave the artist at once a character and name, and proved how materially the efforts of the draughtsman could be aided by a skilful and tasteful engraver.'<sup>305</sup> Britton, in his dedication to Le Keux, claimed that no English engraver 'has done more to enhance the fame of his arm and give peculiar interest and value to that branch which he professed and practices for so many years...'<sup>306</sup> Separate to the rate in which Le Keux was paid for the annual production of his plates, he was offered a share in the property and profits of the latter work alongside Britton, Longman and Taylor in order to ensure that his interest in the publication was maintained. He was also named as a partner alongside Britton and Pugin in the production of

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<sup>303</sup> Jones, *The Literary Works of John Britton*, p. 123.

<sup>304</sup> 'Men I have Known', *The Leisure Hour*, 670, 29 October 1864, pp. 699-700.

<sup>305</sup> 'Brief Memoir of Le Keux', in Jones, *The Literary Works of John Britton*, p. 80.

<sup>306</sup> *Ibid.*, p. 78.

*Architectural Antiquities of Normandy* (1827), for which he produced fifty plates.<sup>307</sup> These transactions confirmed Britton's role as mediator between text, art and business in the production and publication of his works.

Britton's business transactions reveal the preservation of civility within the context of an increasingly competitive and capitalist market for illustrated literature. Publishers maintained their position of power and authority within the book trade. They drove the market forward and constantly had to stay one step ahead if they were to be rewarded for the considerable financial risks they undertook. Yet this did not always lead to a hierarchical, capitalist outlook to the business transactions and correspondence between those invested in the commercial success of the book. Artists, and more importantly intaglio engravers, were recognised not merely as employees but often investors in the work, which underlines the value ascribed to them by others invested in the success of the book.

### No Longer 'merely emply'd as a Workman to engrave Figures': Thomas Bewick and the Value of Wood Engraving to the Book Market

The chapter thus far has examined the business relations and transactions of those involved in the production of illustrated books that featured intaglio and lithographic techniques. What follows is an assessment of the status claims of artists, illustrators and engravers on wood as both its respectability and commercial potential as a print surface began to rise steadily through the course of the nineteenth century. As such, engravers began to recognise their own value to the book trade. Foremost amongst these was the innovative wood engraver Thomas Bewick. An analysis of the correspondence between Bewick, his former master and intaglio engraver Ralph Beilby, and the printers and booksellers Sarah and Solomon Charnley, help to reveal the shifting degree of status afforded to relief methods of print production, which impacted upon the business arrangements between these

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<sup>307</sup> *Ibid.*, p. 79.

various stakeholders. Although Bewick is arguably an exceptional case given his artistic and technical brilliance, as well as the influence he had on wood engraving and the engraving trade more generally in the nineteenth century, his correspondence and business accounts provide a telling insight into the fractious business relations between engraver and printer/publisher at a crucial period for the revival of the medium. Furthermore, the reputation of wood engraving between 1800 and 1850 occupied an often precarious position between artistic potential and commercial necessity. The remainder of this chapter, therefore seeks to explore further the reputation and status claims of wood engravers from both within and outside the networks of book production.

Bewick's new method of wood engraving, using boxwood to carve against the end grain of the block as opposed to carving along the grain on softer woods, inspired a new school of nineteenth-century wood engravers, most notably William Harvey and Luke Clennell. Bewick was well versed in his role as wood engraver during the 1760s and 1770s. He received orders from a number of publishers and authors for the proceeding twenty years. London publishers and booksellers continued to send work to him despite his having moved back to Newcastle in 1777.<sup>308</sup> Having served his apprenticeship under the engraver Ralph Beilby, he entered into a partnership with his former master. Beilby would later author the most celebrated works of Bewick, *A History of British Birds* (1797-1804) and *A General History of Quadrupeds* (1790).

Bewick's desire to complete these works originated from his displeasure at previous attempts at illustrating animals for the purpose of natural history.<sup>309</sup> More fundamentally, he recognised the inherent value of his illustrations to the work. In 1790, an agreement was drawn up whereby Bewick, Beilby and the printer and bookseller Solomon Hodgson would divide the shares of *A History of Quadrupeds* equally between them. Beilby's attempt to exert commercial and intellectual capital

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<sup>308</sup> Bewick often complained about London life. For more on Bewick's life, see Jenny Uglow, *Nature's Engraver*, pp. 54-63.

<sup>309</sup> *Ibid.*, p. 108.

over the work was highlighted through his intention to name himself as author on the title page of the work, which created discontent between himself and Bewick. 'It was sufficient for me', Bewick said upon hearing that Beilby had told Hodgson to print his name as author, 'that I had the opportunity of giving vent to my feelings and gratifying my desires in doing my part of the work.'<sup>310</sup> When the work was eventually printed, Beilby's name did not appear on the title page as the author and was instead listed alongside Bewick's and Hodgson's as a contributor to the work.

Beilby's attempt to do the same again during the printing and publication of the first volume of *A History of British Birds* continued to rile Bewick. Bewick objected to him 'taking upon himself the parade of authorship and representing me merely employ'd as a workman to engrave figures to embellish a work of his composing.'<sup>311</sup> Bewick's anger towards Beilby accentuates the value ascribed to the order of the title page. It also reveals the increasing consciousness and awareness of the artistic potential that can be derived from engraving on wood. Bewick was not merely a craftsman plying his trade. The accuracy and beauty of his engravings led to an acute awareness of where the true value of the publication lay. Similar to *Quadrupeds*, Beilby's name was not printed as author of the work on the title page to *A History of British Birds*. The tensions that arose from the formulation of the title page reveals the struggle for authority and ownership over the work during a period when technological and artist improvements to engraving and printing were taking place.

Bewick's illustrations engendered disputes that arose from who added the greater value to the book. These tensions are further revealed in Bewick's long-standing dispute with Sarah Hodgson, the wife of Solomon Hodgson. Sarah had taken over the printing business from her late husband in 1800. The dispute originated from an error Beilby had made regarding payments received from the number of copies of *Land Birds* (the first volume of his *History of British Birds*) sold.

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<sup>310</sup> *Ibid.*, pp. 170-171.

<sup>311</sup> *Ibid.*, pp. 259-260. For an insight into the importance of title-pages as an expression of cultural capital, see Margaret Smith, *The Title Page: Its Early Development 1460-1510* (London, 2000).

Bewick believed Solomon Hodgson had charged them for printing 246 copies of *Land Birds* they did not receive. Consequently, Bewick made a deduction from the payment to Sarah Hodgson. Bewick approached the bookseller/publisher William Charnley in an attempt to resolve the dispute. Charnley, however, expressed his astonishment upon receiving a letter from Sarah Hodgson to Beilby at Bewick's accusation that Hodgson was responsible for the error.<sup>312</sup> Bewick reluctantly agreed to settle the accounts with Hodgson.

This clerical error placed a great deal of strain on the relationship between Bewick and Hodgson. This had particular consequences for the publication of the fifth edition of *Quadrupeds*, which is emblematic of the tensions that arose between different sectors of the book-selling trade, particularly given Bewick's awareness of the value of the illustrations that adorned the work. Bewick informed Hodgson of his intention to publish the work and asked her to give up her share in the work for financial remuneration. However, Hodgson made clear her intentions to maintain her share; 'Although this property be dormant to the family of Solomon Hodgson, yet I will keep it, as he was the original projector of the work, and without his aid and assistance the *History of the Quadrupeds* would never have been a book.'<sup>313</sup> Hodgson was at pains to stress her husband's salient role in the production of the work, and as a consequence felt justified in retaining her share.

Perhaps more importantly, Hodgson contended that the illustrations were just as much her property as they were Bewick's, which reflects the traditional structural hierarchy between those invested in the book's production. Her awareness of where the value of the work lay was evidenced by her attempts to place the woodblocks in the hands of an 'indifferent' person so that Bewick was unable to print them of his own volition. She proposed that the publisher/bookseller William Charnley keep them 'untill [sic] that confidence can be restored, which is necessary

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<sup>312</sup> BL: Hodgson Papers, Add MS 50241: 1797-1806, ff. 13, 14, Letter from William Charnley to Sarah Hodgson, 21 January 1802.

<sup>313</sup> BL: Hodgson Papers, ff. 43, Letter from Hodgson to Bewick, 8 April 1802.

to the advantage of all the parties concerned.<sup>314</sup> She later informed Bewick, as she had Beilby, that she would not cause any delay in the publication of a new edition and proposed to go to press as soon as possible. Bewick's refusal created uncertainties surrounding who had the right to claim ownership over copyright, which at the time stood at twenty-one years after the first edition was published. The consequence of this was a bitter feud which lasted nearly five years.

The end of the eighteenth century was marked by a period of declining fortunes for the printer. Once at the forefront of the bookselling world, many printers claimed to be 'mere mechaniks [sic]' of the trade by the turn of the nineteenth century.<sup>315</sup> They began to be employed on a contractual basis by the more entrepreneurial publisher-booksellers. Despite this, Hodgson's dealings with Bewick and Beilby reveal the attempt at maintaining a degree of authority and control within the trade. In a response to Hodgson's refusal to sell her share in the work, Bewick threatened to end their business relationship. He claimed that Hodgson had no exclusive right to print the work, 'but only a matter of favor [sic] from us - and truly, from a full view of the past we have not much reason to wish for any further corrections with you, and also least you should continue to treat our favors [sic] with contempt or to insult us with the upmost bitterness and rancour.'<sup>316</sup> Bewick went on to suggest that if Hodgson would not sell her share, he and Beilby would be forced to sell theirs, much to the astonishment of both Hodgson and Charnley who suggested that if he made the correspondence public 'those that took them for worthy men would alter their opinion.'<sup>317</sup> Hodgson threatened Bewick with legal action with a firm contention that Bewick could not go to press with the work just as she could not go to press without the consent of Bewick. This argument over the rights to print lasted for over a year, neither willing to surrender their control over the work. The rising status of wood engraving and the novelty of

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<sup>314</sup> Letter from Hodgson to Bewick, April 8, 1802, f. 43.

<sup>315</sup> Raven, *Publishing Business*, p. 40.

<sup>316</sup> BL: Hodgson Papers, f. 44, Letter from Bewick to Hodgson, 12 April 1802. Nine months later, it became apparent that Bewick had actively sought other printers to print his work without the consent of Hodgson. See Hodgson Papers, ff. 72-73.

<sup>317</sup> BL: Hodgson Papers, f. 52, Letter from William Charnley to Sarah Hodgson, 17 April 1802.



Bewick's method had a considerable bearing on the business relationships and transactions attached to the publication of his two most celebrated works.

The longstanding dispute was eventually resolved early in 1805. It was adjudged that Bewick, being proprietor of two thirds of *Quadrupeds*, had the power to engage a printer of his choosing, but had to satisfy Sarah Hodgson's profits that derived from her share in the work. It was determined that 'neither party can appropriate to themselves exclusively the profits arising from any certain number of copies.'<sup>318</sup> Bewick is in many ways an exceptional case. His new method of engraving was truly unique and unrivalled amongst his contemporaries. Moreover, *A History of Quadrupeds* and *A History of British Birds* were undertakings formulated by Bewick himself as opposed to being employed from the publisher or author to execute the illustrations for the works. Yet his long standing dispute with his printer points to the tensions inherent in different sectors of the book trade at the onset of technological changes to illustration as well as legal changes to copyright. It also highlights the increasing awareness of what was valuable within a steadily more competitive market for books. The working relationship between Bewick and Hodgson had been destroyed as a consequence of their dispute over the ownership of literary property. Yet cordial and civil relations between different sectors involved in the book trade could be maintained despite the move towards a commercial, capitalist market.

### From Artists to Woodpeckers: The Professional Landscape of Wood Engravers 1820-1850

As has been observed earlier in the thesis, the period between 1855 and 1870 has been described as the 'golden age', thanks largely to the rise in the practical, artistic and commercial status of wood engraving. Twenty years earlier, wood engravers rose to prominence for the first time since the heyday of Thomas Bewick

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<sup>318</sup> BL: Graves Papers, f. 92, Copy of the Case between Bewick and Hodgson, January 1805.

around the turn of the nineteenth century. ‘Our progress in this branch of art has been very rapid’, it was observed in *The Art Union*, ‘and we rejoice to say that the magic circle has been broken through; many of our great artists have stepped without it, and have not encountered no peril, but have acquired augmented fame.’<sup>319</sup> In a review of *The Poetical Work of Oliver Goldsmith* (1846) found in the same article, the editors suggested it was impossible to examine the work ‘without feeling assured that engraving on wood is destined to do far more for “the million” than it has yet done.’<sup>320</sup> Amidst the growing reputation of wood engraving during the first half of the nineteenth century, the remainder of the chapter assesses the status claims of draughtsmen and wood engravers from both inside and outside the networks of the book’s production.

As discussed in the previous chapter, wood engraving after 1830 provided popular publishers with a cheap form of graphic reproduction. Considerable pressures were placed on wood engravers to complete numerous wood illustrations within a short period of time in order meet the circulation demands of illustrated magazines, newspapers and books. It was noted in the London trade directory that the wood engraver Thomas Gilks, whose correspondence with artists and publishers will be analysed later in the chapter, upon setting up business on his own in 1850 ‘begs respectfully to announce that he continues to execute all orders that he may be favoured with, in the best style, with promptness, and due regard to moderation in charges.’<sup>321</sup>

In an article on wood engraving printed in *The Art Union*, there were three ‘classes of “labourers”’ that were necessary to produce a perfect impression. The first was the artist; second the engraver and finally the printer; ‘the skill of each being of vast importance separately as well as each other.’<sup>322</sup> The use of the word ‘labourers’ is telling. The transformation of wood engraving from a craft-based skill

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<sup>319</sup> ‘English Artists on Wood’, *The Art Union*, 8 January 1846, p. 11.

<sup>320</sup> *Ibid.*

<sup>321</sup> Quoted in Engen, *A Dictionary of Victorian Wood Engravers*, p. 100.

<sup>322</sup> ‘Wood Engraving’, *The Art Union*, 1.2, March 1839, p. 25.

to one of an artisanal nature, made it much more difficult for engravers to establish their status within the book's production. Bethan Stevens's illuminating account of the wood engraving firm established by the Dalziel Brothers foregrounds the role of the signature within the struggle for artistic identity at a time when engravers working in a factory setting nearly always remained anonymous.<sup>323</sup> Building upon this scholarship, the remainder of the chapter explores both the status claims and degree of civility afforded between engraver/draughtsmen, illustrators and publishers within the transactions and business arrangements during a period that witnessed a shift towards the establishment of the 'first classes of proletarians in the mass media industry' by the second half of the nineteenth century.<sup>324</sup>

A survey of the periodical literature and the intellectual order of the title page in the 1820s and 1830s allows for a more critical engagement over the level of cultural capital afforded to these draughtsmen and engravers. The correspondence and business accounts of the wood engraver Thomas Gilks reveals both the level of civility in his dealings as a freelance engraver as well as the tensions between draughtsman and engraver within the more hierarchical system of the large publishing house. Both periodical reviews and Gilks's correspondence provide useful insights into the level of status attributed these engravers from both outside and within the trade itself.

Those who became particularly skilled at drawing and engraving on wood had the potential to establish themselves as important figures in the production and commercial aspects of the book. Draughtsmen and engravers including William Harvey, Samuel Williams, Birket Foster, Ebenezer Landells and Edmund Evans became well-known for their ability to draw, engrave, and print from wood. Harvey would frequently recommend engravers to publishers, which had the potential to provide them with long term future employment. Similarly, Landells, who had

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<sup>323</sup> Bethan Stevens, 'Wood Engraving as Ghost-Writing: The Dalziel Brothers, losing one's name, and other hazards of the trade', *Textual Practice* (2017), <https://doi.org/10.1080/0950236X.2017.1365756>.

<sup>324</sup> Michèle Martin, 'Nineteenth-Century Wood Engravers at Work: Mass Production of Illustrated Periodicals (1840-1880)', *Journal of Historical Sociology*, 27.1 (2014), p. 132.

established himself as a highly respected illustrator and employed a number of wood engravers, would often form the intermediary between engraver and publisher.

The rising status of draughtsmen/wood engraver against the general artist is revealed in the reception of the artist James Northcote's *Fables*. In 1833, John Murray published the second series of Northcote's *Fables*. William Harvey was tasked with drawing the illustrations on wood in preparation for printing. It featured over two hundred wood engravings made up of half-page vignettes, decorative lettering and embellished head and tail pieces. Although it was stated in the *Literary Chronicle* that the illustrations were taken entirely from the pencil of Northcote - Harvey drew the illustrations on wood from pasted down illustrations given to him by Northcote - and while the Scottish poet Allan Cunningham lauded Northcote for the artwork, it was more widely felt that William Harvey should be praised for the quality of the illustrations.<sup>325</sup> 'With two or three splendid exceptions, the second series of Northcote's *Fables* affords specimens of the works of all the living engravers who have attained to the eminence in their art.' The review continued, 'It is a most extraordinary work, and merits a very extensive sale [...]. We say of the genius of Harvey, for Northcote merely played the bellows-blower in concocting it.'<sup>326</sup> The lettering, which formed a substantial part of the book's embellishment, received notable praise. They were considered 'beautifully designed- by Harvey to be observed- and capitally executed by Landells. They are pigmy wonders of art.'<sup>327</sup>

The illustrations were adjudged to hold greater merit than the text; 'the fables in his (Northcote's) second series would be of no value, did they not serve as pegs for the support of Harvey's pictures.'<sup>328</sup> Northcote, on the other hand, was chastised by the reviewer, considered a fraud for claiming authority over the artwork through his 'scissars [sic] and paste exploit.'<sup>329</sup> A reviewer in *The Newcastle Magazine*

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<sup>325</sup> *The Literary Chronicle*, 457, February 16, 1828, 103; Allan Cunningham, *The Lives of the Most Eminent British Painters, Sculptors and Architects*, Vol. 6 (London, 1833), p. 117.

<sup>326</sup> 'Our Wood Engravers', *Monthly Magazine*, 15.89, May 1833, p. 499.

<sup>327</sup> *Ibid.*, p. 503.

<sup>328</sup> *Ibid.*, p. 502.

<sup>329</sup> *Ibid.*, p. 501.

used Northcote's first series of his *Fables*, published five years earlier, to extol the skill and artistic merit of the draughtsmen who had previously learnt their trade in the city. John Jackson's engravings, in particular, were praised for their level of accuracy and beauty, while the reviewer expressed his astonishment that Harvey had not progressed from the woodblock to the canvas, such was his skill and execution.<sup>330</sup> The example of Harvey and Northcote helps to reveal the recognition of the value of the draughtsman from outside the trade.

The names of these engravers and draughtsmen also began to appear alongside and even ahead of authors and publishers on title pages. The engraver John Orrin Smith's name appeared before the artist John Gilbert on the title page of the Reverend Thomas Dale's edition of William Cowper's *Poems*, published in 1841. Samuel Williams was the only name that appeared on the heavily illustrated *Adventures of a Post Captain*, first published in 1820. The significance of the title page as a symbol of the recognition of the draughtsmen and wood engravers was not lost on periodical reviewers. Editors of the *Monthly Magazine* expressed their anger regarding the absence of Harvey's name on the title page of Northcote's work: 'Our indignation is boundless, at the impudence of withholding Harvey's name from the title-page, and the shallow impertinence of our sage reviewer in attributing the designs to Northcote.'<sup>331</sup> The gradual appearance of wood engravers and draughtsmen on titles pages during the 1820s and 30s points to the status and recognition of wood engravers and draughtsman, which served to marginalise the status of the artist. Amidst the industrialisation of wood engraving towards the middle of the nineteenth century, the reputation and artistic status of those tasked with reproducing the illustration on wood remained intact, although these changing conditions brought with it tensions within the hierarchy of individuals involved in the production of the book.

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<sup>330</sup> 'Northcote's Fables', *The Newcastle Magazine*, 7.7, July 1828, p. 331.

<sup>331</sup> *Monthly Magazine*, May, 1833, p. 499.

The Dalziel company was arguably the most well-renowned of wood engraving firms. Working conditions, particularly by the latter half of the nineteenth century, became industrialised as result of the mass-produced image.<sup>332</sup> Yet their labours were no different to those earlier wood engravers who belonged to a more craft-based occupation. The wood engraver Edmund Evans frequently referred to the working hours of a wood engraver in his memoirs, 'I worked considerably at overtime [...] so I was totally unfit for work for a day or two after the drives of getting blocks in to time.'<sup>333</sup> Thomas Gilks was employed to complete an engraving that was to be used to illustrate part of the *Waverley Novels*, because it was believed that Gilks would do it 'very nicely and very very quickly.'<sup>334</sup> Wood engraving was transformed into an artisanal trade whereby speed of production was held in equal regard to quality, with the publisher at the forefront of business transactions.

Despite the increasingly industrial conditions for wood engravers, business transactions between the producers of the book could often remain grounded in sociability and civility. The illustrator Hablot Knight Browne, popularly referred to as Phiz, recalled a meeting between the draughtsman William Harvey, the wood engraver John Thurston, and the renowned publisher Thomas Cadell. Cadell had invited them to dinner in order to discuss potential arrangements for having illustrations printed for his works. Browne suggested that the engravers 'thought the time well-spent if they came away with one order each for a drawing, and marvel at good luck if they got two.'<sup>335</sup> The fact that Browne recalled this meeting nearly twenty years later and included the fact that the business transactions were played out around the dinner table is suggestive of the importance placed on the social setting in which these transactions took place. Browne's recollections reveal the degree of civility and cordiality within transactions that have been generally

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<sup>332</sup> The Dalziel Company were the largest wood engraving firm of the Victorian period. For more on the operation of the Dalziels, See Stevens, 'Wood Engraving as Ghost-Writing'.

<sup>333</sup> Ruari Mclean (ed.), *The Reminiscences of Edmund Evans* (Oxford, 1967), p. 14.

<sup>334</sup> BL: Thomas Gilks Papers, Add MS 88963, F. 47, Letter from William Dicks to Thomas Gilks, 31 December 1841.

<sup>335</sup> 'William Harvey, and the Wood Engravers of his Era', *The Art Journal*, March 1866, p. 89.

acknowledged to be hurried and impersonal as a consequence of the haste in which wood engravings needed to be completed.

The business transactions between Thomas Gilks and his clients, on the other hand, reveal a much more rigid hierarchical structure in which the wood engraver tended to be placed below the publisher, artist and draughtsman. Thomas Gilks's business accounts reveal the wide range of trades he corresponded with including authors, illustrators, publishers, printers and booksellers.<sup>336</sup> He was a reputable engraver and was employed by a number of publishers as well as providing work himself for other wood engravers. It was relatively common for draughtsmen such as Harvey and William Darton to have the final say on the illustrations that Gilks engraved. In a letter to Gilks from the illustrator Charles Graham, the latter stated that Harvey and Darton had wanted the eye featured in the illustration to be 'opened up a little more, just a touch or so and shaded between the eyebrows and lid, which you can soon do.'<sup>337</sup> Graham proceeded to place emphasis on the time constraints involved in the amendment of the engraving; 'Pray get on with it soon, the parties are very impatient and well they may be!!!'<sup>338</sup>

The exchange here between engraver and illustrator shed light on the status claims between those invested in the production and completion of the engraving. However, this hierarchy of status between illustrator and engraver was by no means fixed. In a letter from the illustrator W.H. Prior, who was employed by Charles Knight, to Gilks in 1841, the former expressed his surprise and disappointment at the quality of Gilks's execution of the illustration he sent to be engraved: 'I sincerely hope for my reputation you will not waste my time again.'<sup>339</sup> In his reply to Prior, Gilks strenuously denied Prior's contention that little effort had been given to the woodblock. 'I must distinctly deny [the accusation]', he replied, 'as it was as much

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<sup>336</sup> Notable correspondents include the publishers Richard Bentley, illustrators and artists including Sir John Gilbert and William Harvey, and authors including Charles Mackay and Anna Maria Hall.

<sup>337</sup> BL: Thomas Gilks Papers, MS. 88963, f. 51, Letter from Charles Graham to Thomas Gilks, 1 November 1841.

<sup>338</sup> *Ibid.*

<sup>339</sup> BL: Thomas Gilks Papers, MS 88963, f. 190, Letter from W.H Prior, artist on wood, to Thomas Gilks, 1841.

for my interest and reputation to make a good cut as it was for you to make a good drawing'.<sup>340</sup>

The exchange reveals a tension in the status claims between illustrator and engraver. Charles Knight, upon hearing Prior's protestations, sent a letter to Gilks criticising Prior's conduct. He re-assured Gilks of the quality of the cut and that neither Prior nor anyone who worked for him was authorised 'to address himself to such terms as Mr Prior has made use of to any gentleman employed in engraving for the works published by Mr. Knight'.<sup>341</sup> Knight re-affirmed the authority of the publishing house over the illustrators and engravers it employed, but was clear in his contention the illustrator did not necessarily hold rank over the engraver:

As to the law you [Gilks] got the cut, if you are content to receive work from this house you must also receive their orders from it, for though we are always glad to receive the opinions of draughtsmen as to the persons best adapted to the engraving, we hold ourselves by no means bound to adopt them [...].

Knight's response to Prior's accusation accentuates the power of the publisher within production of the illustrated book. However, it also reveals the hierarchical tensions played out between those specifically invested in the production and execution of the illustrations. Although illustrators attempted to assert their authority over their 'lowly' counterparts, this was not the universal view held by those in charge of the publication. Although industrialisation did, to a large extent, render wood engraving an industrial trade by the second half of the nineteenth century, the capitalist, hierarchical system of production did not always relegate the wood engraver to the foot of the production line.

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<sup>340</sup> *Ibid.*

<sup>341</sup> BL: Thomas Gilks Papers, MS 88963, f. 190, Letter on behalf of Charles Knight to Thomas Gilks, 18 February 1841.



## Conclusion

The chapter has explored the business relationships, transactions and status claims of those invested in the production of the illustrated book against the broader landscape of technological changes analysed in chapter one. By broadening out these transactions to consider the artist and, more importantly, the engraver, I have argued that the status afforded to the printing medium used to illustrate the book had the capacity to shape these transactions both financially and socially. Despite the increasingly capitalist market in which these individuals operated, which placed a greater emphasis on the role and status of the publisher within networks of the book's production, an analysis of the business arrangements and memoirs of John Britton has revealed the enduring notions of civility, sociability and friendship within these transactions. Furthermore, Britton's recollections provide a check on the grand narratives that detail the rise of the enterprising and capitalist publisher, which tend to foreground the exploitation of every other trade involved in the book's production.

Further analysis of the correspondence of wood engravers, in addition to reviews of the books they were employed to illustrate during the first half of the nineteenth century, provides an insight into the status afforded to wood engravers and draughtsmen in this period and how that was manifested in both the degree of cultural capital afforded to these engravers as well as the way in which business transactions were carried out amidst the industrialisation of the trade. As discussed in the first chapter, wood engraving occupied a precarious position between artistic merit and practical efficiency. Yet the level of praise wood engravers received for book illustrations, often at the expense of the artists themselves, challenges the traditional hierarchy ascribed to those invested in the book's production, in which engravers are predominantly placed at the bottom, amidst the increasingly industrialised conditions in which wood engravers carried out their trade.

Finally, the correspondence and business records of the wood engraver Thomas Gilks, whilst reinforcing the power of the publisher within the increasingly

industrialised nature of wood engraving, also serves to highlight the more complex status claims of those invested in the pictorial element of wood-engraved illustrated literature. Michèle Martin has argued that the hierarchy developed between wood engravers and illustrators was rooted in their working practices as opposed to the external appraisal from outside critics and other individuals involved in the book trade.<sup>342</sup> Yet, as the exchange between Gilks and Prior attests, this hierarchy was by no means fixed, thus establishing tensions of rank and status from within the internal hierarchies of which Martin speaks. Despite the drive towards mechanisation and an increasingly capitalist market for illustrated books, not all transactions followed the pattern of financial exploitation that contemporaries were so eager to evince.

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<sup>342</sup> *Martin*, 'Nineteenth-Century Wood Engravers at Work', pp. 133-134.

## Chapter 3: Wood Engraving, The Ecology of Knowledge and the Democratisation of Geology 1800-1850

The previous two chapters have examined the broader changes to illustration between 1780 and 1850, both in terms of the technical and commercial changes that took place in this period as well as the networks of individuals bound up within the production and marketing of illustrated books. In so doing, I have attempted to assess levels of change and continuity to the illustrated book as a physical and cultural object as well as the relations and transactions between those invested in its success. I have done so primarily from the perspective of the surfaces used to print illustrations amidst significant technological, industrial and cultural developments throughout the first half of the nineteenth century.

It is the purpose of the following three chapters to ground these broader developments within the intellectual, cultural and commercial trajectory of the books and subjects in which illustrations belonged. This chapter explores the role of illustration in the publication of geological books throughout the first half of the nineteenth century. Through a re-evaluation of the illustrations found in the works of some of the leading geologists of the period, I explore the effect illustrations had on authors and publishers of these texts within the broader context of the democratisation of knowledge and the commercialisation of the book. Whilst these illustrations have predominantly been viewed as visual aids to the text, I argue the publishers and authors of these works began to depend more heavily on these pictorial additions in striking a delicate balance between appealing to the general reader, the younger student and the established scientist amidst wider attempts of the so-called ‘gentlemen of science’ to compete within an increasingly unstable market for what was a novel and rapidly developing branch of science.<sup>343</sup>

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<sup>343</sup> Martin Rudwick was the first to coin the term ‘visual language’ in his seminal work on geological illustration. See Martin J. S. Rudwick, ‘The Emergence of a Visual Language for Geological Science 1760-1840’, *History of Science*, 14.3 (1976), pp. 141-195.

As has been explored in the previous chapters, copying illustrations was a common practice given the simplicity of transferring designs on wood. I argue in this chapter that illustrations not only occupied a central position in illustrating these geological texts, but often played more complex roles within the production of these works. Authors and publishers used these illustrations to satisfy a number of objectives: to democratise what was a relatively novel and complex branch of science, to improve the commercial potential of such accounts against the increasingly competitive market for illustrated books, which involved a re-evaluation of the format and style of such works; finally, these wood engravings acted as bearers of knowledge in and of themselves. Leading thinkers such as Charles Lyell, Gideon Mantell and Charles Darwin were able to take advantage of the capacity to copy and reprint wood engravings easily and efficiently, thereby establishing an ecology of knowledge and exchange of ideas, which was reliant on the graphic as opposed to the textual.

Given that intellectual and commercial considerations did not always coincide easily, particularly when appreciating the varying motivations of individuals connected to the production of the book, I also explore what impact the introduction of wood engravings to geology had on the working relations between the publishers and authors. Correspondence between author and publisher reveal tensions between commercial and financial imperatives of the publisher and the intellectual ambitions of the author, whose primary objectives lay in communicating a relatively new branch of science, which produced a number of different, and often competing, discourses.<sup>344</sup>

As Scott L. Montgomery has observed in his pedagogical guide to reading and writing about one's own research, 'communication is the doing of science.'<sup>345</sup> It involves a process of making something once understood by the individual

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<sup>344</sup> For more on these competing discourses, see Ralph O'Connor, *The Earth on Show: Fossils and the Poetics of Popular Science, 1802-1856* (Chicago, 2007), p.213; Ralph O'Connor, 'Reflections on Popular Science in Britain: Genres, Categories and Historians', *Isis*, 100. 2 (2009), pp. 333-345; Jonathon R. Topham, 'Beyond the "Common Context": The Production and Reading of the Bridgewater Treatises', *Isis*, 89.2 (1998), pp. 257-262.

<sup>345</sup> Scott L. Montgomery, *The Chicago Guide to Communicating Science* (Chicago, 2002), p. 1.

comprehensible to a wider group of people.<sup>346</sup> Contemporaries were acutely aware of the need for effective communication in geological publications. Writing in *The Republican* in 1826, one observer lamented the way in which geologists conveyed their research and theories. ‘They write to each other in a style unintelligible to the mass of the people. It is therefore a reasonable question to ask them what is the purpose in so writing, do they wish mankind to improve by their works? No! It is evidently [sic] they do not.’<sup>347</sup> Rather than confine their studies to the scientific elite, they must ‘delight in truth and nature, and clothe themselves in the simple garb of legibility.’<sup>348</sup> Just over twenty-five years later, it was observed that geology ‘is in the ascendant’. The reviewer continued, ‘It counts in its rank some of the most energetic and able men of science of the day; it claims for its service the only scientific society that can bring together a considerable congregation of attentive and intelligent listeners.’<sup>349</sup> It is the aim of chapter to argue that this transformation was made possible through the revival of wood engraving, more so than any changes to writing styles or literary techniques.

The means by which science was communicated have often been examined in relation to the circulation of writing.<sup>350</sup> Scholarship dedicated to the written word has considered not only what was written but also the narrative styles in which the authors conveyed scientific knowledge. Ralph O’Connor has suggested that the prominent geologist Charles Lyell’s success did not necessarily lie in his theory, but rather his use of narrative techniques that enabled him to ‘synthesise and deploy vast quantities of abstruse scientific data within an elegant rhetorically compelling work of literature.’<sup>351</sup> Whilst Lyell’s geology has been predominantly examined in

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<sup>346</sup> James Secord, ‘Knowledge in Transit,’ *Isis*, 95 (2004), p. 655.

<sup>347</sup> ‘Geology’, *The Republican*, 10 November 1826, p. 561.

<sup>348</sup> *Ibid.*

<sup>349</sup> ‘The Future of Geology’, *The Westminster Review*, July 1852, p. 67.

<sup>350</sup> See, for example, Ben Marsden, Hazel Hutchinson, and Ralph O’Connor (eds), *Uncommon Contexts: Encounters between Science and Literature, 1800-1914* (London, 2013); Adelene Buckland, *Novel Science: Fiction and the Invention of Nineteenth-Century Geology* (Chicago, 2013); Ralph O’Connor, *Victorian Science and Literature* (London, 2012); Gillian Beer, ‘Translation or Transformation? The Relations of Literature and Science’, in Gillian Beer (ed.), *Open Fields: Science in Cultural Encounter* (Oxford, 1996), pp. 173-195.

<sup>351</sup> Ralph O’Connor, *The Earth On Show*, p. 164.

relation to the written component, I argue that Lyell's success was equally dependent on the production and circulation of his illustrations from 1835 onwards.

The rise of wood engraving played a fundamental role in what was acknowledged by contemporaries as a considerable transformation in the communication of the Earth's history throughout the nineteenth century. Such was the level of the accuracy and beauty that could be achieved through wood engraving by 1850, that geologists chose this medium not only for financial considerations but also intellectual and artistic imperatives. Charles Darwin's letter to his illustrator George Sowerby requesting an illustration for his 1851 monograph on a newly discovered fossil encapsulates the reputation of wood engraving by the mid-nineteenth century:

I know there can be no change of the enclosed figure being introduced on the Plate, & therefore will you be so good as to do it on wood: seeing the way they now shade Birds &c on wood, I can see no reason why the enclosed may not be done very well.<sup>352</sup>

Despite Darwin's awareness of the aesthetic qualities of wood engraving, the majority of illustrations found in the geological texts under review in this chapter were relatively plain in design and execution. Rather than reading illustrations in relation to art within these scientific texts, I consider instead the intellectual and commercial advantages offered by wood engraving to communicate and democratise what was a rapidly developing science by the early-Victorian period.<sup>353</sup>

Martin Rudwick was the first to recognise the importance of wood-engraved illustrations for the establishment of a 'visual language' for geological texts.

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<sup>352</sup> Darwin Correspondence Project, "Letter no. 1360," Letter from Charles Darwin to George Sowerby, 23 September 1850 <http://www.darwinproject.ac.uk/DCP-LETT-1360> [Accessed 21 August 21 2017]

<sup>353</sup> There are a number of excellent works dedicated to the relationship between science and art in this period. See, for example, Martin Kemp, *Visualizations: The Nature of Art and Science* (Oxford, 2000); Barbara Maria Stafford, *Artful Science: Enlightenment, Entertainment, and the Eclipse of Visual Education* (Cambridge, 1994); Caroline A. Jones and Peter Galison (eds), *Picturing Science, Producing Art*, Second Edition (Oxon, 2013); Brian P. Dolan, 'Representing Novelty: Charles Babbage, Charles Lyell, and Experiments in Early Victorian Geology', *History of Science*, xxxvi (1998), pp. 299-327; Bernd Huppau and Peter Weingart (eds), *Science Images and Popular Images of the Sciences* (New York, 2007); Bernard Lightman, 'The Visual Theology of Victorian Popularizers of Science: From Reverent Eye to Chemical Retina', *Isis*, 91 (2000), pp. 651-680.

Rudwick's study foregrounded the significance of illustration against an intellectual agenda primarily concerned with theory as opposed to communication, which served to relegate visual additions to geological texts as merely decorative adjuncts to the written word.<sup>354</sup> Rudwick's work highlighted the broadening range of illustration as well as the dramatic increase in their number by 1840. It is striking, however, that Rudwick's much-cited work has not prompted further analysis of the significance of wood engraving to scientific texts.<sup>355</sup> Rudwick limits his account to the significance of illustrations to the book in which they are printed, reinforcing the long-held assumption that illustrations of this nature acted purely as visual aids to the written text. Yet, as the correspondence between Charles Lyell and his publisher John Murray attests, illustrations became vital markers of communicating and democratising the Earth's history; so much so that Lyell expressed the view that the written text was redundant without them.<sup>356</sup> Furthermore, while the significance of illustrations for individual books is important to this chapter, it moves on to assess the value of wood engravings outside of the books they were originally designed to illustrate. Whilst they satisfied the attempts of authors and publishers to democratise a novel and complex science, they also proved a valuable mediator of knowledge between scientists themselves, thus providing an ecology of knowledge that depended on the ease of reproducing a wood-engraved illustration as opposed to an intaglio print.

I do not suggest in this chapter that the role of the visual has been completely neglected in favour of the written word.<sup>357</sup> Rather, I suggest there has been an

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<sup>354</sup> Rudwick, 'The Emergence of a Visual Language for Geological Science', pp. 141-195. Rudwick's has been recognized as one of the most influential works published in *History of Science* journal. See Sachiko Kusakawa, 'Classics From This Journal: Martin Rudwick's "The Emergence of a Visual Language for Geological Science 1760-1840"', *History of Science*, xiv: 3 (1976), pp. 149-95', *History of Science*, 54.1 (2016), pp. 98-104.

<sup>355</sup> A quick search suggests that Rudwick's article has been cited 450 times. Carol Siri Johnson's work on American illustration examines the effect of illustration on early-American Geological texts. See Carol Siri Johnson, 'The Evolution of Illustrated Texts and Their Effect on Science: Examples From Early American State Geological Reports', *Leonardo*, 41.2 (2008), pp. 120-127.

<sup>356</sup> As will be discussed near the end of this chapter, Lyell objected to John Murray's refusal to allow illustrations to be printed in a French translation of his seminal work *The Principles of Geology*.

<sup>357</sup> See, for example, Noah Herringham, *Romantic Rocks, Aesthetic Geology* (New York, 2004); Ralph O'Connor, *The Earth On Show*; Anne Secord: Botany on a Plate: Pleasure and the Power of Pictures in Promoting Early Nineteenth-Century Scientific Knowledge', *Isis*, 93 (2002), pp. 28-57.

intellectual departure away from the wood engravings discussed in Rudwick's study to the way in which imagery was used to connect the previously polarised positions of romanticism and geology.<sup>358</sup> This chapter serves to re-evaluate the role of wood engraving in early-to-mid nineteenth-century geological texts. Through a greater appreciation of the design and production of the book, as well as the materiality of these illustrations, I argue that the graphic elements of these texts played a vital role not only within individual volumes but also how they mediated between different texts, which further reinforces the importance of illustration in legitimising the authority of gentlemen of science within wider attempts to disseminate and demystify the general principles of geology.

This chapter responds partly to the number of calls over the past thirty years within the field of the history of science to align the role of print and the book with the emergence of specialist scientific disciplines.<sup>359</sup> Rather than continuing to engage with 'old, sterile debates' over scientific theory, Susan Sheets-Pyenson has argued that an exploration of the means in which the book is published, with a particular focus on the production of illustrations, would shed new light on the diffusion of scientific practice and ideas.<sup>360</sup> Subsequently, there has been a greater appreciation of the role of the book in the dissemination of scientific knowledge. Jonathan Topham, in his illuminating account of *The Bridgewater Treatises*, has highlighted the contexts in which the book was produced, engendering a range of responses to the work, whilst James Secord's study of the anonymously published *The Vestiges of Creation* (1844) stresses the significance of the world of publishers and booksellers in shaping the reception of one of the most controversial Victorian texts.<sup>361</sup>

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<sup>358</sup> See, in particular, Herringham, *Romantic Rocks, Aesthetic Geology*.

<sup>359</sup> Jonathan Topham, 'Scientific Publishing and the Reading of Science in Nineteenth-Century Britain: A Historiographical Survey and Guide to Sources', *Studies in the History of Philosophy and Science*, 31.4 (2000), pp. 3-5.

<sup>360</sup> Susan Sheets-Pyenson, 'The Effect of Changes in Printing Technology on the Development of Natural History Sciences During the Nineteenth Century', in Peter F. McNally (ed.), *The Advent of Printing: Historians of Science Respond to Elizabeth Eisenstein's 'The Printing Press As An Agent of Change'* (Montreal, 1987), pp. 21-27.

<sup>361</sup> Jonathan R. Topham, 'Beyond the "Common Context": The Production and Reading of the Bridgewater Treatises', *Isis*, 89 (1998), pp. 233-262; James A. Secord, *Victorian Sensation*. For other excellent studies, see James A. Secord, *Visions of Science: Books and Readers at the Dawn of the Victorian*



By acknowledging the role of print in shaping and disseminating scientific knowledge, I argue for a greater appreciation of the crucial and often diverse roles illustration played within this branch of science, which remains undervalued. By returning to the wood engravings detailed in Rudwick's work, this chapter aims to contribute to scholarship that coalesces developments in the book with early-to mid-nineteenth century science. These illustrations acted as bearers of knowledge, of which authors and publishers relied heavily, from both commercial and intellectual perspectives. I therefore consider the importance of the material properties of wood engraving for scientific works, how their simplicity of design and speed of production impacted upon both the dissemination of scientific knowledge and the commercial strategies employed to compete in an increasingly competitive market for illustrated books. These questions help to provide further insights into the relations between author and publisher in the production of scientific books, relations that could be strained by the complex dynamic between democratisation of knowledge and the financial and commercial considerations, which were vital to the book's success. Moreover, taking the production of illustrations as a starting point within the context of scientific publications raises further questions about the dialectic between the intellectual capital amongst gentlemen of science within the field of geology and the attempts to democratise knowledge.

Given that I consider illustrations as communicative forms of knowledge transfer, the chapter begins with an assessment of the utility of such terms as 'popular', 'popularisation' and 'democratisation' for the geological works considered here. I then place the production of illustrations at the forefront of historical enquiry by considering the ways in which wood engraved illustrations in particular were the driving force behind marketing strategies in the production of more elementary guides to the history of the Earth. The chapter then moves on to explore the significance of these wood engravings outside of the original texts in which they

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*Age* (Oxford, 2014); Bernard Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago: University of Chicago Press, 2007); O'Connor, *The Earth on Show*, pp. 1-26.

were printed. Illustrations were often shared, copied and reprinted by other geologists. This copying was fundamental to the establishment of an ecology of knowledge that served to reinforce the intellectual capital of those geologists whom the illustrations originally belonged.

Finally, I investigate the effect of new printing processes, particularly stereotyping, within an examination of the relationship between author and publisher. As Aileen Fyfe has argued in her study of the Edinburgh publishers William and Robert Chambers, studies relating to the response of publishers and authors to the emergent literary audience rarely pay much attention to whom the new technologies involved in the production of the book.<sup>362</sup> A case study of the working relationship between Charles Lyell and John Murray helps to uncover the underlying tension within the reception of these new technologies whilst providing an insight into the power relations between author and publisher.

### Democratisation or Popularisation of Knowledge

Scholars including Ralph O'Connor and Bernard Lightman have highlighted the contemporary criticism aimed at the 'gentlemen of science', who stood at the forefront of theories regarding the changes to the Earth's history, for rendering natural history and geology unintelligible to the general reader. William Cockburn, who was renowned for his disapproval of the British Association for the Advancement of Science, lamented the role of geologists in disseminating scientific knowledge: 'they throw a mist [...] around the science, and frighten away the vulgar with unintelligible endecasyllables and cacophonous names.'<sup>363</sup> However, through a deeper investigation into the parallel developments of wood engraving and the emergent discipline of geology, that democratisation of knowledge was central to the aims of the vanguard of geology by the early-Victorian period, further

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<sup>362</sup> Aileen Fyfe, *Steam-Powered Knowledge: William Chambers and the Business of Publishing, 1820-1860* (Chicago, 2012), pp. 3-10.

<sup>363</sup> Quoted in Ralph O'Connor, 'Young-Earth Creationists in Early Nineteenth-Century Britain? Towards A Reassessment of "Scriptural Geology"', *History of Science*, xlv (2007), p. 391.

complicating the use of the term 'popular science' against the wider context of increased specialism in different branches of science.<sup>364</sup>

Calls to align print and the development of science in the nineteenth century highlighted earlier have prompted considerable debate surrounding the popularisation of science and what constituted 'popular science' more generally. Roger Cooter and Stephen Pumfrey were two of the first to call for a re-evaluation of the role popular science played against the diffusionist model that served to reinforce the 'genuine' science of the elite over the crude and distorted accounts of the writers of 'popular science'.<sup>365</sup> This re-evaluation has led to a number of works that seek to emphasise the role of those that were previously acknowledged to have stood on the periphery of science popularisation. These included natural theology traditionalists, biblical literalists, scriptural geologists and journalists.<sup>366</sup> Others have looked at the different modes of science popularisation, including public displays, lectures and museum exhibitions. These public scientific displays were important strategies used by popularisers of science as a way of cementing authority over their discipline.<sup>367</sup>

Scholarship dedicated to popular science, whilst illuminating the diverse ways in which scientific knowledge was disseminated to a wider public, has also contributed to an intellectual divide between what constituted elite and popular forms of knowledge in the nineteenth century. More recently, scholars have attempted to place elite and popular forms of knowledge within a closer

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<sup>364</sup> Topham, in his study of the Bridgewater Treatises, has argued that 'popular science' is an unworkable term that over-generalises the readership of such works. See Topham, 'Beyond the "Common Context"', pp. 234-236.

<sup>365</sup> Roger Cooter and Stephen Pumfrey, 'Separate Spheres and Public Places: Reflections on the History of Science Popularization and Science in Popular Culture', *History of Science*, 32 (1994), pp. 237-267.

<sup>366</sup> Examples include Bernard Lightman, 'The Visual Theology of Victorian Popularizers of Science: From Reverent Eye to Chemical Retina', *Isis*, 91 (2000), pp. 651-680; Ralph O'Connor, 'Young-Earth Creationists in Early Nineteenth-Century Britain? Towards a Reassessment of "Scriptural Geology"', *History of Science*, 45.4 (2007), pp. 357-403; Aileen Fyfe, *Science and Salvation: Evangelical Popular Science Publishing in Victorian Britain* (Chicago, 2004); Lightman, *Victorian Popularizers of Science*. Bernard Lightman, "'The Voices of Nature": Popularizing Science', in *Victorian Science in Context*, ed. Bernard Lightman (Chicago, 1997), pp. 187-205. Ruth Barton, 'Just Before Nature: The Purposes of Science and the Purposes of Popularization in Some English Popular Science Journals of the 1860s', *Annals of Science*, 55 (1998), pp. 1-33.

<sup>367</sup> Iwan Rhys Morus, 'Worlds of Wonder: Sensation and the Victorian Scientific Performance', *Isis*, 101.4 (2010), pp. 806-816.

epistemological framework. James Secord has sought to reconcile popular and elite science within the development of nineteenth-century scientific thought and the dissemination of knowledge. In suggesting there is no intrinsic distinction between the making of knowledge and the communication of knowledge, Secord argues that understanding how knowledge was constituted and appropriated within a culture is just as fundamental to the history of science as it is to cultural history.<sup>368</sup> Ralph O'Connor has highlighted the over-simplification of the distinction between expert and non-expert knowledge in this period. The complexity of engagements between elite gentlemen of science and other groups who attempted to disseminate knowledge to a wider reading public prompts O'Connor to consider the veracity of elite and popular knowledge.<sup>369</sup> Andreas Daum contends that 'popular science' should be seen as part of the changing set of processes, practices and individuals that generate and transform knowledge across different spaces and cultures over time.<sup>370</sup> For Daum, scientific knowledge differs depending on its interpretation, its geographic and cultural reach as well as its validity. Consequently, the usage of 'popular science' misses the inherent complexities of how knowledge was made public.<sup>371</sup>

Daum's contention that knowledge has the capacity to become public 'through actors seeking publicity and articulating the desire to frame particular knowledge as a public commodity' is of particular importance to this chapter. The chapter seeks to understand how wood engraving in particular was used by leading thinkers to democratise and 'frame' knowledge as a commodity. If, as Ralph O'Connor has suggested, we take popularisation to mean 'making something widely known', which included all communication to non-specialists, it is possible to approach popularisation from the point of production. Whilst rejecting the now

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<sup>368</sup> James Secord, 'Knowledge in Transit', *Isis*, 95 (2004), 654-672. For examples of his approach in practice see James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation* (Chicago, 2003), 153-297.

<sup>369</sup> Ralph O'Connor, 'Reflections on Popular Science in Britain: Genres, Categories and Historians', *Isis*, 100.2 (2009), pp. 333-345.

<sup>370</sup> Andreas W. Daum, 'Varieties of Popular Science and the Transformations of Public Knowledge: Some Historical Reflections', *Isis*, 100.2 (2009), pp. 319-332.

<sup>371</sup> *Ibid.*, p. 329.

debunked contention that a passive readership was created, this chapter is more concerned with how knowledge was framed and designed in order to realise intellectual and financial success, and is part of the wider aim of this thesis to understand how meaning is made and shaped through material form.<sup>372</sup>

### The History of Earth History: Geology Before The Revival of Wood Engraving 1800-1830

Borne out of a number of different disciplines of natural philosophy including botany, zoology and mineralogy, geology often encompassed all of these disciplines within grand theories of the Earth's formation. Running parallel to the conception of geology as a distinct branch of science were debates over the very definitions of science itself. Leading thinkers such as William Whewell, Augustus de Morgan, Richard Jones and the astronomer John Herschel, attempted to formulate a coherent definition of science.<sup>373</sup> The establishment of different scientific disciplines throughout the first half of the nineteenth century made any single definition of science considerably more difficult.

Of all the branches of science associated with natural history, none were more controversial than geology throughout the early-nineteenth century. Theories of the natural history of the Earth varied dramatically and were keenly contested, resulting in a wealth of publications. However, while these publications were comprehensible to those invested in geological research, there was growing discontent over the style in which geologists presented their theories and findings. Scientific knowledge had to become general knowledge. Practitioners had to seek ways of communicating their scientific thoughts and activities to an emerging mass readership.

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<sup>372</sup> James Secord and Jonathon Topham have provided fascinating insights into the diverse readership of early-Victorian science. See Secord, *Visions of Science*; Topham, 'Beyond the "Common Context"' pp. 233-262.

<sup>373</sup> Richard Yeo, *Defining Science: William Whewell, Natural Knowledge, and the Public Debate in Early Victorian Britain* (Cambridge, 1993), pp. 9-21.

Early developments in geology emerged predominantly from Scotland. John Playfair and particularly James Hutton were at the forefront of the changes to the ways in which the study of the Earth was undertaken. Although Hutton was not the first to reject theoretical methods of earlier geologists in favour of a practice-based geology, his work would provide future enthusiasts of geology with a framework on how to undertake their research. Geology's marginal place within the broader field of natural philosophy before 1800 is highlighted by the absence of any definition of it in the 1797 edition of the *Encyclopaedia Britannica*. The growing reputation of the discipline after 1800 was reflected in an extended entry in the fourth edition of the *Encyclopaedia* thirteen years later.<sup>374</sup> The establishment of geological forums, most notably the Geological Society founded in 1813, provided a space for a growing number of practitioners to discuss and publish their opposing theories about the Earth's formation. Theories of catastrophism, uniformitarianism and evolutionism were rigorously contested within national, continental and trans-Atlantic contexts.<sup>375</sup>

In the preface to his *An Introduction to Geology*, first published in the same year as the founding of the Geological Society, Robert Bakewell had observed the place of geology within the natural sciences:

In the order of succession, mineralogy and geology are the last of the natural sciences; for though an acquaintance with the earth is more important to man than a knowledge of the distant parts of the universe, yet previously to the cultivation of other sciences, and in particular of chemistry, our knowledge of the mineral kingdom could not extend much beyond that of the rudest periods.<sup>376</sup>

By the early nineteenth century, geology had united previously separate frameworks of inquiry into the Earth. The number of publications featuring the word 'geology' in their titles began to rise dramatically. Of those, William Daniel Conybeare and

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<sup>374</sup> Roy Porter, *The Making of Geology: Earth Science in Britain 1660-1815* (Cambridge, 1977), p. 202.

<sup>375</sup> Secord, *Visions of Science*, pp. 138-172; Porter, *The Making of Geology*, pp. 128-136.

<sup>376</sup> Robert Bakewell, *An Introduction to Geology: Illustrative of the General Structure of the Earth* (London, 1813), p. v.

William Phillips's *Outlines of Geology of England and Wales*, of which only the first part was published in 1822, was recognised as one of the most important works in the development of descriptive geology. It included numerous plates engraved by Thomas Webster, who had previously produced the plates for *The Transactions of the Geological Society*.<sup>377</sup> The printed maps induced French travellers to Britain in order to learn how to prepare similar cartographic prints for France.<sup>378</sup> The use of image and text within the descriptive account was vital to its positive reception.

Of all the works that influenced Conybeare and Phillips, none were perhaps more important than Bakewell's publication. His work was one of the first to render geology intelligible to the general reader. An analysis of the first five editions of Bakewell's work reveals the steadily increasing value attached to illustrations as the revival of wood engraving was taking hold. Bakewell lamented the generally negative reaction to the attempts made to make a scientific subject accessible. He objected to those who deemed these publications to be 'superficial [containing] a plentiful share of dullness, combined with a certain degree of technical precision [and] regarded as essential proofs of profundity'.<sup>379</sup> Indeed, even by the mid-nineteenth century, those accusations persisted. The anonymous reviewer in the *Dublin University Magazine* was scathing of scientific works claiming to be 'popular', denouncing them as superficial and vague.<sup>380</sup> Bakewell sought to respond to the criticisms by producing a work that omitted much of the technical and theoretical language featured in more established geological works in favour of more generalised, practical details. He gave a much more general description of the Earth's development and the organisation of strata. He was one of the first to give a clear, intelligible account of the structure, composition and arrangement of the Earth's materials and the changes that had taken place from prehistory.

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<sup>377</sup> *Ibid.*, p. 182.

<sup>378</sup> H.S. Torrens, 'Conybeare, William Daniel', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, Oct 2007 [<http://www.oxforddnc.com/view/article/6129>, accessed 15 June 2016].

<sup>379</sup> Bakewell, *An Introduction to Geology*, p. xi.

<sup>380</sup> 'Geology, Popular and Artistic', *Dublin University Magazine*, September 1853, p. 338.

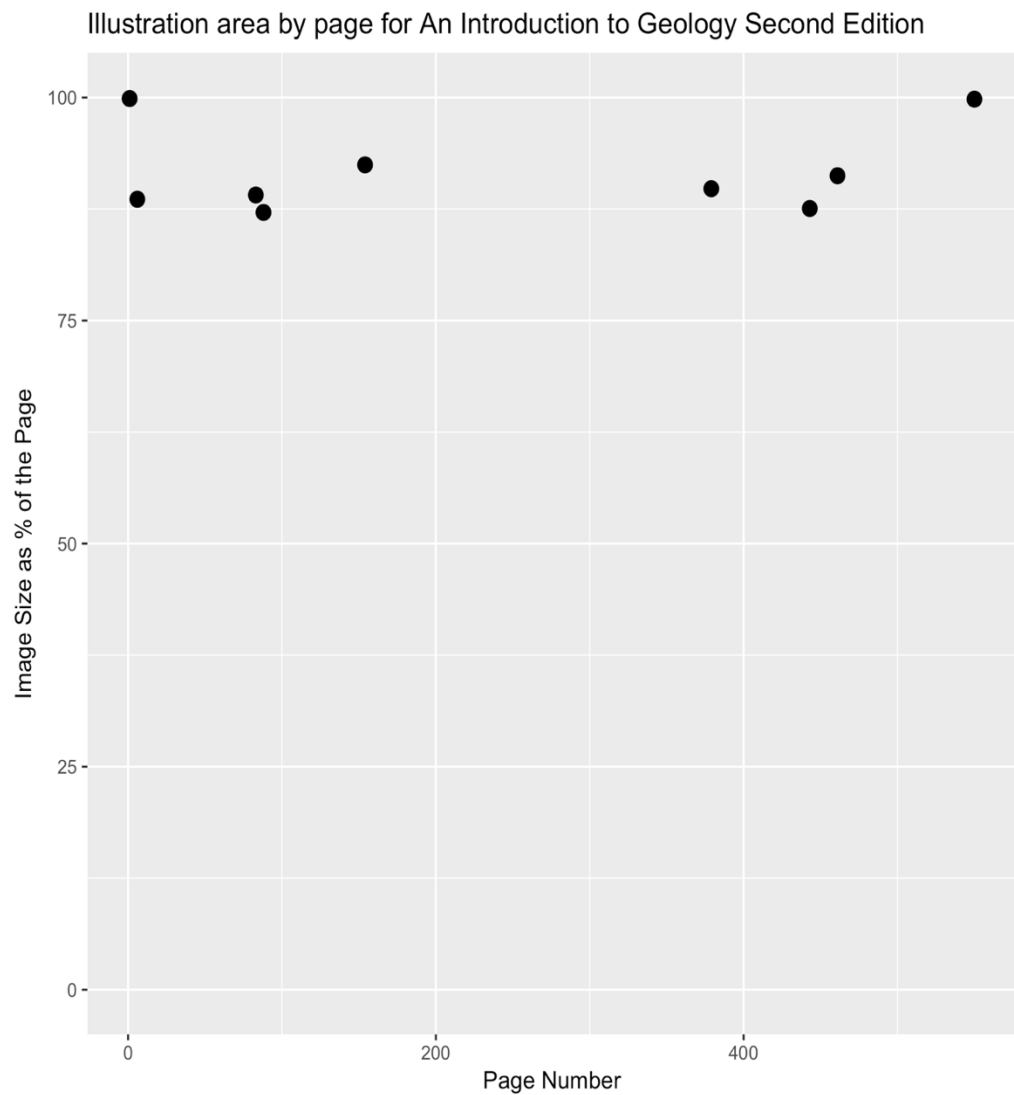
His writing style also differed from many of his contemporaries. Choosing to write in the first person resulted in a much more enlivened and personalised narrative of the Earth's history. The illustrations, though few in number, were made up of maps, strata sections and landscape drawings. Bakewell took advantage of the emerging printing technique of lithography, which did not go unnoticed in the appraisal of his work.<sup>381</sup> His work ran through a total of five English editions and three American editions spanning over twenty-five years, which was testament to its success. New chapters were added in subsequent editions, detailing new findings from his travels around Europe.

Despite Bakewell's unique writing style, what is interesting about the subsequent editions is the steady rise in the number of illustrations. The second edition (1815), for example, featured a total of seven plates made up of maps and landscape drawings (*Figure 3.1*). The use of illustrations does not change a great deal in the third edition. That the addition of new illustrations was highlighted in the advertisements of the work and on the title page perhaps explains the clustering of the images near the front of the book (*Figure 3.2*). By the fifth edition, published in 1838, illustrations played a far greater role in detailing the classifications of rocks and the arrangements of strata. New illustrations representing fossils, rock formations and strata intersections were displayed using in-text wood engravings as opposed to plates (*Figure 3.3*). The American chemist and geologist, Benjamin Silliman, one of the first American professors of science at Yale College, praised the edition as, 'conspicuous for attractiveness, for perspicuity, for a style generally vigorous

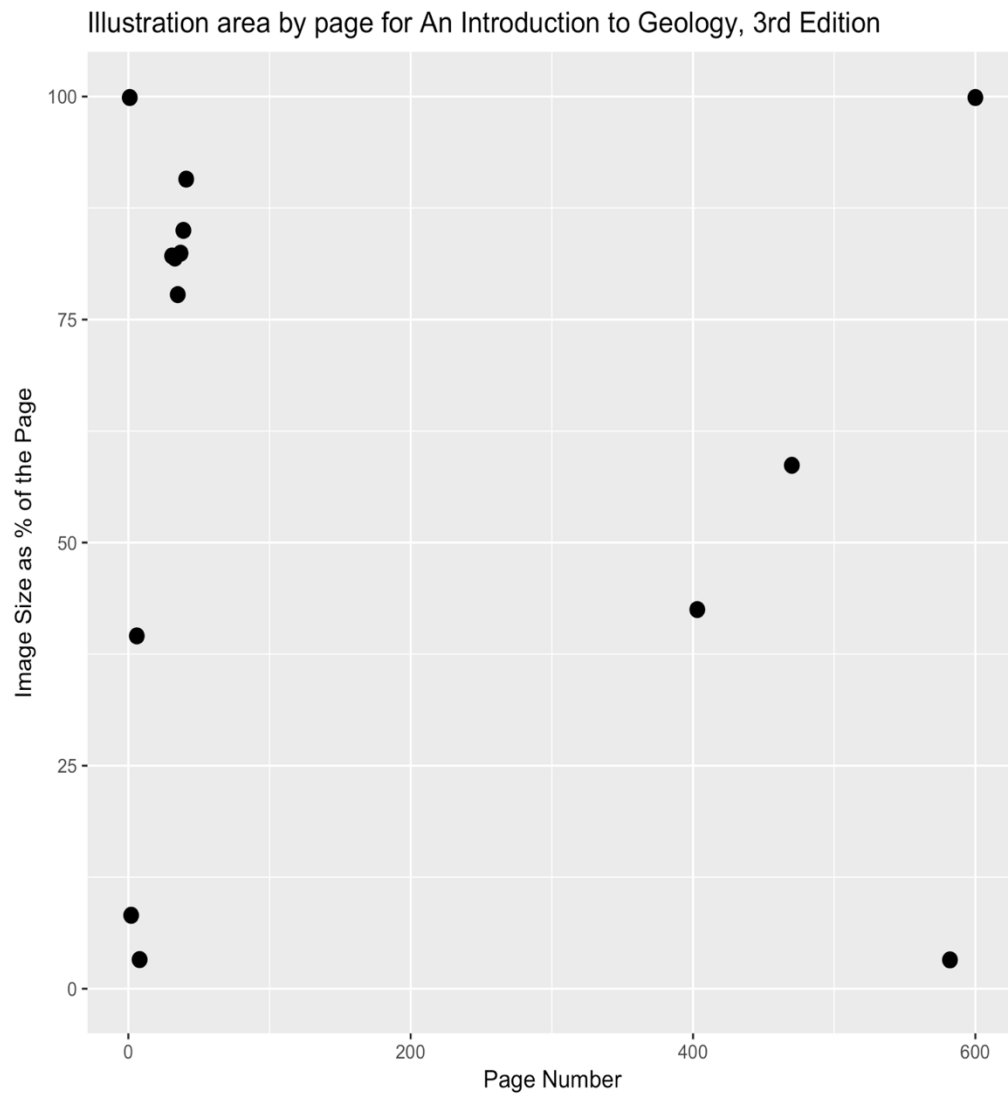
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<sup>381</sup> 'Geology', *The Literary Gazette: A Weekly Journal of Literature, Science, and the Fine Arts*, 24 May 1817, p. 279.

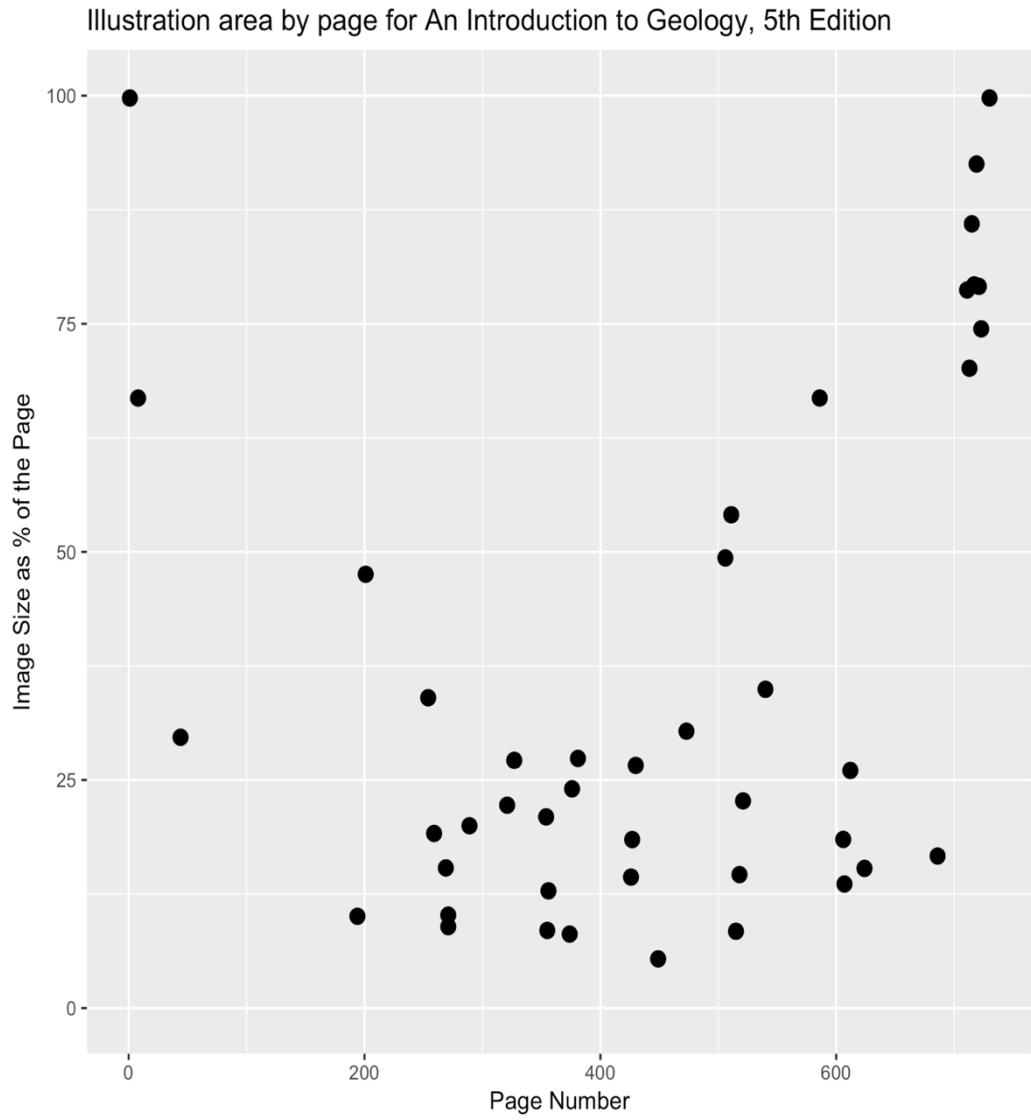




*Figure 3.1* Showing the distribution of illustrations throughout the second edition of Robert Bakewell's *An Introduction to Geology* (1815). Similar to *Figures 1.6, 1.7* and *1.8*, the black dots represent the illustrations found in the book and are plotted depending on their size in relation to size of the page.



*Figure 3.2.* Showing the distribution and size of illustrations in the third edition of Bakewell's *An Introduction to Geology* (1828).



*Figure 3.3.* Showing the Distribution and size of illustrations in the fifth edition of Bakewell's *An Introduction to Geology* (1838)

and correct, often eloquent and beautiful, and, for an independence of spirit which carries the author straight forward to his object, without any servile regard to previous systems'.<sup>382</sup> The introduction of wood engravings as opposed to intaglio and lithographic plates allowed the author to describe the formation of the Earth's surface more clearly and concisely through word and image. Bakewell's five editions, which spanned thirty-five years, highlights the increasingly important role played by the visual within attempts to reinvigorate further editions within the increasingly competitive market for illustrated scientific works. A further analysis of the works of two established geologists, Gideon Mantell and Charles Lyell, helps to reveal the importance of illustration both from a commercial and intellectual perspective, which resulted in changes to the format and style of the books themselves.

### Marketing Geology: Gideon Mantell and Charles Lyell

As Ralph O'Connor has demonstrated, the gentlemen of science who had 'consolidated their position at the top of the knowledge producing hierarchy', were forced to consider the marketing potential of their publications amidst new societies and practices by which geology was communicated to the public.<sup>383</sup> The number of periodicals devoted to scientific findings had more than trebled between 1815 and 1830 and increased exponentially after 1836 as a result of the reduction of tax on newspapers.<sup>384</sup> The rise in the number of periodicals ran parallel to the emergence of scientific societies. These societies frequently published and added to the increasing abundance of scientific literature. The Society for the Diffusion of Knowledge as well as leading publishers including John Murray and Longman, released several publications throughout the 1820s and 1830s under the term 'popular science'. The emergence of female popularisers of science also found a niche in the market and targeted new audiences made up of 'uninformed but

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<sup>382</sup> 'An Introduction to Geology', *The Athenaeum*, 12 October 1838, p. 675.

<sup>383</sup> O'Connor, *The Earth on Show*, pp. 193

<sup>384</sup> *Ibid.*, pp. 193-194.

receptive' women.<sup>385</sup> The popularisation of geology became increasingly competitive by the second half of the nineteenth century.

O'Connor focuses on the changes in writing styles within attempts by leading thinkers to compete within an increasingly unstable market for geological knowledge. For authors whose aim was to capture the imagination of their readers, literary techniques remained the most important form of communication at a time when pictures of past worlds were only steadily being introduced to geological publications.<sup>386</sup> Yet the period between 1830 and 1850 witnessed the steady rise in the incorporation of wood engravings to these texts. The inclusion of illustrations satisfied both the intellectual considerations of the author, who wished to appeal both to fellow geologists and to the student of geology, and the commercial imperatives of the publisher, whose primary concern lay in the profit margin of new editions. These illustrations were not always the most aesthetically striking, but were crucial in rendering what was a new and complex science into a more intelligible form.

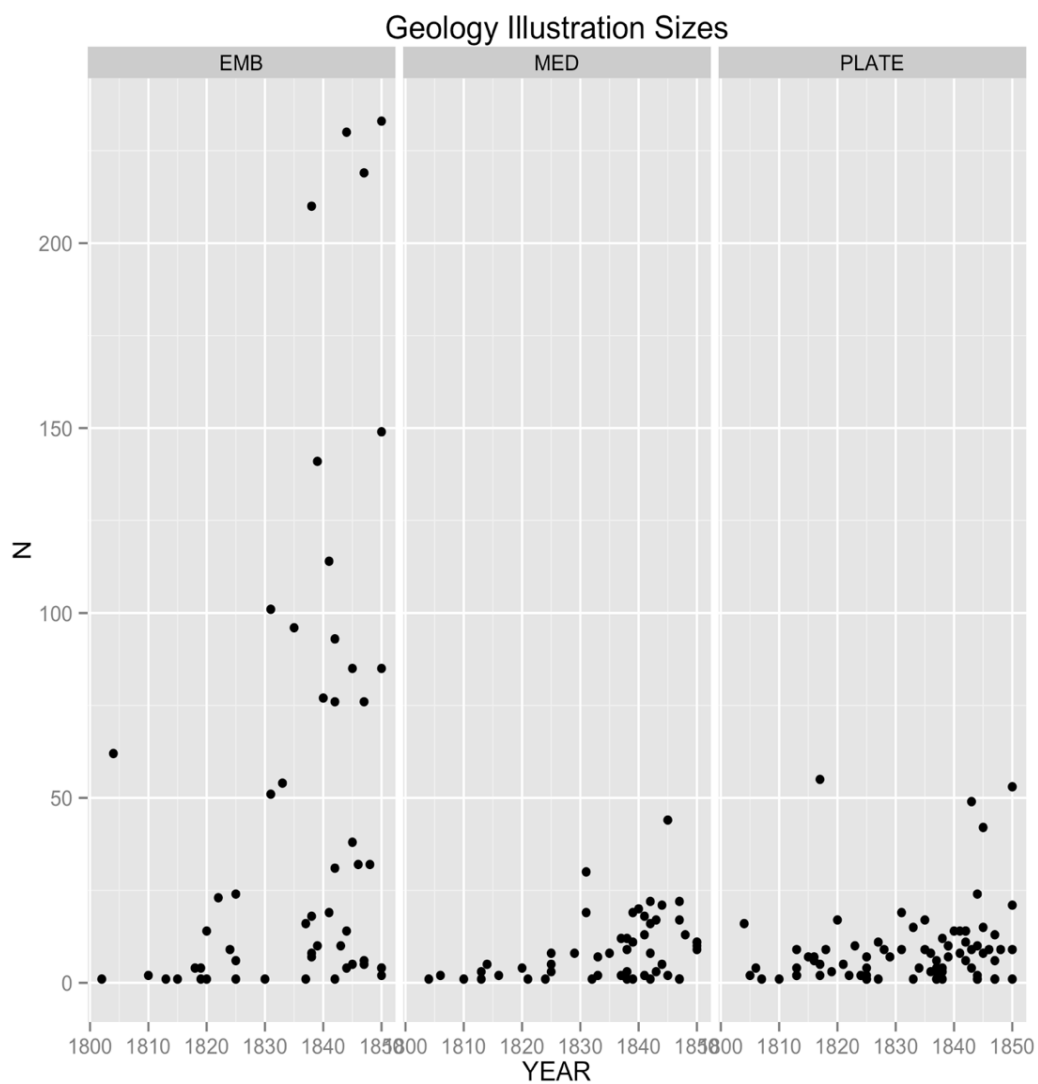
Wood engravings were particularly important for geologists whose goal was, to borrow Martin Rudwick's phrase, to 'burst the limits of time' by gaining reliable knowledge of the Earth's history prior to human records.<sup>387</sup> From 1830 onwards, the incorporation of this 'visual language' through wood engraving began to flourish (*Figure 3.4*). Whilst diagrammatic illustrations and representations of rock formations and strata required a certain level of accuracy, they did not need to satisfy the highly intricate level of detail important to works of anatomy or botany. Anne Secord's study into books dedicated to botany has highlighted the importance of observation within botanical specimens. Illustrations were incorporated in order to create a 'sensory enjoyment' in which colour, delicacy and intricacy were

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<sup>385</sup> Bernard Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago, 2007), pp. 18-34.

<sup>386</sup> O'Connor, *Earth on Show*, pp. 2-7, 217-263.

<sup>387</sup> See Martin Rudwick, *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution* (Chicago, 2005).



*Figure 3.4.* Showing the instances of embellishments, half-page illustrations and plates in 133 geological works found in the British Library dataset of book titles from 1810-1850. The black dots represent geological books that feature embellishments, medium-sized illustrations and plates. The Y axis represents the number of illustrations found in those books. The graph clearly shows the dramatic rise of small in-text illustrations in geological books after 1830.

essential.<sup>388</sup> Wood engraving provided a suitable medium for conveying findings of leading geologists to the general reader who, despite the rise in the number of popularisers of science, remained important in demystifying geological research.<sup>389</sup>

The production of this visual language in the marketing of geological publications can best be seen in the works of two of most notable nineteenth century geologists, Gideon Algernon Mantell and Charles Lyell. Mantell's two most influential works published in the 1830s featured an abundance of wood engravings. In 1833 he published *Geology of the South-East of England*, supported by over 150 subscribers including leading geologists such as Lyell, William Buckland and William Conybeare. In total, the work featured 76 illustrations, 54 of which were wood engravings. Mantell hoped that the presentation of his work would make it 'acceptable both to the natural philosopher and to the general reader.'<sup>390</sup> In 1838 he published a series of lectures collectively entitled *The Wonders of Geology*. Such was the success of the first edition, exhausting a print run of two thousand copies within the first few months of its publication, he produced a second edition a year later. The second edition was embellished with a total of 170 illustrations, 131 of which were wood engravings, nearly twice the number of the first edition.

Mantell stressed the importance of the new illustrations in the preface to the second edition, of which a number were copied from his earlier publication. He hoped they would 'enhance the interest of these volumes, without having materially increased their size and price.'<sup>391</sup> Given that these geological books were already at the higher end of the market for illustrated books, Mantell's work cost fifteen shillings, the efficiency and level of simplicity of design that could be achieved through wood engraving allowed geologists such as Mantell to render geology intelligible to a wider readership. By the sixth edition, published in 1848, it was

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<sup>388</sup> Anne Secord, 'Botany on a Plate: Pleasure and the Power of Pictures in Promoting Early-Nineteenth Century Scientific Knowledge, *Isis*, 93.1 (2002), pp. 28-57.

<sup>389</sup> Lightman, 'The Visual Theology of Victorian Popularizers', pp. 651-680; Lightman, "'Voices in Nature'", in Lightman (ed.), *Victorian Science in Context*, pp. 187-212.

<sup>390</sup> Gideon Mantell, *The Geology of South-East England* (London, 1833), p. vii.

<sup>391</sup> Gideon Mantell, *The Wonders of Geology; or, a familiar exposition of geological phenomena*, Volume 1 (London, 1839), p. viii.

argued that ‘in no work will the intelligent reader unacquainted with geology, find a more truthful and eloquent exposition of the wonders it comprehends; or the man of the science, a more valuable compendium of the present state of palaeontological and geological knowledge’.<sup>392</sup> His work was lauded for its style and presentation and was ‘all that could be wished for in typography, illustration, binding, and decoration’.<sup>393</sup> The number of illustrations in Mantell’s *Wonders of Geology* compared to his more specialist publication *Geology in the South-West of England* points to the function of illustration over the written text in democratising the general rules and laws of geology.

Another of the leading figures within the field, who was equally aware of the benefits of wood as a printing medium was Charles Lyell. Lyell’s *The Principles of Geology*, published in three volumes between 1830 and 1833, proved to be one of the seminal geological texts of the nineteenth century. An analysis of illustrations in both his *Principles* and that of his lesser known work *Elements of Geology* (1838) reveals the significance of wood engraving to democratising knowledge, which had a significant bearing on the form these works took in order to meet market demands.

Lyell was a pivotal figure in the development of geology throughout the nineteenth century. By 1830, his reputation amongst geological circles was well established, mainly through his election to the Geological Society as joint secretary in 1823.<sup>394</sup> Lyell’s *Principles*, which controversially stated that many of the changes to the Earth’s surface were the result of slow-moving processes that are still in operation today, was widely recognised to have transformed the debate concerning the philosophical status of geology.<sup>395</sup> Secord has argued that it was the clearest

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<sup>392</sup> ‘Mantell’s Geology’ *The Literary Gazette: A Weekly Journal of Literature, Science, and the Fine Arts*, 5 February 1848, p. 99.

<sup>393</sup> *Ibid.*

<sup>394</sup> For more on the rise of Lyell’s reputation by 1830, see Secord, *Visions of Science*, pp. 138-142; Leonard Wilson, *Charles Lyell: The Years to 1841: The Revolution in Geology* (New Haven and London, 1970).

<sup>395</sup> For an examination into the theoretical innovations of Lyell see John A. Breyer, ‘Charles Lyell, Geological Change and “Causes Now in Operation”’, *Earth Sciences History*, 25.1 (2006), pp. 57-68, Owen Anderson, ‘Charles Lyell, Uniformitarianism, And Interpretive Principles’, in Amanda Mordavsky Caleb (ed.), *Recreating Science in Nineteenth-Century Britain*, (Newcastle, 2007), pp. 49-64.



vindication of geology as a form of philosophical enquiry.<sup>396</sup> *The Principles*, which reached a remarkable twelve editions spanning over thirty years, was to prove influential for the remainder of the century and Lyell became canonised by his contemporaries as a result. In an obituary to him printed in *The Saturday Review* Lyell was hailed as the most important of the early geologists:

We would not for a moment disparage the labours of such men as Murchison, Phillips, and Sedgwick; but all these, though vying with him perhaps in their actual knowledge of the subject, and the extent and value of their original researches, stand far below him in that grasp of it as a whole, and that power of generalization by which he made his knowledge fruitful.<sup>397</sup>

Such was the reputation of Lyell that Charles Darwin, who was greatly influenced by him, sent a copy of Lyell's work to George Robert Waterhouse who would later become keeper of the geology department in the British Museum. 'I'm so determined to make you a geologist', he said, 'that I have taken the liberty of sending you a copy of Lyell, by which means I obtain full right to mal-treat and abuse you till you have read it.'<sup>398</sup> Lyell was also said to have done for geology what the great astronomer Sir John Herschel had done for the student of astronomy in his *Outlines*. His work was vital to rendering geology a fundamentally modern science.

The first three editions of Lyell's *Principles* featured a limited number of engraved plates. Perhaps the most famous was his depiction of the Temple of Serapis, a frontispiece that would continue to be printed in further editions.<sup>399</sup> Ralph O'Connor has stated that Lyell, rather than focusing on the visual, used effective description and textual tropes in order to synthesise scientific data into a compelling form of literature as well as a marketable commodity. 'Imaginative

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<sup>396</sup> James A. Secord, *Visions of Science: Books and Readers at the Dawn of the Victorian Age* (Oxford, 2014), pp. 144-155.

<sup>397</sup> *The Saturday Review of Politics, Literature, Science and Art*, 27 February 1875, p. 274.

<sup>398</sup> Darwin Correspondence Project, Letter no. 416, Letter from Charles Darwin to George Robert Waterhouse, August 1838, <http://www.darwinproject.ac.uk/DCP-LETT-416>, [Accessed 23 May 2016].

<sup>399</sup> For more on the significance of the Temple of Serapis, see Rudwick, *Worlds Before Adam*, pp. 106-113.

impact', he notes 'is made to validate Lyell's science in the highest sense.'<sup>400</sup> Whilst literary techniques were an important strategy in the completion of Lyell's *Principles*, the correspondence between him and his publisher, John Murray, as well as the publication of subsequent editions of his *Principles* suggest that Lyell recognised the importance of illustration to his written text. In March 1835, four months before the publication of the fourth edition of his *Principles*, Lyell suggested the addition of 'seven or eight' new woodcuts as well as a new lithographed frontispiece. He claimed that the new illustrations would take 'the greater part if not every shilling of [...] £20.'<sup>401</sup> Undoubtedly, the choice of printing method was made with financial considerations in mind. Lyell had calculated, for example, that if Murray could get a plate from the first edition engraved on steel 'drawn well' for ten pounds, the total price together with the wood engravings would not exceed thirty pounds.<sup>402</sup> However, Lyell was also fully aware of the advantages of the addition of a substantial visual component to his *Principles*:

I have found on reading over and studying the whole work this time that I could spread over it a great body of illustrations in Natural History which could, I am sure if interwoven with the text greatly interest and instruct the student and enliven some parts of the book now destitute entirely of illustration. [...] I am sure this edition will be sufficiently beyond any former one both in matter and illustration to stand any chance of success.<sup>403</sup>

Lyell's letter to Murray reveals the importance of illustrations in re-invigorating later editions of Lyell's most celebrated work, which also had the potential to appeal not only to the elite but also to the student of geology.

Lyell's intention to compile an altogether more illustrated work is evident in subsequent editions of his *Principles*. The fifth edition, printed in four volumes priced at a total of twenty-eight shillings, exhausted the print run of two thousand copies. His sixth edition, published in 1840, contained 111 illustrations, 77 of which

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<sup>400</sup> O'Connor, *The Earth on Show*, 166, pp. 193-214.

<sup>401</sup> NLS: MS. 40727, Charles Lyell to John Murray, 19 March 1835.

<sup>402</sup> Lyell suggested to Murray that James Bradley could etch the steel plate, though he had reservations over his competency to achieve an accurate illustration. See *Ibid.* NLS, MS. 40727.

<sup>403</sup> NLS: MS. 40727, Charles Lyell to John Murray, 14 March 1835.

were wood engravings (Figure 3.5). The heavily illustrated editions achieved noted success, with all 1250 copies sold within twelve months of publication.<sup>404</sup> That the ninth edition of his *Principles* made £954 from five thousand copies was reflective of the sustained commercial success of his and Murray's publishing ventures, which was greatly aided by the addition of illustration that served to render Lyell's research more comprehensible to the student of geology as opposed to the established scientist.<sup>405</sup>

Lyell's letter to Murray over the publication of the fourth edition reveals both the commercial and intellectual advantages of including additional illustrations. Such was the importance of illustration to the fourth edition for Lyell, that he frequently complained to his publisher over the errors in the advertisements for the edition. The advertisement placed in *The Literary Gazette*, for example, stated that the four-volume edition featured 147 wood engravings and 13 plates, when in fact the work contained 164 wood engravings and 16 plates.<sup>406</sup> Lyell's misgivings over the incorrect number of illustrations, in addition to his ambition to appeal to 'interest and instruct the student' underlines the value of illustration to the fourth edition in both meeting the commercial demands of a market for illustrated books as well as Lyell's ambition to open up geology outside of the circles of the gentlemen of science.<sup>407</sup> Yet it was his *Elements of Geology*, first published in 1838, rather than his *Principles* that highlight his attempts to democratise geology driven by the visual as opposed to the textual.

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<sup>404</sup> The smaller print run of the sixth edition compared to the two thousand copies of the fifth edition was a consequence of Lyell's fear that his *Principles* would become antiquated 'by being four years behind the knowledge of our rapidly progressing science.' NLS: MS. 40728, Charles Lyell to John Murray, 7 January 1840.

<sup>405</sup> Receipt of Payment from Charles Lyell to John Murray NLS, MS. 40729.

<sup>406</sup> See NLS: MS 40727, Charles Lyell to John Murray, October 1835.

<sup>407</sup> NLS: MS. 40727, Charles Lyell to John Murray, 14 March 1835.

Illustration area by page for Principles of Geology 6th Edition

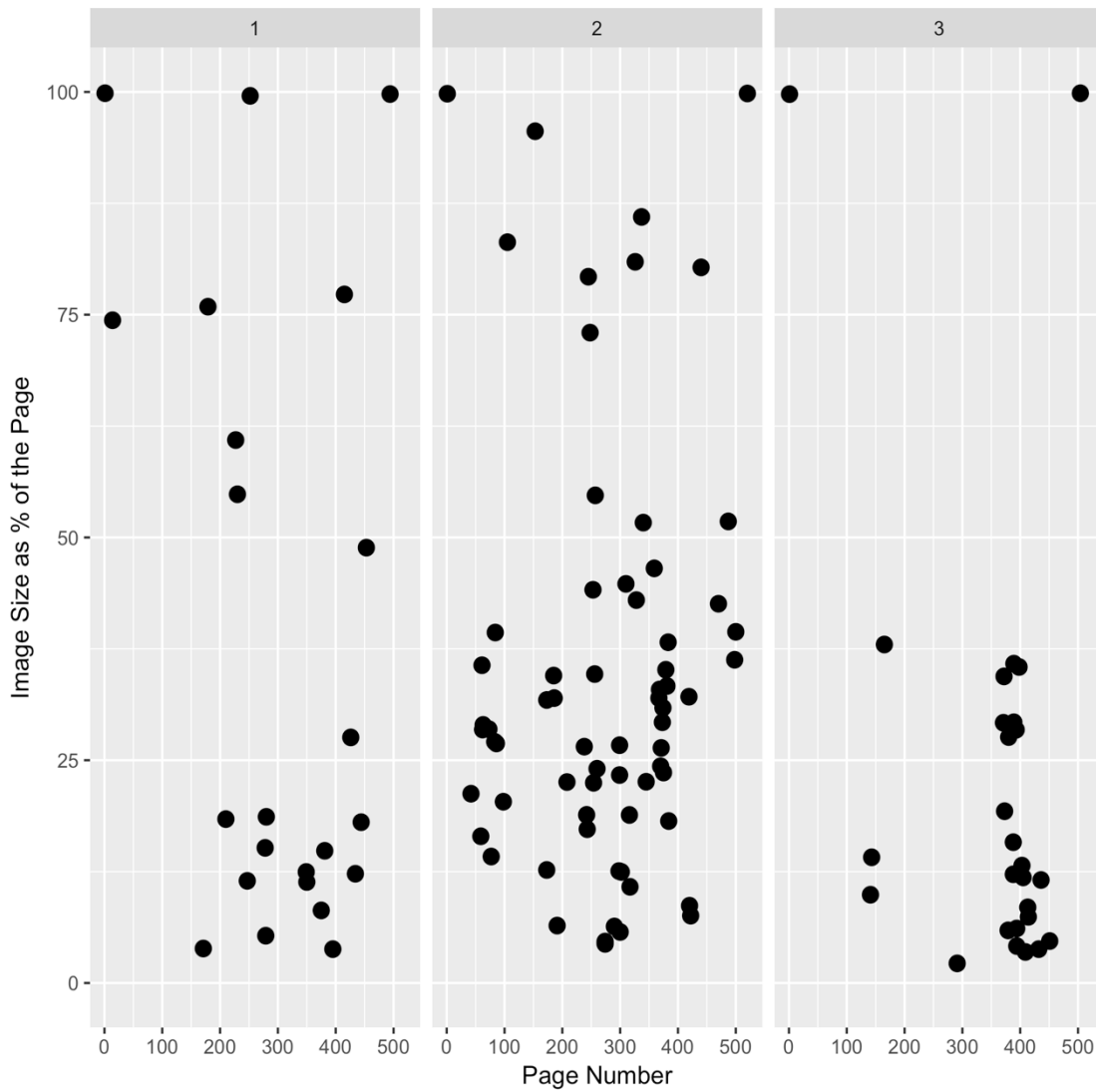


Figure 3.5. Showing the distribution and size of illustrations printed in three volumes of Charles Lyell's *Principles of Geology* 3 Vols (6<sup>th</sup> edn., London, 1840). The page numbers start at '0' on three occasions along the X axis as that denotes the start of the next volume.

## Elementary Illustrations for Elementary Geology

Whilst the incorporation of wood engravings within the latter editions of Lyell's *Principles* was designed to appeal to the knowledgeable student of geology, a comparison between the arrangement of illustrations in this edition and the first edition of his *Elements of Geology* underlines the increasingly vital role the visual component played in his attempts to democratise geological knowledge to the 'general reader', which transformed the format of the book more generally. The publication of bulky quarto editions in the manner of *Principles* presented Lyell and Murray with a commercial dilemma. The physician and amateur geologist William Henry Fitton had suggested to Lyell the idea of publishing a duodecimo volume as a supplement to the first edition of his *Principles*. This new publication would contain all the corrections and additions from the second, third and fourth editions. Lyell suggested to Murray that this could be commercially advantageous and would prompt greater sales. The significance of the illustrations within the work were not lost on Lyell. 'It would make a splendid illustrated little work of 250 pages. Was such a thing even done? [...] I think the publisher and author would both get some credit for doing it, and if determined, it might be suggested in the forthcoming LR [*Literary Review*] review'.<sup>408</sup> Lyell was fully aware of the commercial potential of his *Elements*.

Lyell, as a geologist first and foremost, was aware of the difficulty aligning commercial and intellectual pursuits. Fearful that the public would not appreciate the independence of the *Principles* from the *Elements*, he originally intended to publish the *Elements* as part of the fifth edition of the *Principles*. He was concerned that most people 'after getting the smaller, cheaper, and [...] dryer work first, would not afterwards be led to purchase the more entertaining, attractive [...] costlier work'.<sup>409</sup> In the preface to the second edition of his *Elements*, he even made the suggestion that students should read his *Principles* first so that their curiosity 'may

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<sup>408</sup> NLS: MS. 40727, Charles Lyell to John Murray, 21 March 1835.

<sup>409</sup> NLS: MS. 40727, Charles Lyell to John Murray, 21 September 1836.

be thus excited by entering at once on the sketch which has been given of the progress of opinion in geology [...] and by discussion of the many questions of general interest to which the examination of the Earth's structure gives rise.'<sup>410</sup> Lyell believed that his primary work was just as interesting and important to the general reader as his *Elements*, which perhaps partly explains Lyell's decision to include more illustrations in subsequent editions of his *Principles*.

Lyell, however, was conscious of the public demand for an elementary work from him and published his *Elements* as a separate volume. Similar to his *Principles*, the illustrations were drawn by George Sowerby and engraved by James Lee, a prominent London wood engraver whose father had worked under Thomas Bewick towards the end of the eighteenth century.<sup>411</sup> The copious number of illustrations in his *Elements* suggest that the work was driven by the visual as opposed to the textual. The first edition contained 220 illustrations, compared to the sixth edition of *The Principles* published in 1841, which contained less than half that number. Moreover, his *Elements* featured just two intaglio and lithographic prints, eleven fewer than that of his *Principles* (Figure 3.6). Lyell had calculated that the total cost of all the illustrations printed in the *Elements* totalled £150. Around fifty wood engravings were taken from his *Principles* and printed in his first edition of *Elements*. His *Elements* was printed in octavo format and totalled 571 pages, compared to the 1,800 pages of the *Principles*. Such was the popularity of octavo that there were frequent calls for Lyell to publish his *Principles* in the same format and 'easy type' of his *Elements*.<sup>412</sup> Lyell resisted, claiming that it would be too expensive. The publication of the *Elements*, he suggested, allowed him to reduce the 1,800 pages of

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<sup>410</sup> Charles Lyell, *Elements of Geology* (2<sup>nd</sup> Edn., London, 1841).

<sup>411</sup> His father, John Lee, was considered by the wood engraver John Jackson to be one of the finest wood engravers based in London. See Lucy Peltz, Lee, John (d. 18040, wood engraver. *Oxford Dictionary of National Biography*, <http://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-16295> [Accessed, April 11, 2018].

<sup>412</sup> NLS: MS. 40727, Charles Lyell to John Murray, 25 September 1838.

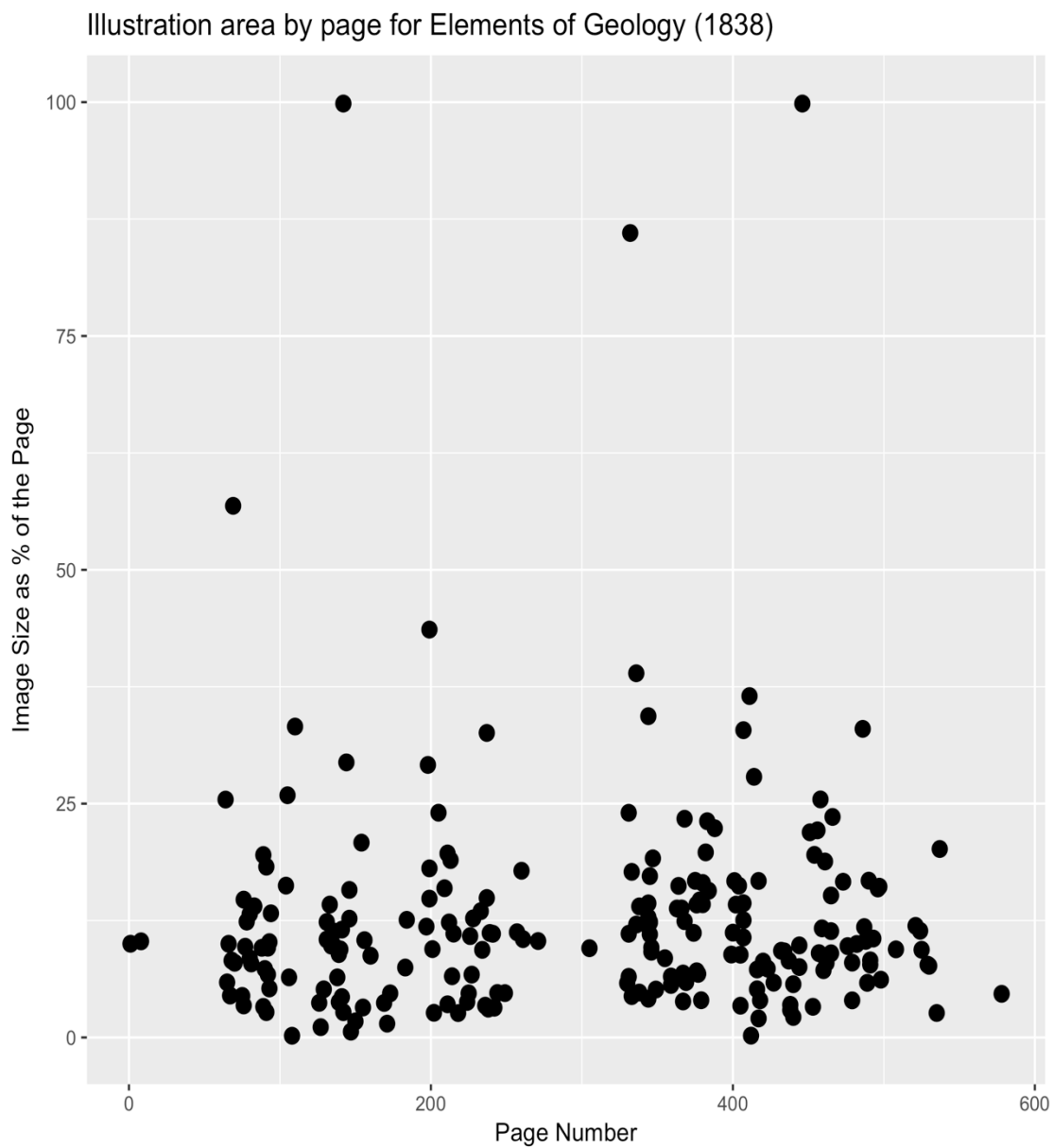


Figure 3.6 Showing the distribution and size of illustrations printed in Charles Lyell's *Elements of Geology* (1838).

the *Principles* to 1,750 pages as result of his 1838 publication, but argued it would make little difference in terms of altering the type.<sup>413</sup>

These calls were typical of the favour his *Elements* received. Charles Darwin wrote to Lyell to express his pleasure having read the work: ‘I repeat I am full of admiration at it. –it is as clear as daylight, [...] you have contrived to make it quite “juicy”, as we used to say as children of a good story.’<sup>414</sup> Within the columns of *The Edinburgh Review*, Fitton suggested it was very different to what he had originally anticipated. Although it was lauded as one of the most popular books published in England on the principles of geology, Fitton expected something quite different: ‘We had looked for something of a very plain and rudimentary description- a treatise, in short, that would have rendered the subject inviting by simplicity of style and illustrations, and could have been read with ease and satisfaction by a well-educated woman.’<sup>415</sup> Nevertheless, its general content received favourable attention. ‘Nothing in these “Elements”’, wrote one observer, ‘has pleased us more than the anxiety with which the author confines himself to facts and avoids the flights of seductive theories[...].’<sup>416</sup>

Given the relative restraint in his use of literary expression, it was his illustrations that were the forefront of the marketing strategies for a work designed to democratise geological knowledge, to ‘do little but make broad statements [but] which rest on a basis firm as the ancient rocks themselves.’<sup>417</sup> By 1851, Lyell had reduced the number of pages of his *Elements* and re-titled the work *A Manual of Elementary Geology*. He suggested to Murray that this new format would be very effective with just one coloured plate ‘and by simply using woodcuts.’<sup>418</sup> Lyell’s

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<sup>413</sup> *Ibid.*

<sup>414</sup> Darwin Correspondence Project, Letter no. 424, Letter from Charles Darwin to Charles Lyell, 9 August 1838, <https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-424.xml;query=Charles%20Lyell;brand=default> [Accessed 23 May 2016].

<sup>415</sup> ‘A Review of Mr. Lyell’s “Elements of Geology”; with Observations on the progress of the Huttonian Theory of the Earth’, *The Edinburgh Review*, 1839 (No precise date).

<sup>416</sup> *The Monthly Review*, October 1838, p. 293.

<sup>417</sup> *The Literary Gazette*, 22 November 1856, p. 924. Charles Lyell, for example, frequently expressed his own personal observations in his *Elements of Geology*.

<sup>418</sup> NLS: MS. 40828, Folios 55-108, Letter from John Murray to Charles Lyell, 23 April 1850. The total cost of the wood engravings was thirteen pounds, eleven shillings and sixpence.



suggestion perfectly captures the importance of wood engraving to convey geological research simply in order to achieve his ambition of democratising geology.

The new edition was an immediate success, selling two thousand copies within nine months of its publication.<sup>419</sup> It was observed that the purchaser of his work would pay ‘little more for it than he would pay for trash’ in consideration of the sheer number of illustrations which would satisfy the purchaser ‘of giving his money for money’s worth.’<sup>420</sup> By 1871, the publication was again re-titled, and aimed more specifically for use in schools, becoming the leading geological textbook in England. In a review of the eighth edition of *Principles of Geology*, while confirming Lyell’s assertion that *Elements* was not merely an introductory work to *Principles*, *The Student’s Elements of Geology*, priced at nine shillings, was extolled as the best elementary work on the subject. This was due to clarity, intelligibility, comprehensive scope and ‘the masterly ease of style throughout [including] the number, accuracy and beauty of the woodcuts incorporated with the text.’<sup>421</sup> Simplicity of style and execution of the visual were intended to reflect the attempts to provide a straightforward, intelligible narrative of the Earth’s history. The medium of wood engraving very much informed both the cultural and intellectual ambitions both author and publisher hoped to achieve through the numerous editions of *The Elements*.

Lyell was one of a few leading figures of geology to publish works of a style similar to that of a manual or textbook. It was noted by one observer in *The Athenaeum* that while England had been ‘fortunate in its expositors’, learned professionals failed to teach ‘the elements of the branch of knowledge they have mastered’.<sup>422</sup> Lyell belonged to the cohort of successful geologists who had ‘put on the professional gown and taken up the pen to write manuals and textbooks’ and thus ‘made themselves and their favourite study alike popular.’<sup>423</sup>

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<sup>419</sup> NLS, MS. 40728, Letter from John Murray III to Charles Lyell, 24 October 1851.

<sup>420</sup> ‘Lyell’s Geology’, *Leader and Saturday Analyst*, 5 May 1855, p. 427.

<sup>421</sup> *The Quarterly Review*, September 1851, p. 416.

<sup>422</sup> *The Athenaeum*, 14 December 1844, p. 1136.

<sup>423</sup> *Ibid.*

David Ansted, who was elected professor of Geology at King's College London in 1840 and vice-secretary of the Geological Society in 1844, was similarly recognised for his attempts to provide the geological enthusiast with a general but comprehensive outline of geology's fundamental laws, though not always successfully.<sup>424</sup> One observer admitted that geology as a science 'is not perhaps so much indebted to him as might be expected for original researchers or for additions to its special literature;- but no writer has more clearly and ably set out its great facts and principles.'<sup>425</sup> In the preface to his 1847 publication *The Ancient World, or Picturesque Sketches of Creation*, he claimed that the object of his work was to communicate 'in a simple form, to the general reader, the chief results of Geological Investigation.'<sup>426</sup> Fully aware of the multiplicity of views regarding the formation of the Earth, he was careful to distance himself from such discussions within the book so as to satisfy the interests of the enthusiast as opposed to the expert. Three years earlier, the same year that he was made vice-secretary, he published a much broader and general survey of geology entitled *Geology, introductory, descriptive and practical*. Ansted made his intentions for the book clear:

In this work I am now undertaking, it is my object to acquaint the reader with the nature of the *foundations* of the science of Geology. I trust [...] I shall be able to show that the facts themselves upon which the theories are founded, are sufficiently numerous and important to deserve the most careful consideration; that the acquirement of a general knowledge of these facts is, therefore, an object not unworthy the serious attention of all those who are interested in the works of Nature...<sup>427</sup>

He was careful to emphasise that he was interested in 'the elucidation of truth, not the establishment of a theory.'<sup>428</sup> His work contained a total of 251 illustrations, 230 of which were wood engravings printed in letterpress. It was published by John Van

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<sup>424</sup> His entry in the Oxford DNB included a quote from a reviewer in 1887 who suggested that 'none of his books have kept their place in the market'. John C. Thackray, 'Ansted, David Thomas (1814-1880)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, May 2015 [http://www.oxforddnb.com/view/article/577, accessed 13 May 2016].

<sup>425</sup> *The Athenaeum*, 12 October 1850, p. 1065.

<sup>426</sup> David Ansted, *The Ancient World. Or, Picturesque Sketches of Creation* (London, 1847), vii.

<sup>427</sup> David Ansted, *Geology, Introductory, descriptive and practical*, Vol. I (London, 1844), pp. 2-3.

<sup>428</sup> *Ibid.*, p. 3

Voorst, a respected publisher of natural history. The illustrations were praised for their clarity and neatness, adding ‘in an extraordinary degree to the value and the interest of the text.’<sup>429</sup> After the publication of the first eight parts of his work it was suggested that Ansted’s geology would become the most popular general text due to this style and method, similar to that of Mantell and Lyell, though without the elegance of the former and the ‘rigid science’ of the latter.<sup>430</sup> The wood engravings were singled out for particular praise, ‘being highly useful in explaining the text.’<sup>431</sup>

Ansted’s subsequent edition, printed in 1850, reinforces the idea that these publications were being driven by the visual. Conscious of the cost of his previous publications, printed in two volumes in octavo and priced at two pounds, two shillings (the two volumes were split into eight parts each priced at five shillings), he wished to produce a smaller, cheaper work that would gratify the educational demands of the student and avoiding ‘unnecessary discussion’ by confining himself ‘strictly to facts.’ Despite the reduction in the amount of text, over four hundred pages were cut from his 1844 work, 160 illustrations were included in the reformatted volume. Ansted’s two publications can perhaps serve to highlight the role of illustration at the point of production. As with Lyell’s *Elements*, commercial success and the successful attempts to democratise what was a complex branch of science were built upon the visual rather than textual description. On a broader level, both Lyell and Ansted’s works show how the printing medium itself drove new publishing ventures that tapped into an increasingly competitive market for scientific knowledge. Wood engraving did not just provide a visual language comprising of rocks, sections and strata. It provided those elite figures who were heavily invested in geological research a marketing strategy that could bring both financial and cultural reward.

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<sup>429</sup> *The Literary Gazette*, September 1844, p. 624.

<sup>430</sup> *Ibid.*, 17 February 1844, p. 112.

<sup>431</sup> *The Spectator*, 5 October 1844.

## The Materiality of Wood and The Ecology of Geological Knowledge

As David McKitterick has observed, knowledge was shared, shaped and transmitted pictorially in various forms of reproductive prints.<sup>432</sup> The simplicity of style and execution that could be derived from a wood engraving provided greater opportunities to share knowledge through visual forms. Geologists often copied illustrations from other leading authorities to use in their own publications; knowledge was thus circulated through the visual rather than the textual. Furthermore, the circulation of these illustrations prompted numerous illustrated publications designed to elucidate the history of the Earth, thus enabling these scientists to not only ‘bring together a considerable congregation of attentive and intelligent listeners’, but to reinforce their own intellectual capital amidst the rising number of illustrated geological texts.<sup>433</sup>

Geologists copied illustrations via a range of methods. The Geological Society housed a number of woodcuts used to illustrate their journal. Charles Darwin often wrote to the Geological Society requesting to borrow wood blocks used to illustrate the Society’s journal in order to reproduce them in his own works.<sup>434</sup> Geologists also requested proofs of the illustrations from each other in order to produce illustrated editions of previously unillustrated texts. The geologist Leonard Horner, for example, requested proofs of Charles Darwin’s wood engravings used for work on South America so that Horner was able to cut them up in order to produce an illustrated catalogue of John Morris’s unillustrated work *Catalogue of British Fossils* (1843).<sup>435</sup> More commonly, illustrations were copied and reprinted from accounts belonging to established scientists. Charles Lyell, for example, used illustrations from the research of Adam Sedgwick, the president of

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<sup>432</sup> David McKitterick, ‘Organising Knowledge in Print’, in *The Cambridge History of the Book*, p. 534.

<sup>433</sup> *The Republican*, 10 November 1826, p. 561.

<sup>434</sup> See, for example, Darwin Correspondence Project, Letter no. 10496F, Letter from Charles Darwin to the Geological Society, 5 May 1876 <http://www.darwinproject.ac.uk/DCP-LETT-10496F> [Accessed 4 December 2017].

<sup>435</sup> See, for example, Darwin Correspondence Project, Letter no. 1032F, Letter from Charles Darwin to David Ansterd, 25 November 1846 <http://www.darwinproject.ac.uk/DCP-LETT-1032F> [Accessed 5 December 2017].

the Geological Society between 1829 and 1831.<sup>436</sup> Mantell's work featured illustrations taken from Bakewell and George Cuvier, one of the most significant continental geologists of the first half of the nineteenth century.<sup>437</sup>

The illustrations belonging to these early geologists were particularly important for publications designed for the use of beginners and enthusiasts. Although other groups were involved in the dissemination of geological knowledge, gentlemen of science could draw upon their experiences from their travels around the world in order to understand the changes to the Earth's structure. Illustrations belonging to these individuals therefore carried a greater level of authority. Over sixty illustrations from Ansted's *Geology, Introductory, Descriptive and Practical* were copied from some of the most influential geological publications of the nineteenth century, including *The Bridgewater Treatises* (1833-1840), Henry De la Belche's *Report on the Geology of Cornwall* (1839), John Phillips's *Illustrations of the Geology of Yorkshire* (1836) and Mantell's *Geology of the South-East of England* (1833). The numerous illustrations in both Lyell's *Principles* and *Elements* were important not only for the text contained within the volumes, but for other geologists who responded to the demand for simplified accounts of the Earth's history. Illustrations printed in his *Elements*, for example, were used in subsequent elementary volumes published by other geologists. David Ansted's *An Elementary Course of Geology, Mineralogy and Physical Geography* (1850), featured a number of illustrations originally printed in Lyell's volume.<sup>438</sup> Copying illustrations not only enhanced the market for illustrated accounts of the history of the Earth's surface, but established an ecology of knowledge through illustrations, reinforcing the reputation of geologists not only within their own works but those belonging to other scientists.

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<sup>436</sup> Letter from Charles Lyell to Adam Sedgwick, January 18, 1838, in *Life Letters and Journals of Sir Charles Lyell* (2<sup>nd</sup> edn., London, 1881), p. 35.

<sup>437</sup> For more on the significance of George Cuvier's work in Britain, see Jonathan R. Topham, 'Science, Print, and Crossing Borders: Importing French Science Books into Britain, 1789-1815', in David N. Livingstone and Charles W. J. Withers (eds), *Geographies of Nineteenth-Century Science* (Chicago and London, 2011), pp. 311-337.

<sup>438</sup> Authors who copied illustrations often referenced the works of the geologists from which they originally belonged, thus reinforcing the intellectual capital of that individual.

Whilst geologists openly shared and copied illustrations from each other, which also served to reinforce the authority of their own findings, the simplicity of copying wood engraving also meant that authors and publishers lost control of the printing of their illustrations in other publications. Many of Lyell's illustrations were copied and printed in the work of poet and geologist George Fleming Richardson, entitled *Geology for Beginners*, published in 1842. Richardson claimed that the motivations for such a work arose from the dearth of works designed to convey information to the 'mere beginner', 'more introductory than the excellent introduction of Mr Bakewell – more elementary than the admirable *Elements* of Mr. Lyell.'<sup>439</sup> Richardson had written to Lyell in acknowledgement of the use of thirteen figures that he had copied from his *Elements*.<sup>440</sup> Upon reading Richardson's work, Lyell found that he had in fact copied forty illustrations from the work. Lyell requested that Murray show Richardson's letter to Hippolyte Baillièrè, Richardson's publisher, in an attempt to prevent 'further plunder' in anticipation of a new edition to be published the following year.<sup>441</sup>

The episode involving Richardson and Lyell reveals how the medium of wood engraving could be exploited for intellectual and commercial ends. At one level it reveals the lack of control over image production with an increasingly competitive market for scientific knowledge. On another, it highlights the capacity to form an ecology of knowledge through the migration of illustrations across various authoritative accounts dedicated to geology. Richardson's intent to write a work deemed more elementary than that of Lyell, whilst simultaneously copying many of his illustrations, suggests the importance of the visual as a far more important mediator of knowledge transfer than written text to audiences who hold no claims to expertise. These illustrations had a simplicity in and of themselves,

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<sup>439</sup> George Fleming Richardson, *Geology for Beginners, comprising a familiar explanation of geology, and its associate science* (London, 1842), p. ix.

<sup>440</sup> NLS: MS. 40728, Charles Lyell to John Murray, 25 March 1843.

<sup>441</sup> *Ibid.*

which meant they could be appropriated to fit the needs of different authors and publishers.

### Stereotyping as Intellectual Rather than Commercial Capital

The value of illustrations found in the works of leading geologists, particularly Charles Lyell, lay not only in the establishment of a visual language for geology within the books themselves, but also outside of these books, which established an ecology of knowledge whereby information was shared, copied and disseminated through the visual rather than the textual component. The capacity to copy and reprint the illustrations cheaply and easily contributed to the rise in the number of heavily illustrated elementary geological texts intended for the student and general reader. The interest in Lyell's illustrations was not limited to England. His illustrations were also sought after by publishers and authors on the continent, particularly France, Germany and America. The process of stereotyping illustrations, invented early in the nineteenth century but becoming a more common practice by 1830, allowed publishers to produce facsimiles of the original illustrations, which enabled them to exploit the market for illustrated books more widely. Yet, as the correspondence between Charles Lyell and John Murray reveal, new printing process such as stereotyping were not immediately embraced by publishers. The tension that this engendered between author and publisher highlights the intellectual as opposed to the commercial advantages offered by stereotyping.

The process involved taking a mould or cast of the surface of the wood block, originally made from papier mâché until the more durable material of plaster of Paris was used after 1820. The block was covered by the plaster of Paris, removed and baked until dry. The cast was then placed in a vat of molten lead alloy and the result was a metal reproduction of the wood block. The great advantage of this method was that the plaster cast made from the wood block could be used indefinitely. Bewick had previously estimated that up to one million prints could be

taken from one of his engravings.<sup>442</sup> Lyell was also fully aware of the durability of wood blocks, suggesting to Murray that all the engravings could be made without having to wait for the publication of future editions.<sup>443</sup> However, the cracks in the wood over time as well as the general wear from printing could affect the final print from the original block. Stereotyping provided a solution to these issues. The cast ensured an exact facsimile of the original print. Proprietors of *The Penny Magazine* were one of the first to use stereotyping. They acknowledged that the cost of re-engraving wood and re-composing types would have stifled their goal of producing thousands more copies of the magazine and thus stereotyping held a strong commercial advantage.<sup>444</sup> It became essential to publishing strategies, particularly by the mid-nineteenth century. The Edinburgh publishers Robert and William Chambers, for example, chose to utilise stereotyping in order to reach a national and transatlantic market. The process allowed them to send stereotyped plates of type down to London so that their periodicals could be printed in the two main publishing centres of the country. The improvements in transport links across the Atlantic also allowed them to exploit a new market by sending stereotypes to American publishers.<sup>445</sup>

The reputation of British geologists was enhanced by the vitality of the science on the continent and, by the mid-nineteenth century at least, America. Jonathan Topham in his illuminating account of the geographical networks of scientific publications between Britain and the continent, has highlighted the significance of French science in Britain throughout the quarter century after the French revolution. Despite the restrictive conditions of war, he has argued, scientific knowledge generally reached Britain relatively quickly.<sup>446</sup> As Charles Withers and David N. Livingstone have observed, textual circulation was not the

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<sup>442</sup>Michael Twyman, *Printing 1770-1970*, p. 22.

<sup>443</sup> NLS: MS. 40727, Charles Lyell to John Murray, 14 March 1835.

<sup>444</sup> 'Printing Presses and Machinery-Bookbinding', *The Penny Magazine of the Society for the Diffusion of Useful Knowledge*, 28 December 1833, p. 505.

<sup>445</sup> Fyfe, *Steam-Powered Knowledge*, chapters 3, 5, 14, 15.

<sup>446</sup> Jonathan R. Topham, 'Science, Print, and Crossing Borders: Importing French Science Books into Britain, 1789-1815', in David N. Livingstone and Charles W. J. Withers (eds), *Geographies of Nineteenth Century Science* (Chicago and London, 2011), pp. 311-337.



only mechanism implicated in ‘science’s mobility.’ They have suggested that the visual side of science was central in the ‘staging of nature as a spectacle [...] and the romanticising of highland wilderness.’<sup>447</sup> As previously stated, geologists as well as other popularisers of science relied upon the visual productions of their contemporaries. The invention of stereotyping enabled the greater circulation of visual forms of knowledge throughout Europe and across the Atlantic.

Stereotyping also became useful for disseminating geological research from respected geologists on the continent, particularly authors and publishers of works that aimed to introduce the general reader and student to the fundamental facts of earth history. Throughout the early part of the nineteenth century, it was a more common practice in France and America than it was in England.<sup>448</sup> Stereotyping wood blocks had first been used in France in order to prevent forgery while English printers used metal plates.<sup>449</sup> David Ansted, for example, wished to use the illustrations from authoritative works from across the channel including Francois Sulpice Beudant’s *Cours Élémentaire d’histoire Naturelle* and Henri Victor Regnault’s *Chimie* for his 1850 work, aimed principally at students for educational purposes. The works of Beudant and Regnault were published by the same publisher, who sold the casts of the illustrations to John Van Voorst for Ansted’s publication.

Although stereotyping was adopted by publishers of geological works, not all were quick to embrace this relatively new print process. An exploration into the impact of newly emerging technologies on geological works can also uncover the power relations between author and publisher in the production of the book. Jonathan Topham has previously suggested that publishers were not merely ‘the lackeys of scientific practitioners’; rather they were fundamental to potentially successful publishing ventures.<sup>450</sup> James Secord has highlighted the vital role of the

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<sup>447</sup> Charles W. J. Withers and David N. Livingstone, ‘Thinking Geographically about Nineteenth-Century Science’, in *Ibid.*, p. 10.

<sup>448</sup> Fyfe, *Steam-Powered Knowledge*, p. 34.

<sup>449</sup> ‘Wood engraving in France’, *The Literary Gazette*, 11 January 1840, p. 22.

<sup>450</sup> Jonathan Topham, ‘Publishing and the Reading of Nineteenth-Century Britain: A Historiographical Survey and Guide to Sources’, *Studies in the History of Philosophy and Science*, 31.4 (2000), p. 600.

London publisher John Churchill played in the successful publication of the *Vestiges*.<sup>451</sup> He has also argued that one of the greatest assets of Lyell's *Principles* was Murray. The quality of paper and binding added to the attractiveness of the volumes, which undoubtedly contributed to the numerous sales it achieved; 1500 copies of the first edition of volume one were sold within a year of its publication.<sup>452</sup> The relationship between publisher and author was particularly important when it came to the adoption of relatively new technologies. Charles Lyell's correspondence with John Murray reveals the tensions between the commercial and intellectual advantages offered by stereotyping.

Translations of Lyell's *Principles* were printed more or less immediately after the publication of the first edition of the work. The mineralogist Carl Friedric Alexander Hartmann had published three volumes from 1832 to 1834 entitled *Lehrbuch der Geologie*.<sup>453</sup> Around the same time Lyell was due to publish his *Elements* he was approached about the possible production of a French translation of his work.<sup>454</sup> The importance of the illustrations from Lyell's perspective was evident within this negotiation. Murray had informed the translator that he could not allow the use of the plates and wood engravings, much to the displeasure of Lyell. Three years earlier, Lyell had suggested to Murray the possibility of creating casts for his illustrations in anticipation of the fourth edition of his *Principles*: 'I have heard of this being done' he informed Murray, 'but I know nothing about it.'<sup>455</sup> Upon hearing of Murray's refusal to use his illustrations, he stressed again the benefits of making casts from the woodblocks. Lyell had even received reassurances from the translator that the casts would be used solely for the translated edition and promised to cover most of the expenses for preparing the casts, yet his efforts to have his illustrations stereotyped proved unsuccessful in the immediate term, which underlines the

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<sup>451</sup> Secord, *Victorian Sensation*, p. 151.

<sup>452</sup> Secord, *Visions of Science*, pp. 143-144.

<sup>453</sup> See Ezio Vaccari, 'Lyell's Reception on the Continent of Europe: a contribution to an open historiographical problem', *Geological Society, Special Publications*, 143 (1998), p. 41.

<sup>454</sup> For an examination of the reception of Lyell's translations, see Martin Rudwick, *Worlds Before Adam: The Reconstruction of Geohistory in the Age of Reform* (Chicago and London, 2008), pp. 335-339.

<sup>455</sup> NLS: MS. 40727, Charles Lyell to John Murray, 16 January 1835.

tension between commercial and intellectual objectives that could be achieved through stereotyping.

Eventually, Murray agreed to have the illustrations stereotyped, which reinforced Lyell's reputation, particularly in America. The regular use of stereotyping in America resulted in the dissemination of Lyell's illustrations across the Atlantic in order to meet the demands of an ever-growing readership. The first two editions of *Principles* were published in Boston by 1836. Benjamin Silliman, one of the earliest American chemists and the first American professor of science, suggested to Lyell that his work had succeeded in 'producing a great change in geological opinion.'<sup>456</sup> Silliman informed Lyell that he was using his work 'almost daily' in his university lectures and popular courses. Many of these lectures were heavily influenced by both Lyell and Robert Bakewell. Not only was Lyell, as Silliman asserted, transforming geological opinion through his research, but his illustrations also served to galvanise the market for illustrated geological texts intended for the general reader. His travels to America throughout the 1840s, where he gave numerous lectures, resulting in a two volume work entitled *Travels to North America*, confirmed his standing within the geological field of geology in America.<sup>457</sup> John Comstock, who had written on a range of different branches of natural history, published the fifteenth edition of his *Outlines of Geology* in 1845. As the title suggested, it was intended to be a 'popular treatise', a culmination of the most interesting parts of the science and designed for use by schools and general readers. The progress of geology in America was slower than the rapid developments made in Britain over the same period. Comstock stated in the preface that he and the publisher had prepared a volume that embraced the opinions of 'even the most recent and respectable authors contained within its outlines[...]'<sup>458</sup> The book was printed in duodecimo format together with eighty-seven wood engravings. Just

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<sup>456</sup> NLS: MS. 40727, Lyell to Murray, 9 June 1836.

<sup>457</sup> For more on Lyell's influence in America, see Leonard G. Wilson, *Lyell in America: Transatlantic Geology, 1841-1853* (Baltimore and London, 1998).

<sup>458</sup> John Comstock, *Outlines of Geology: Intended as a Popular Treatise on the Most Interesting Parts of the Science. Together with an Examination of the Question, Whether the Days of Creation were Indefinite Periods, Fifteenth Edition* (New York, 1845), p. 4.

under half of the illustrations were stereotypes of Lyell's illustrations by the prominent New York printer F. F Ripley. He had stereotyped illustrations from other eminent British geologists for Comstock's publication including Edward Hitchcock, John MacCulloch and Adam Sedgwick. Stereotyping illustrations aided the expansion of an ecology of geological knowledge that invigorated the market on the continent and America.

## Conclusion

On the surface, the wood engravings printed in the geological works discussed in this chapter conform to the traditional definition ascribed to illustrations, namely supportive aids subsumed by the primacy of the written text. Yet a closer investigation into the visual component of the works belonging to leading authorities such as Charles Lyell, Gideon Mantell and David Ansted highlights the crucial role wood engraving played in their attempts to both democratise and commercialise what was a relatively new and complex branch of science. Moving beyond an analysis of the more renowned works belonging to such authors, such as Lyell's *Principles of Geology*, an investigation into the production of their later publications, often considered subsidiary to the intellectually more rigorous accounts that preceded them, reveals how crucial illustrations were both to the commercial and intellectual pursuits of author and publisher. Within an ever-expanding market for illustrated literature, these scientists and their publishers were forced to alter the way in which scientific knowledge was communicated. This was not done by merely adding illustrations but also by reducing the text and reformatting the book in order to achieve both financial and intellectual success. The attempts to democratise geology by these authors relied heavily upon the restored reputation and financial viability of wood engraving.

The means by which illustrations were printed, appropriated and, on occasion, plagiarised are indicative of the effect the revival of wood engraving had

on the dissemination of geological texts. O'Connor, in his study on the literary techniques employed in geological works, has contended that his work is not a reception study but rather an investigation into science's 'literary projection' onto its public.<sup>459</sup> Similarly, this chapter has dealt with the visual projection of geology. It suggests the ways in which the printing medium drove new publishing ventures, which enabled the gentlemen of science to tap into an increasingly competitive market for scientific knowledge. I do not argue that these works were 'popular', particularly given the unhelpful nature of the term, but rather I suggest that wood engraving was fundamental in attempts both to project a comprehensible account of the Earth's history and to ensure its commercial success within the market for illustrated books. Moving beyond a simple description of the print processes involved allows for an examination into the ways in which these processes were exploited within the specific contexts of different subjects. The trends in the production of illustrations in geological works during the first half of the nineteenth century are broadly similar to that of topographical literature in the following chapter. Yet a closer investigation into the relationship between the development of printing processes and the subject they were used to illustrate reveal the importance of the visual within more specific commercial, financial, social and cultural contexts.

Finally, a case study of illustrated geological books has served to reveal the importance of illustrations not only within but also separate from the pages of the original book in which they were printed, placing further significance on the material properties of the printing medium. Wood blocks were often shared, copied and reprinted not only in England but also on the Continent and America as result of the arrival of stereotyping by 1830. This was crucial to establishing an ecology of knowledge that not only added competition to the market for illustrated geological books but also served to reinforce the authority of the scientists to which the illustrations originally belonged amidst rising competition for intellectual capital.

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<sup>459</sup> O'Connor, *The Earth on Show*, p. 8

Far from merely illustrating the text, wood engravings were crucial to the intellectual trajectory of geology around the world.

## Chapter 4: Steel, Wood and the Transformation of Topography 1780-1850

The last chapter explored the significance of wood engraving for the democratisation of geological knowledge, particularly during the early-Victorian period. Wood engravings were fundamental to the establishment of an ecology of knowledge by those who attempted to democratise what was a relatively new scientific discipline. Moreover, examining these illustrations from a production-led approach helps to reveal the tensions played out between publishers and authors of books which began to rely more on the visual component to achieve their ambitions of establishing geology as a legitimate and interesting branch of science.

This chapter examines the reasons for the increasing popularity of topographical publications against the backdrop of technical changes to graphic reproduction between 1780 and 1850. Rather than focusing on the literary achievements of these topographical works, or retracing the journeys of their authors, this chapter will investigate the changes to the production and design of topographical books from the late-eighteenth to the mid-nineteenth century.<sup>460</sup> In particular, I consider the extent to which the introduction of steel engraving and the revival of wood engraving from 1825 onwards, which were embedded within the wider discourses of progress, improvement and modernity, shaped and even transformed the intellectual and aesthetic output of the topographical book.

From the beginning of the eighteenth century to the mid-nineteenth century topographical works were arguably the most frequently illustrated books in Britain. In 1827 it was suggested that there was ‘no department of art more

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<sup>460</sup> The use of spatial analysis and GIS have recently been deployed to explore the journeys made by authors such as Thomas Gray and Thomas Pennant. See Patricia Murrieta-Flores, Christopher Donaldson and Ian Gregory, ‘GIS and Literary History: Advancing Digital Humanities Research Through the Spatial Analysis of Historical Travel Writing and Topographical Literature’, *Digital Humanities Quarterly*, 11.1 (2017), <http://www.digitalhumanities.org/dhq/vol/11/1/000283/000283.html> [Accessed 12 February 2018]; Christopher Donaldson, Ian Gregory, and Patricia Murrieta-Flores, ‘Mapping “Wordsworthshire”: A GIS Study of Literary Tourism in Victorian Lakeland’, *Journal of Victorian Culture*, 20.3 (2015), pp. 287–307.

universally accepted to the taste of the English than that of topography, and certainly there is no country wherein the artists have so generally excelled in this delightful and interesting branch of study as in England.’<sup>461</sup> Topography was acknowledged in the eighteenth century to be a singularly English undertaking. The antiquarian Richard Gough, in comparing English publications to those on the continent, believed that ‘we shall find preference both in number and matter due to us.’<sup>462</sup> Fifty years later, the artist and antiquarian Sir Richard Hoare claimed that English topography had become ‘a favourite pursuit, and the researches of an antiquary are no longer considered as useless.’<sup>463</sup> The desire to understand the history, antiquity and beauty of the country in which they dwelled was a great source of entertainment to an increasingly literate society. This popularity provided collaborative opportunities for authors, artists, illustrators and publishers to exploit the commercial market for topographical literature.

This chapter, therefore, examines the parallel developments of the changes to printing techniques and the rising popularity of topographical and travel literature between 1770 and 1850. By assessing both the commercial opportunities offered by steel and wood engraving in particular, I aim to reveal the significance of the materiality of such illustrations in determining the wider intellectual, social and cultural aims of the publishers, authors and artists of these books. Unlike the previous chapter, these tensions are not explored in relation to the dynamic between publisher and author, but rather the tensions borne out in the context of the medium chosen to illustrate topographical books. This had a significant bearing on the intellectual and commercial output of topography during a period marked not only by technological developments within the world of print, but also by sustained social and cultural changes to the nature and democratisation of travel.

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<sup>461</sup> *The Literary Chronicle*, June 1827, p. 381.

<sup>462</sup> Richard Gough, *Anecdotes of British Topography. Or, an Historical Account of what has been done for Illustrating the Topographical Antiquities of Great Britain* (London, 1768), p. vi.

<sup>463</sup> Quoted in John Britton, *An Essay on Topographical Literature: Its Province, Attributes, and Varied Utility* (London, 1843), p. vi.



The commercialisation of topography was aided by a number of political, economic and social factors. Political uncertainties, evidenced by the Napoleonic wars and the expansion of the British Empire, left commentators pondering Britain's place within the world. Topographical works such as Richard Phillips's *Modern London* (1804) and Rudolph Ackermann's *Microcosm of London* (1808-1810) placed London at the centre of urban and architectural development, designed to contrast with the *ancien regime* in France.<sup>464</sup> Phillips's work contained sixty copperplate engravings of various buildings and recognisable locations in and around London. These works were a means by which the 'actual present state' of London could be visualised within a backdrop of political unrest.<sup>465</sup>

Societal changes also played an important role in the increasing demand for topographical literature. The growth of middle-class tourism by the mid-nineteenth century opened up opportunities to travel, which meant that the 'transcendent viewing position' was no longer 'the perquisite of the gentleman', which was almost exclusively the case in the eighteenth century.<sup>466</sup> The result was a considerable rise in the number of books dedicated to travel writing, a genre in which topography became embedded. Accounts of foreign peoples, their customs, history, scenery and geography were eagerly sought after, both by publishers who wanted to maximise profit and purchasers fascinated by the foreign 'other.'<sup>467</sup> In a review of Lady Chatterton's *Rambles in the South of Ireland* (1839), the fashion for foreign travel was considered unnecessary. The reviewer expressed his dissatisfaction over the fascination with lands outside the British Isles 'without a visit or without a single

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<sup>464</sup> For more on *The Microcosm of London*, see Jon Mee, "Mutual Intercourse" and "Licentious Discussion" in *The Microcosm of London*, *The London Journal*, 37.3 (2012), pp. 196-214. For more on this publication within the wider context of book illustration, see Lucy Atkinson, 'The Microcosm of London: Special Collections Featured Item for May 2009', Available at <https://www.reading.ac.uk/web/files/special-collections/featuremicrocosm.pdf> [Date Accessed: 21/12/2017].

<sup>465</sup> Richard Phillips, *Modern London* (London, 1804), 2. See also John Barrell, *Edward Pugh of Ruthin 1763-1813 'A Native Artist'* (Cardiff, 2013), pp. 150-170; John Barrell, 'Sensibility and the Urban Panorama', *Huntington Library Quarterly*, 70.2 (2007), pp. 229-235.

<sup>466</sup> Amanda Gilroy (ed.), *Romantic Geographies: Discourses of Travel 1775-1844* (Manchester, 2000), pp. 3-5.

<sup>467</sup> For an excellent analysis into the publishing contexts of travel writing, see Innes M. Keighrem, Charles W. J. Withers, and Bill Bell, *Travels in Print: Exploration, Writing, and Publishing with John Murray, 1773-1859* (Chicago, 2015).

thought [given to] so much that is beautiful and curious at home and in the sister island.<sup>468</sup>

Although a fundamental divide remained between those who had the requisite wealth to explore domestic and foreign lands for themselves and those who were restricted to pictorial representations of such landscapes, the rise of a leisured middle class in the nineteenth century provided the commercial opportunities to establish a sustained and competitive market for travel literature. These developments ensured the popularity of rich pictorial works displaying the antiquarian history and landscapes, both foreign and domestic. The resulting synergy between art and antiquity in topographical literature was shaped and even transformed by innovations in mechanisation and industrialisation.

The taste for topography offered authors, artists, illustrators and publishers of topographical literature a solid commercial environment in which to market their publications. As Noah Heringham has observed, the commercial pursuit of learned readerships required a successful collaboration in order to ensure a marketable publication.<sup>469</sup> The rise in the number of topographical prints in the late eighteenth and nineteenth century have received attention from art history scholars who have traced the varying representations of landscape beyond the high arts. Print and artwork have been used to trace reconfigurations within the political, social and economic identity of landscape.<sup>470</sup>

It is not the purpose of this chapter to examine how artists and patrons used art for political or economic motives or to investigate what John Bonehill and Stephen Daniel describe as ‘visual rhetoric vs piecemeal reality’, although the contexts in which topographical books were published is considered.<sup>471</sup> Nor is it the

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<sup>468</sup> *The Metropolitan Magazine*, May 1839, p. 97.

<sup>469</sup> Noah Heringham, *Sciences of Antiquity: Romantic Antiquarianism, Natural History and Knowledge Work* (Oxford: Oxford University Press, 2013), p. 2.

<sup>470</sup> See in particular Stephen Copley and Peter Garside, *The Politics of the Picturesque: Literature, Landscape and Aesthetics Since 1770* (Cambridge, 1994), pp. 42-81, Thomas Faulkner, Helen Berry and Jeremy Gregory (eds), *Northern Landscape: Representations and Realities of North-East England* (Woodbridge, 2010), Helen Wyld, ‘Re-framing Britain’s Past: Paul Sandby and the Picturesque Tour of Scotland’, *The British Art Journal*, 12.1 (2011), pp. 29-36.

<sup>471</sup> John Bonehill and Stephen Daniel, ‘Projecting London: Turner and Greenwich’, *Oxford Art Journal*, 35.2 (2012), p. 176. For an analysis of the commercial and economic representation of London

purpose to investigate the motivations behind what was chosen to be represented by publishers, authors and artists. Rather, the objective is to assess the ways in which the materiality of illustrations and their arrangement in the book shaped the status and authority of topography. Questions regarding the function of art and technology as well as the dialectic between nature and representation have been explored in relation to the picturesque.<sup>472</sup> By examining these dynamics, Ron Broglio argued that ‘both the picturesque and representational technologies pit the primacy of vision and the static quality of inscription against the mobility of the tourist and the dynamic characteristics of nature.’<sup>473</sup> The technologies that Broglio discusses do not include printing surfaces and techniques. Matthew Sangster has acknowledged the importance of the style and execution of John Tallis’s *London Street Views* in one of the most successful topographical works of the mid-nineteenth century. For Sangster, the form of the print was just as important as its visual contents within the changes and continuities of the way representations of London’s streets were framed and organized.<sup>474</sup>

The impact of the changes to printed illustration and the commercialisation of the book on topographical publications are of central importance in this chapter. Accordingly, I will consider how the debate over landscape and topographical art was not only one of aesthetic theory, but also centrally concerned with the way in which the topography was being communicated in light of emergent printing techniques by the early-Victorian period. I therefore assess the extent to which the relationship between printing technology and the mode of representation had a bearing on the development of topography as a literary discipline through the first half of the nineteenth century.

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in nineteenth-century topography, see Elizabeth Grant, ‘John Tallis’s *London Street Views*’, *The London Journal*, 37.3 (2012), pp. 234–51, DOI: 10.1179/174963212X13451695770476.

<sup>472</sup> Ron Broglio, *Technologies of the Picturesque: British Art, Poetry, and Instruments 1750–1830* (Lewisburg, 2008).

<sup>473</sup> *Ibid.*, p. 18.

<sup>474</sup> Matthew Sangster, ‘Transformation and Specialization in London and its Topography’, *Journal of Victorian Culture*, 22.3 (2017), pp. 317–328. DOI: 10.1080/13555502.2017.1329971.

The rise of tourism and middle-class travel also had a significant bearing on the transformation of topography by 1850. In light of this, I examine the significance the design and order of word and image found within topographical books had on the intellectual transformation of the discipline. Nineteenth-century travel writing and tourism have often been examined separately from topography in this period, which fails to acknowledge the crucial role played by the materiality of illustrations in shaping the intellectual output of topography as a whole. The commodification of tourism by the mid-nineteenth century was mirrored by the commodification of the book. This chapter, therefore, considers how those involved in the books production responded to these changes through their use of graphic reproduction as opposed to the written word, allowing for a broader understanding of the point at which the presentation and arrangement of the book became as important if not more so than the artistic rigour with which topography was traditionally associated.

A central concern of this chapter is to examine the role printing surfaces such as copper, steel and wood played in the changing considerations of what topography should represent and, more importantly, how this information should be arranged within shifting social and cultural contexts that included urban development, the rise of middle-class travel and tourism as well as the expansion of a reading public. In doing so, I consider how ‘the tourist’s gaze’ was imagined and reflected within the pages of the book.<sup>475</sup> The chapter therefore begins with an exploration into the debates concerned with aesthetic judgement in landscape and topography during early developments in graphic reproduction. Concepts of the sublime and the picturesque and their links to the imagination and emotion provoked a response by topographical artists and engravers to provide more accurate representations of what the tourist would encounter. The chapter moves on to consider the development of printing techniques such as steel etching and the

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<sup>475</sup> For more on the ‘the tourist’s gaze’, see John Urry, *The Tourist Gaze*, 2<sup>nd</sup> edition (London, 2000); Nicola J. Watson (ed.), *The Literary Tourist: Readers and Places in Romantic and Victorian Britain* (Basingstoke, 2006).

revival of wood engraving within the context of topographical works. I argue that the application of these techniques was not solely founded on financial or commercial objectives, but also on the suitability of these mediums within the social and cultural contexts in which they were used. Finally, I will explore the contemporary reaction to new technologies and developments in book production within the increasingly diverse field of topography.

Before assessing the extent to which the printing surface shaped the production and reception of topographical works, it is worth determining what is meant by a topographical book. Nineteenth-century guidebooks, antiquarian studies, county histories and travel accounts all included topographical prints. Illustrations printed in these books often lent themselves to topographical enquiry: maps and landscape views, as well as antiquarian objects and sights. Moreover, as will be evident towards the end of this chapter, contemporaries often placed these sub-genres within a broader debate on the state of topographical literature. As such, all of these sub-genres are included in the collection of 404 topographical works used here, the majority of which are county histories and domestic travel accounts. Together, they highlight the importance of the materiality of illustrations as well as the design and format of the book in determining the transformation of topography by 1850.

### The Aesthetic Tradition 1780-1810

Technological developments in the reproduction of art in the late eighteenth century remained embedded in laborious and often time-consuming intaglio methods. The introduction of aquatint etching, which involved the application of acid-resistant etching ground that was melted onto the printing surface in order to establish a tonal effect in the finished print, served to rival the superiority of copper engraving.<sup>476</sup> The status attached to these forms of

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<sup>476</sup> For more on the technical methods of aquatint etching, see Ann. V Gunn, 'Sandby, Greville and Burdett, and the "Secret of Aquatint"', *Print Quarterly*, XXIX, 2 (2012), pp. 178-180. See also

printmaking lent themselves to landscape art, which was rooted in topographical writing throughout the eighteenth century. The first part of this chapter, therefore, considers the debates over aesthetic judgement of landscape during the late-eighteenth century, which raised concerns over the idealisation of landscape scenes against the backdrop of the rise in the number of illustrated publications primarily considered as topographical accounts. Before the onset of new print techniques such as lithography and steel engraving, the resultant attempts to represent what were considered more faithful landscape scenes encountered by authors and artists were bound up in debates on aesthetic and artistic principles over accuracy of representation.

Prints that featured in travel writing and topography more widely in the eighteenth century were immersed in aesthetic principles including the sublime and the picturesque. Sir Uvedale Price's account of the picturesque, first published in 1810, set out to provide a theoretical framework for these aesthetic concepts. 'Every place', he stated, 'every scene worth observing, must have something of the sublime, the beautiful, or the picturesque; and every man will allow, that he would wish to preserve and to heighten [...] their prevailing character.'<sup>477</sup> Fifty years earlier, Edmund Burke argued in his *Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1757) that the sublime was embedded within notions of power, obscurity and vastness. The difference between the beautiful and the sublime in landscape painting was, for Burke, considerable: 'The ideas of the sublime and the beautiful stand on foundations so different, that it is hard, I had almost said impossible, to think of reconciling them in the same subject, without considerably lessening the effect of the one or the other upon the passions.'<sup>478</sup>

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Timothy Clayton, 'The Print and the Spread of the Picturesque Ideal' in Dana Arnold (ed.), *The Picturesque in Late Georgian England: Papers Given at the Georgian Group Symposium* (London, 1994), pp. 15-17.

<sup>477</sup> Sir Thomas Dick Lauder, *Sir Uvedale Price on the Picturesque; With an Essay on the Origin of Taste, and Much Original Matter* (Edinburgh & London, 1848), p. viii.

<sup>478</sup> Edmund Burke, *A Philosophical Enquiry into the Origin or Our ideas of the Sublime and Beautiful* (London, 1757), pp. 113-114.

The concept of the sublime in relation to landscape art produced compositions of nature that evoked an emotional response to the scene encountered. The works of foreign artists including Claude Lorrain, Rembrandt and Jean Pillement were engraved and sold in order to bring those that could afford them in closer contact with the sublime. Intaglio engravers also adhered to the concept of the sublime, often in travel and topographical accounts. This had the effect of provoking an emotional response from readers of such books.<sup>479</sup> Nicolas Poussin, J.M.W. Turner and Philippe de Loutherbourg all appropriated the landscape in their art in order to capture the imagination of their patrons.<sup>480</sup>

The late eighteenth century witnessed a noticeable shift in taste in terms of what landscape artists should strive to achieve. William Gilpin, in his *Three Essays: on Picturesque Beauty; on Picturesque Travel, and on Sketching Landscape* (1792), set out a theoretical, aesthetic model based on the picturesque.<sup>481</sup> The concept of the picturesque attempted to bridge the divide between the imaginative panoramas that the sublime offered and the true depiction of the landscape. However, similar to the sublime, Gilpin was not concerned with exact representations of the places he encountered, but rather the feelings one would encounter when coming into contact with the British landscape. His criticism of the antiquarian George Vertue derived from his perceived inability to coalesce antiquarianism and art. 'He copied with painful exactness', Gilpin argued, 'in a dry, disagreeable manner, without force, or freedom.'<sup>482</sup> In his *Observations on the River Wye* (1782), he claimed that the object of his work involved 'a new object of pursuit; that of not barely examining the face of a country; but of examining it by the rules of picturesque beauty; that of not

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<sup>479</sup> William A. Williams, *Tourism, Landscape, and the Irish Character: British Travel Writers in Pre-Famine Ireland* (Wisconsin, 2008), pp. 20-21.

<sup>480</sup> See Michael Symes, 'Gardens Picturesque and Sublime', in Dana Arnold (ed.), *The Picturesque in Late Georgian England: Papers Given at the Georgian Group Symposium* (London, 1994), pp. 21-27. See also Walter J. Hipple, *The Beautiful, the Sublime, the Picturesque in Eighteenth Century British Aesthetic Theory* (Carbondale, 1957), pp. 10-34.

<sup>481</sup> For an excellent account on Gilpin and the picturesque tour in the late-eighteenth century, see Stephen Copley, 'Gilpin on the Wye: Tourists, Tintern Abbey, and the Picturesque', in Michael Rosenthal, Christina Payne and Scott Wilcox (eds), *Prospects for the Nation: Recent Essays in British Landscape* (New Haven and London, 1997), pp. 133-155.

<sup>482</sup> Quoted in Martin Myrone, 'Graphic Antiquarianism in Eighteenth-Century Britain: The Career and Reputation of George Vertue (1684-1756)', in Martin Myrone and Lucy Peltz (eds), *Producing the Past: Aspects of Antiquarian Culture and Practice, 1700-1850* (Surrey, 1999), p. 36.

merely describing; but of adapting the description of natural scenery to the principles of artificial landscape.<sup>483</sup> Gilpin's picturesque model is used to depict the 'ideal', of 'frameable' views that served to introduce tourists and travellers to new environments without the connotations of power and vastness that were bound up with the concept of sublime.<sup>484</sup>

Gilpin's contention that picturesque art should denote objects and views that would be deemed suitable for painting was criticised by Sir Uvedale Price who argued that Gilpin's definition of the picturesque was too confined. The picturesque, for Price, drew the reader's mind towards pictures; 'and from that partial and confined view, what is in truth only an illustration of picturesqueness, becomes the foundation of it.'<sup>485</sup> Price was convinced that both art and nature had to be studied in order to achieve a suitable 'taste' for the picturesque.<sup>486</sup> The debate over what the term picturesque meant or how it was adopted in practice brought about criticism of Gilpin. *The Tour of Dr. Syntax* (1812), illustrated by Thomas Rowlandson to accompany the verses compiled by William Combe, was designed as a satirical slur at Gilpin. Characterised as a stubborn theorist who taught the British to assess landscape, both Rowlandson and Combe were keen to stress the inability of Gilpin to translate his aesthetic theory into practice when confronted with nature itself.<sup>487</sup> Although the picturesque model placed emphasis on ruggedness and departed from the uniformity and stylised artistic dimensions of the sublime, Rowlandson's satirical illustrations revealed the fragility of the picturesque's links to nature.

### The Search for the 'vrai resemblance' 1790-1820

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<sup>483</sup> William Gilpin, *Observations on the River Wye, and Several Parts of South Wales, Relative Chiefly to Picturesque Beauty; Made in the Summer of the Year 1770* (London, 1782), pp. 1-2.

<sup>484</sup> Malcolm Andrews, 'A Picturesque Template: The Tourists and Their Guidebooks', in *The Picturesque in Late Georgian England*, pp. 7-8.

<sup>485</sup> Lauder, *Sir Uvedale Price*, p. 80.

<sup>486</sup> *Ibid.*, p. 60.

<sup>487</sup> Francesca Orestano, 'The Revd William Gilpin and the Picturesque; Or, Who's Afraid of Doctor Syntax', *Garden History*, 31.2 (2003), pp. 163-179. Ron Broglio, *Technologies of the Picturesque: British Art, Poetry and Instruments 1750-1830* (Lewisburg, 2008), pp. 30-32.



Given the relatively embryonic stages of technical and material change to printing surfaces in the late-eighteenth century, illustrations found in topographical accounts were predominantly embedded within debates surrounding artistic and aesthetic theory. Running parallel to these debates, however, was a steady stream of artists and engravers seeking to represent accurate views of British landscape scenes.<sup>488</sup> Those who were working towards the end of the eighteenth century sought to bridge the divide between landscape art and topographical literature. Paul Sandby, the first Englishman widely regarded to have used the process of aquatint, was also one of the first real topographical artists in Britain. A recommendation to the Earl of Hardwicke by Thomas Gainsborough to accurately portray the Earl's new estate is evidence of Sandby's reputation to represent truth.<sup>489</sup> His experience while working for the Board of Ordinance improved his level of competency for drawing maps and surveys, which in turn provided the catalyst for his topographical art over twenty years later when he published *Virtuosi's Museum*, containing twenty-six copper-engraved views of England, Ireland and Scotland between 1778 and 1781.<sup>490</sup> This series, as Helen Wyld has suggested, was one of the most important commercial print ventures of the eighteenth century.<sup>491</sup> His prints, which cover the whole archipelago, helped to open up tourism to previously untouched areas of the British landscape.

One year prior to the publication of *Virtuosi's Museum*, Sandby published thirty-six aquatint views of Wales. The use of aquatint as opposed to line engraving likened the prints to watercolours, portraying a much more naturalistic effect.

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<sup>488</sup> It should be observed at this point that by suggesting there was a greater appreciation of accurate views of nature, this is not to say that theories of art, particularly the picturesque, remained prominent throughout the first half of the nineteenth century. John Britton, whose works are discussed in this section, continued to commission artists to design illustrations based on principles derived from picturesque theory in his illustrations. See, for example, Paula Ridy, 'The Representation of the Country House in Individual Books and Guides 1720-1845', Unpublished PhD Thesis (University of Sussex, 2014).

<sup>489</sup> For an examination into the use of aquatint in Britain, see Anthony Griffiths, 'Notes on Early Aquatint in England and France', *Print Quarterly*, 4.3 (1987), pp. 255-270. For Gainsborough's recommendation, see John Bonehill and Stephen Daniels, 'Real Views from Nature in this Country': Paul Sandby, Estate Portraiture and British Landscape Art', *Art Journal*, 10:1 (2009), pp. 72-73.

<sup>490</sup> Wyld, 'Re-Framing Britain's Past', p. 29.

<sup>491</sup> *Ibid.*, pp. 29-36.

Sandby was not the only artist considered to represent the true nature of the British landscape. Richard Wilson, one of founders of the Royal Academy, was recognised as one of the greatest landscape painters of Wales. Wilson had actually visited Wales in order to complete his paintings, an undertaking that was rare for elite landscape artists.<sup>492</sup> Edward Pugh, an artist who also produced views of Wales albeit localised and of a smaller scale to Wilson's, greatly admired Wilson for his personal observations of Wales in order to more accurately represent the landscape.<sup>493</sup>

John Barrell has shown how Pugh himself was an artist intent on accurately illustrating the Welsh landscape, more so than Wilson or Sandby. His *Cambria Depicta* first published in 1813 contained approximately eighty views of North Wales in an attempt to provide a complete tour of Wales that was designed not just to point out the picturesque beauties of the Welsh landscape but also to provide details of the topography, history and customs of the region.<sup>494</sup> The traveller and antiquarian Thomas Pennant was the first to have made illustrated tours around Scotland and Wales. The popularity of his works ensured that subsequent editions of *A Tour in Scotland* (1769) and *A Tour in Wales* ran well into the nineteenth century. Other artists including John Warwick Smith and William Green brought together landscape art and true nature, which helped to strengthen tourism towards the end of the eighteenth century.

These landscape artists did much to bridge the aesthetic divide between landscape art and rigorously analytical topographical writing. The primary aim of topographers and antiquarians were mirrored by Sandby, Pugh and Pennant. They strived for accuracy in topographical writing. Many topographical writings, particularly during the first half of the eighteenth century, tended to piece together a topographical history of a county by using former accounts from celebrated seventeenth-century antiquarians such as William Camden, William Dugdale, Randall Catherall and Richard Carew. John Harris's *History of Kent* (1719), for

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<sup>492</sup> John Barrell, *Edward Pugh of Ruthin*, p. 2

<sup>493</sup> *Ibid.*, pp. 2-3.

<sup>494</sup> *Ibid.*, pp. 170-190.

example, used many former accounts of the county to compile the work. Contemporary commentators also lamented the lack of organisation in the compilation of topographical works. Of Harris's work, the antiquarian Richard Gough suggested he compiled the history 'without much judgement or skill in the use or arrangement of his imperfect designs.'<sup>495</sup> In the preface to one of the first topographical works to include Wales, it was observed that in many previous accounts, descriptions 'have been thrown together with such unaccountable disorder and confusion, that they can neither be read with pleasure, nor consulted occasionally with advantage.'<sup>496</sup> The birth of the Age of Enlightenment brought about tensions amongst antiquarians. 'Our enlightened age laughs at the rudeness of our ancestors, and overlooks the manners of that rank of men whose simplicity is the best guardian of antiquity', a simplicity which would 'serve to guide us back to truth.'<sup>497</sup> The common goal between topographers, antiquarians and later-eighteenth-century landscape artists to establish truth and authenticity in their volumes provided the foundations by which the disciplines could unite.

The merging of printed views and topographical literature was not a new phenomenon by the turn of the nineteenth century. From the early eighteenth century onwards, topographers and antiquarians had embraced image and text. When listing the different forms topographical literature took, Gough praised the introduction of maps and views, lauding them as 'such interesting representations, and we are so sensible that we have lost by the want of them in earlier ages, that while the curious are induced to preserve them, future artists will be encouraged to execute them.'<sup>498</sup> *Britannica Illustrata*, published in 1714, contained eighty copperplate engravings 'indifferently engraved' by the Dutch draughtsman Johannes Kip.<sup>499</sup> Given the superiority of continental engravers over their English equivalents in this period, it is unsurprising that Jacques Nicolas Bellin's *Essai Géographique Sur*

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<sup>495</sup> Gough, *Anecdotes of British Topography*, p. ix.

<sup>496</sup> Anon., *England Illustrated, or, A Compendium of the Natural History, Geography, Topography, and Antiquities Ecclesiastical and Civil, of England and Wales* (London, 1764), p. ii.

<sup>497</sup> Gough, *Anecdotes*, p. xxvii.

<sup>498</sup> *Ibid.*, p. xxxiv.

<sup>499</sup> *Ibid.*, p. 46.

*Les Isles Britanniques* (1757) included a considerable number of views depicting various locations around the England and Scotland. The bridging of the gap between landscape art and topography after 1770 placed a greater degree of responsibility on the engraver in the production of what Timothy Clayton has termed ‘simple nature.’<sup>500</sup> The engraver William Woollett produced many landscape prints including two prints after paintings by Richard Wilson. Pupils of Woollett, most notably Thomas Hearne, began to engrave scenes that were both pictorially aesthetic as well as historically and topographically accurate.<sup>501</sup> By the end of the eighteenth century, prints that held both aesthetic appeal and historical accuracy had become a popular commodity. These developments, which accelerated after 1770, provided nineteenth-century artists, publishers, engravers and authors the foundations by which they could commercialise topographical books within a period that gave rise to a transformation in the economy of book production.

The first half of the nineteenth century witnessed a considerable rise in the number of illustrated topographical works.<sup>502</sup> The proliferation of prints within topography ignited the taste for truth; ‘the vrai resemblance; hence, portraiture, in all things, is preferred to the *beau ideal*.’<sup>503</sup> John Britton’s *The Beauties of England and Wales*, perhaps the first major topographical work of the nineteenth century, were published in twenty-one volumes and involved a collaboration of a number of publishers, topographers, artists and engravers.<sup>504</sup> In order to ensure authenticity, Britton, his partner Edward Brayley and a number of artists travelled around the country in order to provide an accurate representation of each county. The first of the series, *The Beauties of Wiltshire; Displayed in Statistical, Historical and Descriptive*

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<sup>500</sup> Clayton, ‘The Print and the Spread of the Picturesque Ideal’, in *The Picturesque in Late Georgian England*, p. 18.

<sup>501</sup> *Ibid.*, p. 19

<sup>502</sup> The number of topographical accounts dedicated to London alone, for example, more than doubled in the period 1801-1825 compared to 1776-1800. See Sangster, ‘Transformation and Specialization in London’, pp. 318-320. For a quantitative survey of the number of topographical works published between the seventeenth and nineteenth centuries, see Bernard Adams, *London Illustrated 1604-1851: A Survey and Index of Topographical Books and their Plates* (London, 1983).

<sup>503</sup> *The Literary Chronicle*, 422, June 16, 1827, p. 381.

<sup>504</sup> The volumes collectively took fifteen years to complete at a considerable cost of £50,000.

*Sketches, Illustrated by Views of the Principal Seats, & With Anecdotes of the Arts* (1801) was completed in partnership by Britton and Brayley.

Britton's intention to produce these county histories arose from his desire to both 'fascinate the young eye [and] gratify also that of the learned professor', therefore bridging the divide between art and topography.<sup>505</sup> His achievement was recognised in a review of Britton's work in *The British Critic*. The reviewer reassured the reader of its utility as an accurate topographical work: 'the reader [...] is not to imagine, that the Beauties of Wiltshire are selected with no other view than to display the editor's professional skill as an artist, and to exhibit a gaudy and ornamented volume in compliance with the meretricious taste of the day.'<sup>506</sup> The tension that had arisen from the synergy between art and topography was evident in a number of reviews of *The Beauties of England and Wales*. Arthur Aikin, editor of *The Annual Review; or Register of Literature*, was pleasantly surprised by the work, having witnessed the developments in the format of topographical literature: '[...] we had prepared ourselves for a surfeit of that picturesque and sentimental cant [sic], by which, for the last twenty years, the public taste has been vitiated and enfeebled. In this expectation, however, we have been happily disappointed.'<sup>507</sup> He proceeded to praise the accuracy and detail of the work and the 'copious and useful' account of the maps and views that were published in illustration of the topographical details of each county. He also praised the engravings themselves, 'for the most part well-chosen, and ably with which the work is ornamented are executed.'<sup>508</sup> Britton attempted to strike a perfect balance between topography and art. The illustrations lent themselves to the descriptive commentary of the topographical and antiquarian features of the country.

Such was the desire for more accurate representations of topographical scenes, that the quality of the engraving was considered secondary to the

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<sup>505</sup> Thomas Rees and John Britton, *Reminiscences of Literary London from 1792-1853. With Interesting Anecdotes of Publishers, Authors and Book Auctioneers of that Period* (New York, 1896), p. 28.

<sup>506</sup> *The British Critic*, June 1802, p. 577.

<sup>507</sup> *The Annual Review; or Register of Literature*, January 1802, p. 436.

<sup>508</sup> *Ibid.*, pp. 463-464.

establishment of truth in nature. Engraving and etching on copper provided variable degrees of success and quality. Although highly respected engravers produced the illustrations for Britton's work, the number of engravers used to complete the plates resulted in unequal execution. The employment of multiple engravers was, more often than not, a necessary inconvenience in order to meet the deadlines set by the publisher. The variation in quality of execution of the engravings was the greatest criticism of the work. The first volume of the series was acknowledged to be beautifully engraved while the second volume, despite the superiority in the compilation of topographical features, was deemed inferior to the first. The editor of *The Lady's Monthly Museum* advised Britton to pay closer attention to the embellishments.<sup>509</sup> In a review of the seventh, eighth and ninth volumes in the *Monthly Review*, the subjects of the engravings were acknowledged to be well selected and 'for the most part neatly executed: but some of them have not much excellence to boast.'<sup>510</sup> The numerous volumes of *The Beauties of England and Wales* were published at a time when intaglio-printing processes had not departed from eighteenth century techniques. The inequality of engraving in Britton's work was the only shortfall of a work that proved influential for later publishers and authors.<sup>511</sup>

Artists benefited greatly from the progress made in the production of book illustrations. Even the most famous of artists such as J.M.W. Turner and C. F. Robson turned their hand to book illustration. In order to represent the 'vrai resemblance' of the country, the role of engravers was central to its achievement. By November 1811, the ten volumes of *The Antiquarian and Topographical Cabinet* were completed. Each volume was priced at fifteen shillings, relatively expensive given the size the volumes. The author was listed as the engraver James Storer. The complete work contained over five hundred prints engraved on copper. The composition of the work was similar to that of a plate book, an assemblage of

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<sup>509</sup> *The Lady's Monthly Museum, or Polite Repository of Amusement and Instruction*, December 1804, p.

<sup>417</sup>  
<sup>510</sup> *Monthly Review, or, Literary Journal*, February 1810, p. 134.

<sup>511</sup> See Hamilton, *A Strange Business* (London, 2014), pp. 205-206.

illustrations that could harbour interest from a number of readers. In the preface to the 1817 edition, published by one of the foremost publishers of the nineteenth century, John Murray, Storer outlined his vision for the work. The design was to 'comprise in miniature, an Assemblage of Views interesting to the Antiquary, the Topographer, and the Admirer of picturesque scenery.'<sup>512</sup> The pages were deliberately unnumbered in order to allow the subscribers to arrange the work in whichever way they wished without disorganising the book. The work was praised for its style of drawing and engraving of 'unusually neat' execution.<sup>513</sup> The Storer brothers were widely regarded as one of the most talented engravers of their time and engraved plates for a number of topographical works. Their engravings of various scenes in and around Clerkenwell found in a topographical history of the county were praised by reviewers for the *Literary Chronicle*. The review was indicative of the changing tastes for topography over landscape art. The anonymous reviewer suggested that, although the engravings fail to 'boast the pictorial effect belonging to the productions of a Turner and a Robson, [they] have at least the more important quality of very great truth and correctness.'<sup>514</sup>

The trajectory of illustrated topographical literature between the period 1780 and 1820 was largely defined by the tension between adherence to artistic principles such as the sublime and the picturesque at a time when material changes to graphic reproduction remained relatively embryonic. The concept of the picturesque remained popular throughout the period covered here. Yet debates over the rules of these artistic principles were overshadowed by changes to the means by which illustrations found in topographical books were produced. The use of copper engraving to illustrate topographical accounts gradually became supplanted by the rise of steel engraving from the 1820s onwards. An exploration into the application of steel engraving to topographical books helps to shed greater

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<sup>512</sup> James Storer, *The Antiquarian and Topographical Cabinet; Containing A Series of Elegant Views of the most Interesting Objects of Curiosity in Great Britain*, Volume 1 (London, 1817).

<sup>513</sup> *The Monthly Review, or, Literary Journal*, January 1808, p. 96. The second volume of the work was equally praised for the engravings. See *The Monthly Review, or, Literary Journal*, March 1809, p. 319.

<sup>514</sup> *The Literary Chronicle*, May 1828, p. 329.

light on the role of the print surface in not only symbolising artistic and technological progress but also the progress in national commerce, finance and infrastructure during a period in which London's position both on the continent and throughout the world was becoming increasingly dominant.

### Urban Topography and the Rise of Steel Engraving 1825-1850

The chapter thus far has discussed the trajectory of topographical illustrations in terms of the close ties between the intellectual discipline of topography and landscape art. However, despite the continuing links between topography and art throughout the period under review in this thesis, illustrated topographies equally touched upon cultural and social concerns in addition to wider contexts of Britain's technological, industrial and commercial place in the world. Nicholas Green has argued in his work on nineteenth-century France that the development of landscape art in this period is as much a cultural history as it is art history. He contends that the concept of 'nature' was constructed through the development of a metropolitan culture in which class formations were being played out.<sup>515</sup> Understanding the cultural significance of topographical illustrations is the central concern of the remainder of the chapter. By viewing urban illustrated topographies in terms of the wider cultural developments in which they were printed as opposed to their artistic significance, it is possible to understand the significance of the materiality of different printing techniques in communicating the social, cultural, economic and even imperial power of Britain by the mid-nineteenth century. An analysis of the illustrations printed in four nineteenth-century topographies of London show how the printing medium had a significant bearing on the portrayal of London that publishers, artists and authors of these works wished to convey.

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<sup>515</sup> Nicholas Green, *The Spectacle of Nature: Landscape and Bourgeois Culture in Nineteenth-Century France* (Manchester, 1990).



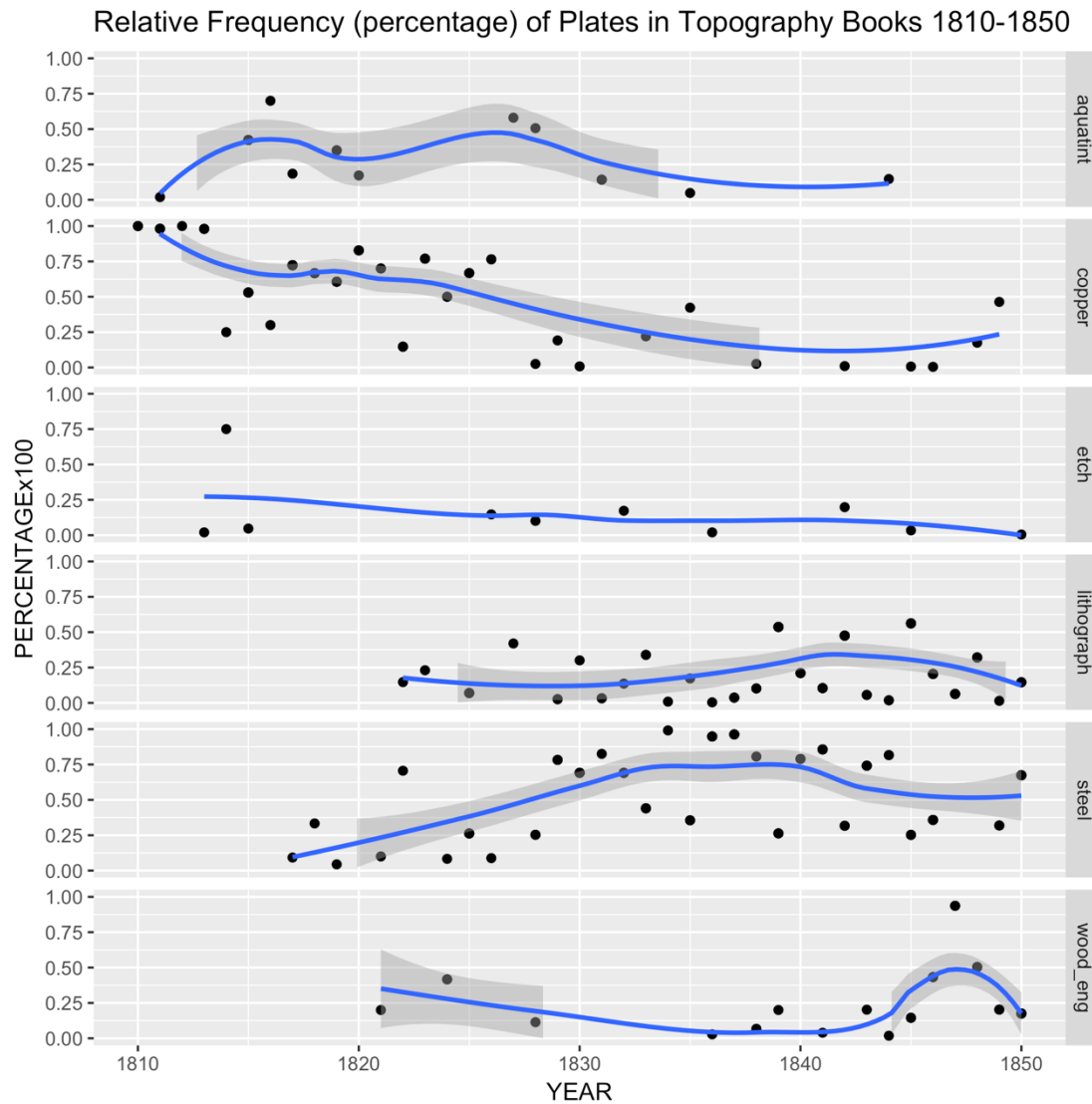
As can be seen by *Figure 4.1*, the arrival of new printing techniques had a sustained effect on illustrated topographical books. As the graph reveals, lithography and steel etching steadily displaced aquatint and copper engraving as the primary method for reproducing topographical prints. Publishers and authors of foreign travel literature often used the quicker and cheaper reproductive technique of lithography to reproduce the landscape views of distant lands. It provided an alternative to more time-consuming intaglio techniques given the capacity to design and print on the same surface.<sup>516</sup> Edward Napier's *Scenes and Sports in Foreign Lands*, Lady Chatterton's *Home Sketches and Foreign Recollections* as well as John Murray's travel guides in the early to mid-nineteenth century were all illustrated with lithographic prints.<sup>517</sup>

Despite the differences in cost and speed of production between lithography and steel engraving, the intaglio method of steel engraving developed into the most popular medium for reproducing topographical prints (*Figure 4.1*). As revealed in chapter one, the durability of steel as opposed to copper allowed for far greater print runs, which improved the commercial potential of the books they were designed to illustrate. The application of steel as a printing medium, as well as the revival of wood engraving discussed later in the chapter, were naturally bound up with the financial and commercial viability within an increasingly competitive market for illustrated literature. The engraver William Tombleson, who had engraved plates for esteemed artists including Pugin and Turner, began to publish his own accounts featuring his engravings. Tombleson published his *Views of the Rhine edited by W. G. Fearnside* in 1832. Published in weekly parts, with each part containing three steel plates, the price was set at a very inexpensive sixpence. Although the subject matter of the prints was not greeted by a great deal of

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<sup>516</sup> See chapter one, pp. 48-50.

<sup>517</sup> For an exploration into the commercial history of Murray's Handbooks, see Gráinee Goodwin and Gordon Johnston, 'Guidebook Publishing in the Nineteenth Century: John Murray's Handbooks for Travellers', *Studies in Travel Writing*, 17.1 (2013), pp. 43-61. DOI: 10.1080.13645145.2012.747791.



*Figure 4.1.* Showing the relative frequency of printing methods for full-page illustrations printed in 404 topographical works found in the British Library ‘Rare books’ dataset between 1810 and 1850. The black dots represent relative frequency of illustrations produced by a particular print method a given year. The grey area relates to the confidence in the blue smoothing curve. The more varied the relative frequency of the dots, the less confidence in the smoothing line, which results in a wider shaded area.

enthusiasm, the price of the parts was a source of astonishment: 'We really cannot say where the cheapness is to stop, and daily look for some publication, which the purchaser will be paid for taking. Steel, steam, and extensive circulation, may bring prints to this at last.'<sup>518</sup> Three months later, when all parts had been published, it was observed that the style of execution, considering the price they were sold at, 'is quite astounding.'<sup>519</sup> The capacity of steel engraving to meet both commercial imperatives while offering a visually appealing print cemented the medium as a popular form of graphic reproduction for topographical illustrations.

The commercial potential of steel engraving was further reinforced by the number of impressions that could be taken from a single plate. Joseph Swan, who had engraved plates for a number of different publishers, set up his printing house in Glasgow in 1818. In 1835 he published *A Historical Description of the Abbey and Town of Paisley* (1835), which included six plates engraved after drawings by Charles Mackie and contained a history of the origin of the town. Swan was primarily interested in the most beautiful and picturesque views of Scotland. He had by the time of the aforementioned publication published a series of books including his *Views on the Lakes of Scotland*, *Views of Glasgow*, and *Views on the River Clyde*, with each print accompanied by topographical and historical descriptions. He had originally published his *Views on the River Clyde* as a small publication in 1829, featuring four of his steel engravings. The volume as a whole set at an expensive price - seventeen pounds complete - but the decision to publish the work in parts meant that it had received a fair level of attention and attracted a substantial number of subscribers.<sup>520</sup> Swan's ventures proved successful and showcased the most picturesque surroundings in Scotland. Engravers such as Swan and Tomblason exploited the demand for topographical prints and, coupled with the practical advantages offered by steel engraving, gave them a greater chance of commercial success within their own ventures.

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<sup>518</sup> *The Literary Gazette*, July 1832, p. 474.

<sup>519</sup> *Ibid.*, 6 October 1832, p. 636.

<sup>520</sup> *Swan's Select Views on the River Clyde* (Glasgow, 1829), p. ii.

However, the advantages offered by steel were not limited to commercial and financial imperatives. Steel engraving was also fundamental to attempts to unite accuracy and precision with beauty and delicacy of the topographical scenes encountered. This was particularly important for the development of illustrated books dedicated to urban topography. The review of the fifth part of the engraver John Le Keux's *Memorials of Cambridge* (1841), which illustrated the colleges, churches and other public buildings erected in Cambridge, expressed praise for the precision of the engravings while exemplifying them as 'striking proof of the perfection to which the English have brought the art of steel-engraving.'<sup>521</sup> As Stephen Daniels has observed, urban plans and views formed part of a wider concern to picture social reform and progress within the urban environs in which purchasers of these works would have been familiar.<sup>522</sup> The industrial landscape by the early nineteenth century was perhaps the greatest visual indicator of the changes in the economic and industrial development that was transforming Western society.<sup>523</sup> Through these attempts to map visually Britain's urban development, Daniels argues that combining 'artistry and economy, topicality and historical scholarship, quality control and commercial appeal' became increasingly more difficult.<sup>524</sup>

Yet the development of steel engraving, highlighted as a symbol of technological and artistic progress of Britain, was considered the ideal medium by which to improve the accuracy and detail of urban topography, which in turn was used to triumph Britain's economic, technological and imperial power in the world. Steel engravers could convey accuracy, beauty and commercial viability within a period in which London was portrayed as the centre of urban, technological and

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<sup>521</sup> *The Monthly Magazine*, April 1838, p. 442.

<sup>522</sup> Stephen Daniels, 'Mapping the Metropolis in an Age of Reform: John Britton's London Topography, 1820-1840', *Journal of Historical Geography*, 56 (2017), p. 65. It is worth noting Matthew Sangster's online resource, which maps the scenes depicted in topographical accounts of London as a way of learning more about how publishers, authors and artists chose to represent London during a period of commercial, social and political change. See <http://www.romanticlondon.org/>. For more on urban social reform in this period, see Janice Carlisle, *Picturing Reform in Victorian Britain* (Cambridge, 2012); Arthur Burns and Joanne Innes (eds), *Rethinking The Age of Reform, Britain 1780-1830* (Cambridge, 2003).

<sup>523</sup> Alex Potts, 'Picturing the Modern Metropolis: Images of London in the Nineteenth Century', *History Workshop Journal*, 26.1 (1988), p. 28.

<sup>524</sup> Daniels, 'Mapping the Metropolis', p. 66.

artistic development.<sup>525</sup> Furthermore, the displacement of engraved lines on copper with the finer etched and engraved lines on steel were crucial in the shift from picturing urban social development to a greater appreciation of urban architectural and industrial progress.

The rise of steel engraving was considered a sign of British technological, industrial and artistic development. British steel-engravers were unrivalled in the quality and precision of execution.<sup>526</sup> Engravers of topographical works dedicated to metropolitan and urban improvements were central, as highlighted by Augustus Pugin's choice of engravers in his work delineating urban views of Paris. Pugin had previously worked with John Britton on the publication of *Illustrations of the Public Buildings of London* (1823-1828). He published his urban views of Paris in both French and English in parts between 1829 and 1831. The plates had taken two years to complete with each printed alongside an accompanying page of letterpress detailing matters of topographical interest.

Steel engraving was eulogized by contemporaries as a British invention that showcased its technological and commercial growth. This was reinforced by Pugin's decision to employ a host of English engravers who travelled to France to complete the plates. He employed no fewer than thirty-one engravers to complete the steel plates for both volumes under the supervision of Charles Heath. The plates were adjudged to convey a 'thorough and excellent' notion of Paris and the surrounding neighbourhood.<sup>527</sup> The employment of Heath and his engravers did not go unnoticed in subsequent reviews of the work. James Silk Buckingham, the first editor of *The Athenaeum*, praised Pugin as a guarantee of fine drawings of architectural views but went further in his praise of Heath whose superintendence 'was an assurance that the pencil would be done justice by the burin.'<sup>528</sup>

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<sup>525</sup> Anne Bermingham, 'Urbanity and the Spectacle of Art', in James Chandler and Kevin Gilmartin (eds), *Romantic Metropolis: The Urban Scene of British Culture, 1780-1840* (Cambridge, 2005), pp. 151-176.

<sup>526</sup> Hunnisett, *Steel-Engraved Book Illustration*, pp. 63-105.

<sup>527</sup> *The Literary Gazette*, October 1831, p. 635.

<sup>528</sup> *The Athenaeum and Literary Chronicle*, September 1828, p. 726.

Not only a sign of the industrial and artistic development of Britain, steel engraving played an important role in the increasing importance attached to representing Britain's architectural development, which emphasised Britain's rapid progress in industry and commerce. James Elmes, in his *Metropolitan Improvements, Or London in the Nineteenth Century* (1827-1830), underlines the importance of architecture in the establishment of a civil nation:

Public buildings are the most lasting and effective ornaments of a country; and, at the same time, the cheapest that a people can obtain. By their means nations are established, and obtain "a local habitation and a name;" by them are opulent and ingenious foreigners attracted, and in most cases, more money is brought into a country than all the cost that was originally expended in their construction.<sup>529</sup>

Alex Potts's comparison of Elmes's *Metropolitan Improvements* and the publications of the eighteenth-century topographer Thomas Malton highlights the changes in the representation of urban landscape, from the open public space to the streets, traffic and buildings depicted by Shepherd.<sup>530</sup> Further changes to the representation of architectural scenes can be detected during the period of technological development that witnessed the gradual displacement of copper engraving with steel engraving as the primary method used to reproduce urban topographical scenes. This change was crucial, as the finer detail that could be derived from steel was essential in communicating the architectural details of London buildings as opposed to the social significance of London's topographical development.

A comparison between illustrated topographies of London through the first half of the nineteenth century reveals the changes in what was pictured by those who utilised different printing techniques, which reveals a shift from an interest in representing London's architecture in terms of the social milieu to a greater focus

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<sup>529</sup> Thomas Shepard and James Elmes, *Metropolitan Improvements, Or London in the Nineteenth Century* (1827), p. 3. It is worth noting that the artist Thomas Shepard's name appears before the author (Elmes) on the title page of the book, which is telling of the value derived from the illustrations as opposed to the written word.

<sup>530</sup> Potts, 'Picturing the Modern Metropolis', p. 34.

on the architecture itself as a symbol of the prosperity of the country.<sup>531</sup> The material properties of steel engraving were essential to ensuring a successful transition from a societal perspective of urban London to one concerned more specifically with the beauty and detail of London's architecture as a symbol of Britain's financial and commercial power.

Richard Phillips's advertisement to *Modern London* (1804), a work that featured thirty four copperplate engravings, thirty one of which were coloured, revealed the publisher's intentions to picture the 'actual present state' of London.<sup>532</sup> In doing so, emphasis was placed on representing the city's architecture in terms of the social spaces that were created as a result of London's architectural development: 'They are faithful portraits of the places and scenes represented [that] convey at once correct ideas of places which interest from their celebrity, and of scenes which characterize the manners of people.'<sup>533</sup> The copperplates printed in Phillip's work underscored the motivation to represent the social as well as architectural topography of London.<sup>534</sup> The representation of *The Royal Exchange (Plate 4.1)*, for example, frames the architectural features of the building in relation to its utility as a space for conversation, sociability and business. The copper-plate engraving conveys the number of social interactions taking place within the quadrangle of the Royal Exchange. Much of the letterpress that accompanied the plate described the different walks of the quadrangle in terms of the spaces occupied by different nationalities.<sup>535</sup>

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<sup>531</sup> For further analysis of London's topography see, Sangster, 'Transformation and Specialization in London and its Topography', pp. 317-328. Lesley Hoskins looks closely at the social topography of London in one of the more famous works of the early-nineteenth century. Lesley Hoskins, 'Putting People on the Page: Material Culture as a Way in to Everyday Life Behind the Facades of Tallis's London Street Views', *Journal of Victorian Culture*, 22:3 (2017), pp. 329-338, DOI: 10.1080/13555502.2017.1325576; Elizabeth Grant, 'John Tallis's *London Street Views*', *The London Journal*, 37:3 (2012), pp. 234-51, DOI: 10.1179/174963212X13451695770476. For a wider analysis of the visual culture of London, see Dana Arnold (ed.) *The Metropolis and its Image: Constructing Identities for London c. 1750-1950* (Oxford, 1999).

<sup>532</sup> Phillips, *Modern London*, p. iii. Matthew Sangster has shown that Phillips's work showcased the interactions between people and places to a far greater degree than that of Thomas Malton's *A Picturesque Tour Through the Cities of London and Westminster* (1792-1801). See Matthew Sangster, 'Accumulating London', *Picturing Places* (2017), <https://www.bl.uk/picturing-places/articles/accumulating-london> [Date Accessed: 7 January 2018].

<sup>533</sup> *Ibid.*, p. iv.

<sup>534</sup> Sangster, 'Transformation and Specialization', pp. 322-324.

<sup>535</sup> Phillips, *Modern London*, p. 490.

The Royal Exchange was considered to be the cultural melting pot of London. Joseph Addison lauded the Royal Exchange as a site that encapsulated London's increasing cosmopolitanism. 'There is no place in town which I so much love to frequent as the Royal Exchange', he claimed, 'It gives me great satisfaction [...] to see so rich an assembly of countrymen and foreigners consulting together upon the private business of mankind, and making this metropolis a kind of emporium for the whole earth.'<sup>536</sup> The depiction of a busy and crowded space occupied by wealthy denizens highlights London's architectural space as a vital mediator for social interaction.

Similar to Phillip's account, Ackermann's *Microcosm of London* (1808-1810) framed the city's architecture as sites for increasing social mobility.<sup>537</sup> Ackermann, together with the author William Combe and the artists Thomas Rowlandson and Augustus Pugin chose to represent the social significance of London's urban space in the early nineteenth century. The employment of the caricaturist Thomas Rowlandson in particular, who built a career upon social observation, underlines Ackermann's desire to frame London's architecture as a social commentary.<sup>538</sup> In addition to London's public buildings, which included depictions of the Bank of England and the British Museum, Ackermann also included spaces of leisure and entertainment in order to reveal 'the life that flowed in and around them.'<sup>539</sup> Ackermann's representation of *The Royal Exchange* also foregrounds its utility as a space for sociability. Ackermann's use of aquatint to reproduce the illustrations of Rowlandson and Pugin further emphasises interest in the people that occupy London's architectural spaces. The use of colour draws the readers' eye towards the

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<sup>536</sup> Quoted in Rudolph Ackermann, *The Microcosm of London*, Vol. 3 (London, 1808), p. 25.

<sup>537</sup> Mee, "Mutual Intercourse" and "Licentious Discussion", pp. 198-199.

<sup>538</sup> Mee has found that attempts to frame London's architecture as social spaces created tensions between Ackermann and his artists. Pugin was more interested in architectural matters whereas Rowlandson was primarily concerned with representing London's social milieu. See Mee, "Mutual Intercourse" and "Licentious Discussion", pp. 211-212. For more on the life and works of Thomas Rowlandson, see James Payne and Thomas Payne, *Regarding Thomas Rowlandson, 1757-1827: His Life, Art and Acquaintance* (London, 2010); Kate Heard, *High Spirits: The Comic Art of Thomas Rowlandson* (London, 2013); Diana Donald, *The Age of Caricature: Satirical Prints in the Reign of George III* (London and Yale, 1996).

<sup>539</sup> Mee, "Mutual Intercourse" and "Licentious Discussion", p. 201.



crowded quadrangle where groups of people belonging to different nationalities have converged.

Described as ‘the emporium of the World’, it was observed that the quadrangle of the building (*Plate 4.2*) was unrivalled in its capacity to bring together different nationalities. The author claimed that the optimum time to visit the Royal Exchange was ‘from three to four, when the visiter [sic] may view an assembly which is not to be seen in any country, and may be considered as a principal support of the grandeur of his own.’<sup>540</sup> The physical architecture of the building was therefore regarded as secondary to a social commentary on London’s urban development. The application of aquatint and particularly the use of colour helped to foreground the assembly of people, which enabled Ackermann to achieve his objective, namely framing London’s architecture in terms of the city’s rising cosmopolitanism.

By comparing these earlier topographies of London with those published at a time when steel engraving began to overtake copper engraving and aquatint as the primary mode of picturing London’s urban development, it is clear that the former provided more than a commercially and financially viable alternative. Additionally, steel engraving served to depart from grounding architectural development within the rise of London’s social milieu to a greater concern with the architecture itself, fostering an increasing awareness of London’s growth in terms of commerce and economic power. The material properties of steel, particularly the capacity to engrave and etch far finer lines as opposed to copper, allowed artists and engravers to highlight the delicacy, beauty and grandeur of the buildings represented in their accounts of London’s topography within the wider aims of reinforcing Britain’s economic and industrial progress. Steel engraving thus served the dual purpose of evincing both Britain’s technological achievements in the arts as well as its growing influence in the world.

James Elmes and Thomas Shepherd’s *Metropolitan Improvements* included dozens of steel-engraved prints displaying the architectural features of the

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<sup>540</sup> Ackermann, *The Microcosm of London*, p. 25.

metropolis undertaken by thirty-four engravers including James Tingle, Henry Wallis, William Radclyffe and Thomas Barber, and issued in forty-one numbers between 1827 and 1830. As stated previously, the author wished to convey the superiority of London's architecture within a wider discourse of nation-building.<sup>541</sup> The plates were designed to convey the pace of London's architectural development. 'So rapidly [sic] indeed are these improvements', Elmes stated, '[...] that the absence of a few months from London, produces revolutions in sites, and alterations in appearances, that are almost miraculous, and cause the denizen to feel himself a stranger in his own city.'<sup>542</sup>

The depictions of London's buildings suggest that Elmes and Shepherd were interested primarily in their architectural detail as opposed to the social spaces that were created as a result. The depiction of the Bank of England in *Metropolitan Improvements* sits in stark contrast to that of Ackermann's print (*Plates 4.3 and 4.4*). While Ackermann's print reveals the social exchanges and business transactions that are taking place within the great hall of the Bank of England, the illustration found in Shepherd's work pays greater attention to the bank's structural exterior.<sup>543</sup> Additionally, the accompanying letterpress was dedicated solely to its structural history as opposed to its social significance emphasised by Ackermann.<sup>544</sup> Although Shepherd includes depictions of London society within his architectural scenes, these are not explicated to the same extent as those of Phillips and Ackermann.

A greater focus on the the architectural significance of urban topographical prints is further reinforced in W.I. Bicknell's *Illustrated London* (1846), who detailed the wider context in which his work was published. 'Never, indeed, in the history of our country,' he claimed, 'were building operations in fuller activity than at present, or greater beauty of design displayed.'<sup>545</sup> The volume was issued in fortnightly parts,

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<sup>541</sup> Potts, 'Picturing the Modern Metropolis'; in Arnold (ed.), *The Metropolis and its Image*, passim.

<sup>542</sup> Elmes and Shepherd, *Metropolitan Improvements*, p. 2.

<sup>543</sup> It is worth noting here that, despite a whole section of letterpress dedicated to an architectural description of The Royal Exchange, there is no accompanying print. Rather, the depiction of the building is represented as part of the scene detailing the Bank of England.

<sup>544</sup> Elmes and Shepherd, *Metropolitan Improvements*, pp. 128-131.

<sup>545</sup> W.I. Bicknell, *Illustrated London, or, a Series of Views in the British Metropolis and its Vicinity* (London, 1846), np.

each number containing five ‘highly finished’ steel engravings at a low price of sixpence per number. Unlike Elmes and Shepherd, Bicknell chose to include a print representing the quadrangle of the Royal Exchange (*Plate 4.5*). A comparison between Phillips and Ackermann’s illustrations of the Exchange with that of Bicknell’s underscores the latter’s greater interest in the architectural design of the Exchange’s quadrangle as opposed to a site for diverse sociability. The perspective is changed in Bicknell’s work in order to accommodate more of the quadrangle’s structure and highlight the architectural details.

Furthermore, the depiction of London’s social milieu is far less of a concern in Bicknell’s account. While *The Royal Exchange* in both Ackermann and Phillips’s work is dominated to a large extent by the interactions in the foreground of the illustration, the engraver of the illustrations printed in *Illustrated London* does not highlight the social interactions to the same degree as in previous illustrated topographies of London. Unlike that of Ackermann’s and Phillips’s account, the accompanying letterpress to the illustration in *Illustrated London* excludes any commentary on the Royal Exchange’s potential for sociability.<sup>546</sup>

Bicknell’s work, perhaps more so than that of Elmes and Shepherd, was centrally concerned with the architectural designs of the buildings themselves. Throughout the volume, Bicknell synonymised the beauty of the architecture included in his account with the ‘accuracy’ and ‘precision’ of their designs. Describing the architectural history of the Bank of England, Bicknell lauded the ‘skill and taste’ of the architect Sir John Soane for the ‘beautiful order’ of his design of ‘Tivoli Corner’, which was considered to have been executed with ‘praiseworthy care and accuracy.’<sup>547</sup> The construction of Waterloo bridge was similarly adjudged to exude accuracy and precision, which ‘must be beyond praise.’<sup>548</sup>

The relationship between the materiality and the representation of the print is most clearly detected in Bicknell’s account. He reassured subscribers and

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<sup>546</sup> Bicknell, *Illustrated London*, pp. 1–4.

<sup>547</sup> *Ibid.*, p. 143.

<sup>548</sup> *Ibid.*, p. 79.

purchasers of ‘their utmost energy to produce a work which for beauty and correctness of illustrations cannot be surpassed.’<sup>549</sup> The importance of the engraver to Bicknell’s volume is suggested by the order in which the names are printed on the title-page. The engraver Albert Henry Payne’s name appears in larger font on the title page of W.I. Bicknell’s *Illustrated London* (1846).<sup>550</sup> The capacity to communicate both beauty and accuracy was considered achievable primarily through ‘highly-finished’ steel engraving.<sup>551</sup>

As detailed in chapter one of this thesis, the invention of steel engraving within more general technological changes to the production of the illustrated books was praised for bringing illustrated literature within the financial reach of a wider demographic. Of Thomas Roscoe’s topographical account of South Wales originally published in 1837, one reviewer claimed that ‘it is the invention of steel-engraving [...] that the people are chiefly indebted for the benefit [the diffusion of cheap works of art], as by such means only is it possible to obtain so many impressions from one plate as to admit of a moderate price being put upon the product.’<sup>552</sup> The commercial advantages offered by steel engraving can be detected in Bicknell’s work compared to that of Ackermann’s. *The Microcosm of London* was considerably expensive to produce, so much so that Ackermann reduced the number of volumes from four to three.<sup>553</sup> Moreover, each issue of *The Microcosm* was priced at seven shillings. By contrast, Bicknell was able to price each part of his *Illustrated London* at sixpence, which brought the volume within the financial reach of a rising middle class readership.

However, as a further examination into topographical accounts of London published between 1810 and 1850 reveals, steel engraving became vital in communicating the precision and grandeur of the city’s public buildings during a period in which authors attempted to elevate the status of London as a leading

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<sup>549</sup> *Ibid.*, n.p.

<sup>550</sup> For more on the link between the order of the title page and cultural capital, see Chapter two, pp. 100-102.

<sup>551</sup> ‘Highly-finished steel engravings’ was printed on the title page to each part of *Illustrated London*.

<sup>552</sup> *Chamber’s Edinburgh Journal*, November 18, 1837, p. 303.

<sup>553</sup> Mee, “Mutual Intercourse” and “Licentious Discussion”, p. 212.

financial and industrial centre of the world. The copperplates and aquatints used in Phillips's and Ackermann's accounts did not achieve the level of detail and precision in the representation of the city's architecture compared to Bicknell's illustrations. By contrast, the properties of steel; the hardness of the plate and fineness of the etched lines, were better suited to the representation of Britain's architectural achievements. These print mediums served to convey the social and cultural 'progress' of London in the late-eighteenth and early-nineteenth centuries.

An investigation into the application of steel engraving for urban topographical works highlights the importance of the printing medium's materiality in attempts to picture London according to the social, political and financial context in which they were published. Communicating the accuracy and precision of London's architectural sites, at the same time highlighting their beauty, were thought to be best achieved through steel engraving. Whilst the application of aquatint engraving served to coalesce architectural development with London's vibrant social milieu, steel engraving was considered to coalesce beauty with accuracy and precision within a wider objective to showcase the strength of Britain's commerce and economy against wider imperial expansion by the mid-nineteenth century. The materiality of steel engraving was vital in communicating this to the readers of these topographies.

### Wood engraving, the Virtual Tour and the Reinvention of Topography 1830-1850

While intaglio methods such as aquatint and steel etching were most suited to unifying art and topographical enquiry, the inability to print these forms of engraving and etching on the same press as the type prevented publishers from experimenting with the design and arrangement of these accounts. Tim Fulford has, in his excellent account of the reproduction of landscape scenes in the early-nineteenth century, argued that mechanical and technological changes to graphic reproduction contributed to a 'virtual topography' through the establishment of a

print genre that came to be known as ‘views’.<sup>554</sup> Whilst I agree with Fulford’s claim that the capacity to market authors through the production of images as well as words, I argue here that a ‘virtual topography’ was established later, when the mutability of wood engraving allowed publishers and authors to experiment with the design and arrangement of the book, which served to mirror the wider social and cultural developments in travel and tourism.<sup>555</sup>

The revival of wood engraving after 1830 provided an opportunity to shape topography according to the publishing contexts of the early-Victorian period. Attempts to reflect the increasing democratisation of travel by the mid-nineteenth in guides, tours and rambles relied heavily on the revival and restored reputation of wood engraving. Publishers, authors, and artists of these works were, therefore, not only concerned with the contents of their volumes but also their arrangement and design as part of a wider attempt to replicate the author’s travels on the pages of the book. Histories of travel writing and tourism more generally have tended to explore the significance of what was written as opposed to what or even how the book was illustrate.<sup>556</sup> Through a further exploration into the use of wood engraving for illustrated topographical books, it is clear that financial considerations were not the only reasons for adopting a cheaper and faster mode of graphic reproduction in comparison to intaglio methods. The greater flexibility in design and arrangement of word and image, given the capacity to print type and image on the same press, afforded publishers and authors the opportunity to virtually replicate the rambles, tours, itineraries and guides of the authors within the pages of the book.

Running parallel to the concerns of authors and artists of topographical works to illustrate Britain’s urban and architectural development was the rise of

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<sup>554</sup> Tim Fulford, ‘Virtual Topography: Poets, Painters, Publishers and the Reproduction of the Landscape in the Early Nineteenth Century’, *Romanticism and Victorianism on the Net*, 57-58 (2010), pp. 1-31.

<sup>555</sup> *Ibid.*, pp. 1-3.

<sup>556</sup> See, for example, Nicola J. Watson, *The Literary Tourist: Readers and Places in Romantic and Victorian Britain* (Basingstoke, 2006); Nicola J. Watson (ed.), *Literary Tourism and Nineteenth-Century Culture* (Basingstoke, 2009); Glenn Hooper, *Travel Writing and Ireland, 1760 and 1860* (Basingstoke, 2005); Katherine-Haldane Grenier, *Tourism and Identity in Scotland, 1780-1939* (Aldershot, 2005).

middle-class travel and tourism, particularly after 1835. Although tourism dates back to the early-medieval period, it was only by the early-to-mid nineteenth century that opportunities to travel were opened up to the middle classes.<sup>557</sup> Before then, touring the country was a luxury that could only be afforded by the elites. This was reflected in the considerably large and expensive folios produced by travel writers. William Gilpin, Thomas Pennant, Charles Young and later Edward Pugh produced works designed to reveal the great tourist routes of the British Isles. However, the advances made in book production were relatively embryonic at that stage. Pugh's *Cambria Depicta*, for example, consisted of 480 pages together with a folio volume of plates, amounting to a considerable 150,000 words.<sup>558</sup> These expensive volumes were affordable only to wealthy elites at a time when the concept of 'the tour' was well established.

The progress made by steam technology in the 1820s provided further opportunities for domestic travel. Travel by both steamboat and rail by 1850 served to interconnect inland Britain with the other isles of the archipelago.<sup>559</sup> The commercialization of travel by the mid-nineteenth century ran parallel to the expansion of the literary market for travel guides and tours that formed the bulk of topographical writing in the period. The taste for travel writing can be detected in the commercial fortunes of John Murray's pioneering handbooks for travellers. Within the period 1836-1858, only 9% of the company's published handbooks incurred a loss. Losses increased markedly by the end of the nineteenth century, rising to 69% by 1881-1901.<sup>560</sup> Murray's early success accentuates the popularity for travel literature in the early-Victorian period.

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<sup>557</sup> Benjamin Colbert, 'Introduction: Home Tourism', in Benjamin Colbert (ed.), *Travel Writing and Tourism in Britain and Ireland* (Basingstoke, 2012), p. 2.

<sup>558</sup> Barrell, *Edward Pugh of Ruthin*, p. 176.

<sup>559</sup> Williams, *Tourism, Landscape and the British Character*, pp. 11-12. For more on the development of the steam boat and tourism, see John Armstrong and David M. Williams, 'The Steam-Boat and Popular Tourism', *Journal of Transport History*, 26.1 (2005), pp. 61-77. There are a number of excellent accounts on the growth of rail travel and the impact that had on tourism. See, for example, Stuart Hylton, *The Grand Experiment: The Birth of the Railway Age: 1820-1845* (Hersham, 2007); Michael Freeman, *Railways and the Victorian Imagination* (New Haven, 1999).

<sup>560</sup> Gráinne Goodwin and Gordon Johnston, 'Guidebook Publishing in the Nineteenth Century: John Murray's Handbooks For Travellers,' *Studies in Travel Writing*, 17.1 (2013), pp. 44-45.

The commercialisation of travel guides, tours and rambles also corresponded to technical developments in graphic reproduction. As can be seen in *Figure 4.1*, the market for topographical books that include intaglio engravings and lithographic prints remained strong. Notable topographical publications such as *Barber's Picturesque Illustration of the Isle of Wight* (1845) and Archibald Fullerton's *A Series of Select Views in Perthshire* (1844) included a number of steel-engraved illustrations depicting landscape views of the places encountered by these authors. Lithographs were also frequently printed in tours and rambles, including Murray's travel guides and Lady Georgina Chatterton's *Rambles in the South of Ireland* (1838). Although her volumes sold well, the illustrations received mixed reviews. It was observed in the *Literary Gazette*, for example, that Chatterton had given much information with regard to Irish antiquities through both pen and pencil.<sup>561</sup> It was hailed as a work that produced amusement and entertainment but could also be referred to by 'learned antiquaries.'<sup>562</sup> Others lamented the sketch-like appearance of her illustrations. One reviewer, while accusing Chatterton of 'indulging in antiquarian researches', claimed that she had presented her readers with 'a scattering of "nices", "pretties", "beautifuls" [...and] several architectural *drolleries*, traced by her pencil, which she seems to have exercised as freely as her pen.'<sup>563</sup>

Despite questions over the merits of illustrations of the kind found in Chatterton's volumes on Ireland, the literary market remained strong for full-page illustrations of architectural and landscape scenes. However, what is particularly striking is the sharp rise in books that contain a number of smaller illustrations, particularly after 1835 (*Figure 4.2*). Authors and publishers of topographical books

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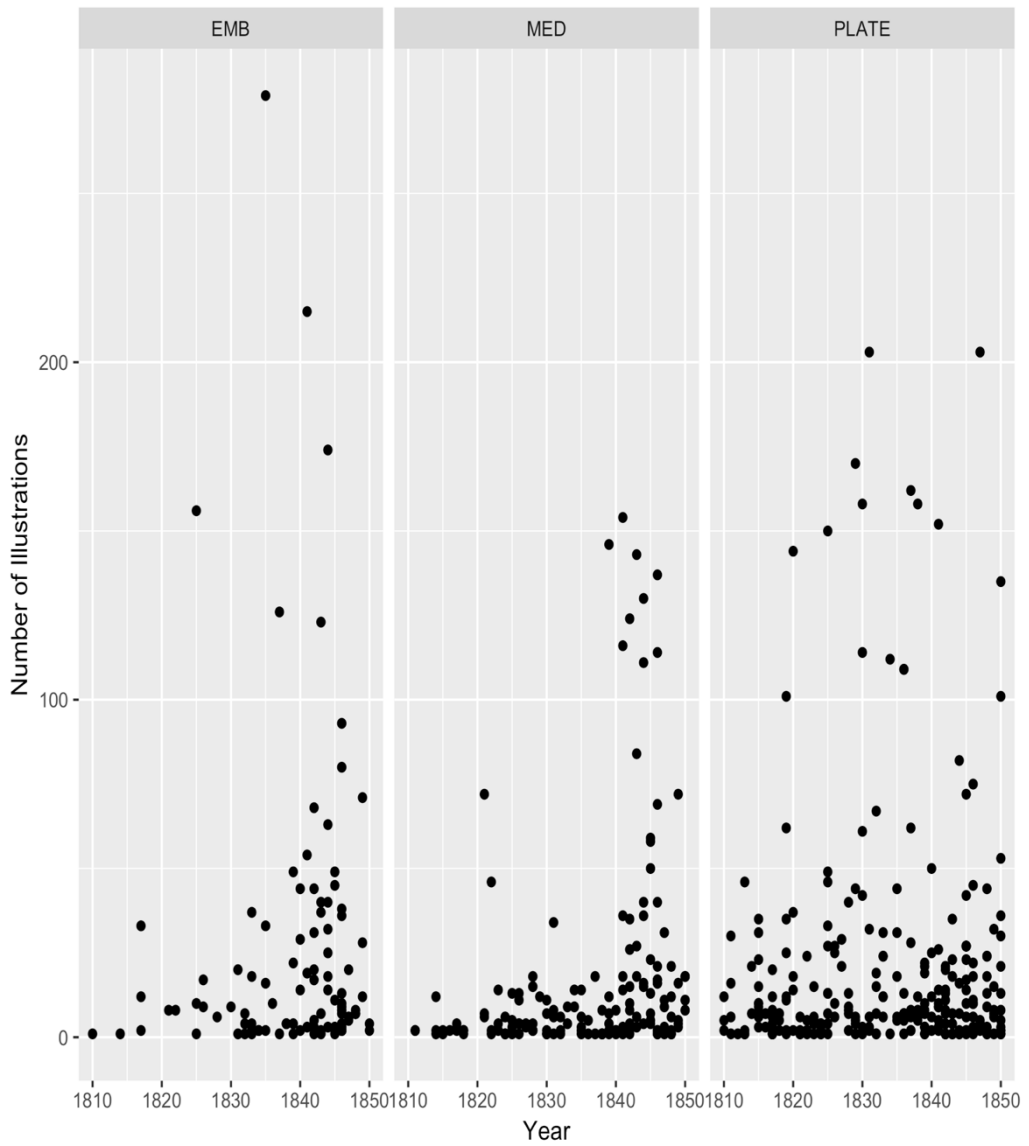
<sup>561</sup> *The Literary Gazette*, 16 April 1839, p. 242.

<sup>562</sup> *The Gentleman's Magazine: and Historical Review*, July 1839, p. 613. It is perhaps worth noting that the same reviewer also hailed the volumes as a 'good omen' of the decline of 'the taste for fashionable novel writing.'

<sup>563</sup> *Tait's Edinburgh Magazine*, June 1839, p. 408.



### Topography Illustration Sizes



*Figure 4.2* showing the instances of embellishments, half-page and full-page illustrations in 404 topographical publications from 1810-1850. It is clear that from 1830 onwards publishers, authors and artists of topographical literature began to use smaller illustrations to illustrate their books.

turned to wood engraving as part of a wider ambition to alter the format and arrangement of topographical accounts within an increasingly saturated market for cheaper, illustrated literature. This can be clearly identified in Robert Sears's *A New and Popular Pictorial Description of England, Scotland, Ireland, Wales, and the British Isles* (1847), which was designed to introduce American readers to the history and antiquities of their trans-Atlantic neighbours. 'Every book', Sears suggested, 'which is calculated to diffuse among us historical and descriptive accounts of Great Britain, has a solid claim, we think, to the favourable regard of the patriotic and the good.'<sup>564</sup> The work featured over 250 wood engravings exhibiting natural scenery, local antiquities and various forms of architecture. Sears was fully aware of the importance of the format the book took:

From the materials for such a volume a large folio might have been produced; but our object has been to condense and arrange in as small a compass as possible, all the really useful information the subject can afford; thus giving to the public a work, at a comparatively trifling expense, which details all that could be learned from far more expensive and bulky volumes.<sup>565</sup>

Wood-engraved illustrations allowed publishers, artists and authors to reconfigure the format of the book, which led to departure from the heavily-bound volumes of tours and topographies published in the eighteenth century.

The changes to the design and format of topography is exemplified through Charles Knight's topographical history of London. Knight took advantage of the market demand for topographical literature. As will be explored in more detail in the next chapter, his pictorial histories of England, the Bible and Shakespeare as well as his penny encyclopaedias sold extremely well. In 1850, he added a topographical account of London to his pictorial publications entitled *Pictorial Half-hours of London Topography*, embellished with thirty-six wood engravings. The entire volume was priced at three shillings and sixpence, with each monthly part costing

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<sup>564</sup> Robert Sears, *A New and Popular Pictorial Description of England, Scotland, Ireland, Wales, and the British Isles* (New York, 1847), p. 7.

<sup>565</sup> *Ibid.*

nine pence. It provided the literary market with a comprehensive description of the architectural history of London dating back to the eighteenth century. Knight's work exemplifies the shift from the large, folio editions of county histories to smaller, compact editions that left out miscellaneous detail in favour of a more succinct and entertaining account.

Yet these changes were not predicated solely on commercial and financial objectives, but also as a means to virtually reconstruct the travels of the author. The synergy between word and image through wood engraving, therefore, proved particularly appealing to authors and publishers of itineraries and rambles. Publishers sought to find a way of providing a representation of the movement involved in tourism and travel within static descriptions, something that Broglio has termed the 'phenomenological critique of technology.'<sup>566</sup> Wood engraving provided authors with the capacity to illustrate the narrative of their journeys, which in turn enabled readers to reconstruct the rambles and tours of the authors simultaneously through word and image.

Attempts to reconstruct the excursions of the author can be found in the anonymously written *Rambles in Kent* (1845) published in duodecimo format and including sixty-two wood engravings and six steel engravings. Printing the book in duodecimo format enabled readers to travel to Kent accompanied by the topographical guide. The wood engravings were employed to reflect the act of rambling as detailed in the introduction to the work.<sup>567</sup> The author stated that his volume would make a perfect accompaniment to a trip around Kent, in which he was careful to observe that a trip 'varying from ten to eighty miles, may be speedily made on the South-Eastern Railway.'<sup>568</sup>

Perhaps one of the best examples of the shift in topographical literature from picturing grand landscape scenes to virtually replicating the travels of the author through word and image was Frederick Palmer and Alfred Crowquill's *The*

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<sup>566</sup> Broglio, *Technologies of the Picturesque*, pp. 17-19.

<sup>567</sup> Anon, *Rambles in Kent* (London, 1845), pp. 1-3.

<sup>568</sup> *Ibid.*, p. 1

*Wanderings of a Pen and Pencil* (1846). Originally intended to sell in ten parts, it was eventually sold in eight at a total price of two shillings and sixpence. Alfred Henry Forrester, who worked under the pseudonym Crowquill, enjoyed a great deal of success as an illustrator, publisher and journalist. His reputation as a humorous illustrator and draughtsman was firmly established by his work for *Bentley's Miscellany*, *Punch* and the *Illustrated London News*.<sup>569</sup> In an obituary published in *The Illustrated Review*, it was noted that Forrester produced so many fine books of his own 'that he was in the good books of everybody else.'<sup>570</sup>

In 1845, together with his partner Francis Palmer, he travelled around various southern counties of England to illustrate the historical antiquities they encountered. Unlike the majority of topographical works that strived for truth and accuracy in their illustrations, the primary aim of Palmer and Forrester was to induce their readers to 'desert the library for the mountain, or the solemn abbeys of his "Monasticon" for the great quiet places where the originals hasten to decay.'<sup>571</sup> The work was reminiscent in nature of *Dr. Syntax* yet, unlike Coombe's work, it was adjudged to be 'far less facetious than it was distinctly antiquarian.'<sup>572</sup> The wood engravings, though not considered the finest of examples, were praised for their clarity of representation. William Harrison Ainsworth praised the publication, rendering it one of the 'better-assorted companions' and pleaded with the public to endorse the work so that the pair could produce subsequent volumes in the future.<sup>573</sup> The success of Palmer and Crowquill's publication was indicative of the demand for novel forms of topography. Industrialisation and mechanization broadened the scope for publishers and illustrators to produce topographical works in different formats, particularly illustrated accounts of tours and rambles, in which word and image were designed and arranged in a way that virtually replicated those

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<sup>569</sup> For more on the career of Forrester, see Engen, *Dictionary of Victorian Wood Engravers*, p. 59.

<sup>570</sup> *The Illustrated Review*, June 1872, p. 737.

<sup>571</sup> Francis Palmer and Alfred Crowquill, *Wanderings of a Pen and Pencil* (London, 1846), p. 375.

<sup>572</sup> *The Illustrated Review*, June 1872, p. 741.

<sup>573</sup> *The New Monthly Magazine and Humorist*, October 1846, p. 251.

tours, reflecting the taste for middle-class domestic travel by the mid-nineteenth century.

Palmer and Crowquill's *Wanderings of a Pen and Pencil* was published by the London printmaker Jeremiah How. All of How's publications were heavily illustrated. More often than not, no expense was spared in creating the most aesthetically pleasing illustrations. In an advertisement for the eighth part of his *Book of Ballads*, edited by S. E. Hall, it was observed that the illustrations were created by 'our chiefest [sic] artists, reflected by the burin of our best engravers.' The engravings completed by Thomas Walmsley were 'of great firmness and exceeding delicacy, and the effect of the chiaroscuro exquisite in tone and keeping.'<sup>574</sup> Not only were the illustrations praised, but the quality of paper and printing were also a source of great admiration. The quality of engravings, paper and printing was a running theme in How's publications, which tended to keep the prices of the parts high.<sup>575</sup> Not much is known about How's finances, although in 1843, he was listed in the court for relief of insolvent debtors, which suggests that his publications did not always bring financial remuneration.<sup>576</sup>

Of all of his publications, his topographical works were arguably the most popular and influential. In 1842, How published *England in the Nineteenth Century*, which was split into two 'divisions', the North and the South. *An Illustrated Itinerary of the County of Lancaster* formed the title of the northern division while Cornwall was the focus of the southern division. The task of providing a topographical account of the counties was given to Cyrus Redding, whose previous publication *History and Description of Modern Wines* (1841) proved influential throughout the nineteenth century. His *Shipwrecks and Disasters at Sea* (1833) and *Gabrielle: A Tale of the Swiss Mountains* (1829) were also tremendously successful. The polarised accounts of the two counties provided readers with a varied account of topography.

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<sup>574</sup> *The Eram*, 1 October 1843.

<sup>575</sup> The numbers of *How's Illustrated Books of British Song* (1846), for example, were priced at half a crown.

<sup>576</sup> *The London Gazette*, September 19, 1843; *The London Gazette*, 7 November 1843; *The Morning Chronicle*, 28 November 1843; *The Morning Post*, 29 December 1843.

Lancashire, one of the primary industrial centres of Britain, provided a sharp contrast to the picturesque views of Cornwall. Of the 179 illustrations that embellished *Lancaster*, thirty-one related to the cotton trade. Only six of the 112 illustrations in *Cornwall* depicted scenes of industry in the form of mining. The contrast between ancient and modern topography within the two volumes was subject to praise by the writers of *The Athenaeum*, who commended the publisher for choosing one county ‘chiefly noted for its natural beauties and romantic features’ and the other ‘distinguished for some great branch of national manufactures.’<sup>577</sup> Although the diametric nature of the two studies was held in high regard, somewhat ironically, it was not Redding’s original intention to illustrate the industrial side of Lancashire and it was only due to the desire from How to publish as quickly as possible that the industrial descriptions of Lancaster by the contemporary historian William Cooke Taylor were prominent in the work.<sup>578</sup> Perhaps unsurprisingly, it was the more picturesque *An Illustrated Itinerary of Cornwall* that received the greater patronage and volumes of the work continued to sell by 1860, albeit at two thirds of the original price.<sup>579</sup>

The motive to balance entertainment and information was a prerequisite of the work. Redding wished to keep statistical information to a minimum and confine it to matters of interest and reference only. In the preface to the work on Cornwall, he laid out his intention to combine ‘a moderate compass’ of both amusement and information. Consequently the book was interspersed with personal feelings and impressions of the scenery encountered in order to depart from the ‘tedious’ classification of subjects displayed in former topographical works.<sup>580</sup> It was hoped therefore that the work would acquire the attention of readers who read principally for amusement. For readers who wished to learn about the statistical information relating to the counties, the last forty pages of his

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<sup>577</sup> *The Athenaeum*, August 1842, p. 728.

<sup>578</sup> Cyrus Redding, *Fifty Years of Recollections, Literary and Personal, with Observations on Men and Things*, Vol. III (London, 1858), p. 196.

<sup>579</sup> *Ibid.*, p. 197.

<sup>580</sup> Cyrus Redding, *An Illustrated Itinerary of the County of Cornwall* (London, 1842), p. viii.

*Lancaster* were dedicated to information relating to poor law unions, ecclesiastic benefices, curacies and parochial statistics.

Both books were heavily illustrated, incorporating both wood engravings and steel-engraved plates bound sporadically through each volume. The wood engravings were used to ‘impart a correct idea of not a few interesting objects, particularly the relics of many of the dwellings of our ancestors.’<sup>581</sup> The steel plates provided picturesque and beautiful views of the two counties. Unusually for books of this nature, the list of illustrations which also acted as instructions to the binder, included the names of the engravers as well as the artists. Even more unusually, the names of the wood engravers were also included, highlighting the restored reputation of the printing medium and recognition of the work of the engravers. Twelve artists were employed to complete the drawings while no fewer than twenty-four engravers were used to replicate the artists’ work; foremost amongst those were William Radclyffe and John Hinchliffe. How noted in the preface to *Cornwall* that the work was ordered to accommodate the abundance of wood engravings. The illustrations printed in both works were lauded for their levels of accuracy and beauty. Despite the clarity of impression and the beauty of the steel engravings, the illustrations on wood were subject to particular praise for being ‘very clear, characteristic, and brilliantly cut.’<sup>582</sup> The illustrations of picturesque scenery were admired for their ‘artistical [sic] feeling’ and scenes illustrating cotton manufactures for their accuracy.<sup>583</sup> A year before the publication of *Lancaster*, George Newman Wright’s *Lancashire: It’s History Legends, and Manufactures* was circulated amongst the printing houses of London. Wright’s work was of a very different character, providing readers with a more statistical account of industrial developments in the county. How and Parson’s publication was deemed to be ‘infinitely the superior’ not

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<sup>581</sup> Cyrus Redding, *An Illustrated Itinerary of the County of Lancaster* (London, 1842), p. iii.

<sup>582</sup> *The Examiner*, 9 April 1842, p. 228.

<sup>583</sup> *The London Saturday Journal*, January 1842, p. 18.

only for its subject matter but also for its vignettes and numerous wood engravings.<sup>584</sup>

The dimensions of the book, the format of the letterpress and the considerable number of illustrations of *England in the Nineteenth Century* exemplified the need for publishers to reorder topography for commercial success (*Figure 4.3*). Writers for *The Athenaeum* felt How's publication exemplified this shift:

“The age of folios” has indeed passed away—even the county history, the last to lay aside the venerable form in which alone our forefathers believed all learning and research could be enshrined, has been compelled to come forth in quarto, with ample margin and wide spreading letter-press, instead of the closely packed double columns that gladdened the hearts of our Dugdales and Stukeleys. It is doubtless in compliance with the taste of the age, that the work before us makes its appearance in a series of monthly pamphlets; and instead of being divided into books and chapters, in which each separate question of antiquities or natural history would be fully and right learnedly discussed, it takes the popular form of a tour, and leads us along from town to village, from cromlech to abbey, after the gossiping fashion of the day.<sup>585</sup>

Both *Lancaster* and *Cornwall* were published in five monthly parts in imperial octavo format and included between twenty and thirty wood engravings and one steel engraving in each part. How's publication was made an example of the progress made in illustrated topographical literature. In a comparison between *England and the Nineteenth Century* and the publication of *The Beauties of England and Wales* forty years earlier, the quality of paper and print, the elegance of engravings, that embellished the ‘intelligence’ of the writing in the former, was indicative of ‘the great improvements of preparing books, as in any constructive business followed in England.’<sup>586</sup> Although the subject matter of the publication was recommended for its level of information and entertainment, fine printing, the copious number of illustrations and quality of paper were the source of admiration that led commentators to recommend the work to a wide readership.

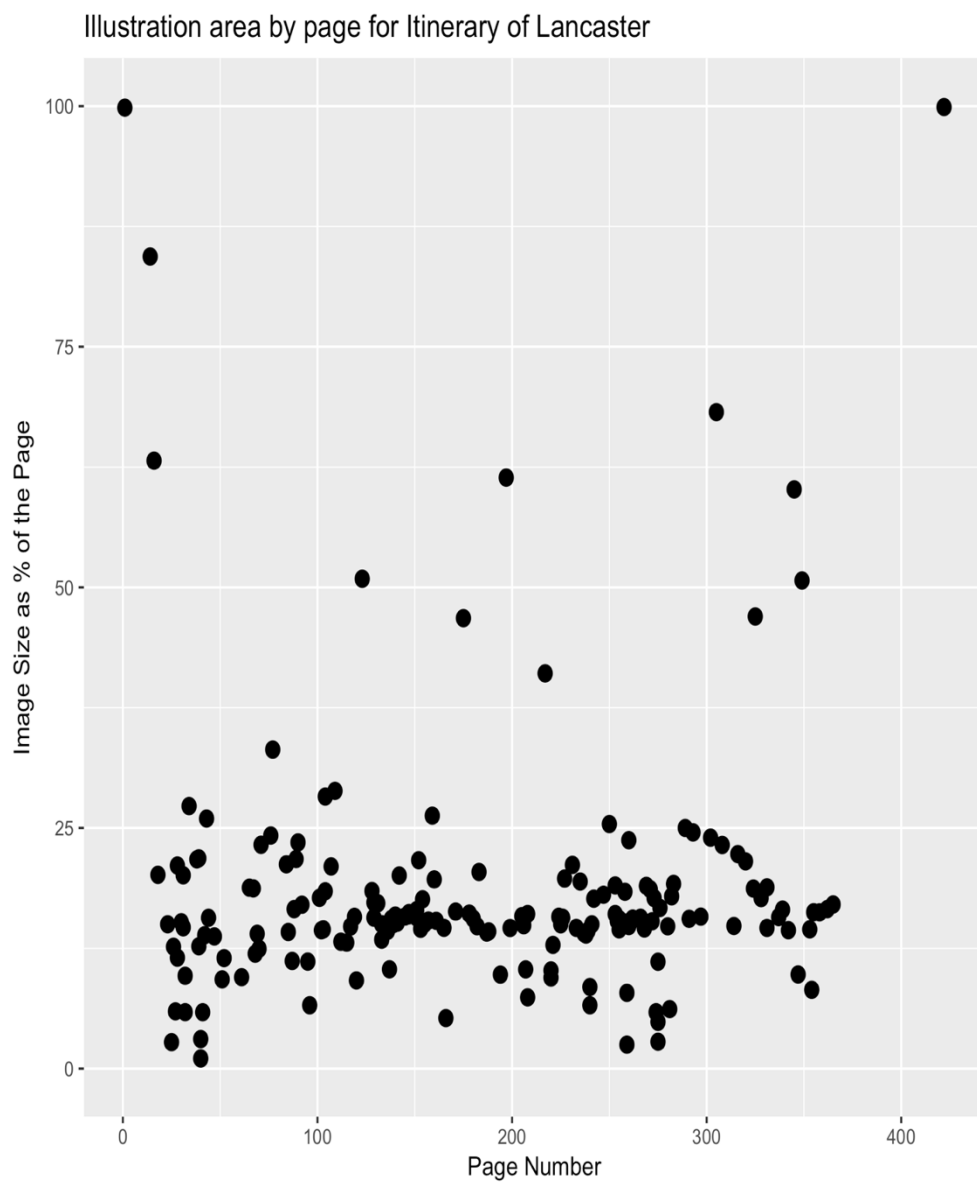
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<sup>584</sup> *Ibid.*, p. 19.

<sup>585</sup> *The Athenaeum*, 30 July 1842, p. 681.

<sup>586</sup> *Chambers's Edinburgh Journal*, February 1842, p. 26.





*Figure 4.3.* Showing the image distribution by page in Cyrus Redding's *An Illustrated Itinerary of the County of Lancaster* (1842). As can be seen from the graph, the vast majority of the illustrations fall below twenty-five percent of the page.

Both illustrated itineraries were credited in respect to artistic accomplishment, but perhaps more importantly symbolised the dramatic shift in the design and arrangement of topography that reflected the culture of travel and tourism as opposed to that of older topographical practices. Another of How's publications, which did much to shape the public opinion of Ireland at a time of national struggle, is also reflective of the greater value attached to the design and arrangement of illustrations in attempting to align the physical act of travelling with the physiological act of reading. *Ireland: Its Scenery and Character*, written by the novelist Anna Maria Hall who often published under the name of her husband, the journalist Samuel Carter Hall, was published during a period when the destitution of Irish society had come to the fore. The 'land question' had been a source of perpetual concern for the British government throughout the nineteenth century. The strain on tenants to pay rents from absentee landlords was one of the primary factors behind the impoverishment of Ireland. Two thirds of the population of Ireland by 1841, incidentally the year that *Ireland* was published, relied on agriculture yet very rarely received a working wage.<sup>587</sup> The Great Famine of 1845 was to compound the levels of poverty and destitution Ireland's inhabitants were experiencing throughout the early to mid-nineteenth century.

Given the social and political context of Ireland at this time, the publication of a work that included both geographical and social topography in the form of a tour received a great deal of recognition. Writers of *The Monthly Review* suggested that the best features of the work were those that enabled the reader to observe Ireland's people from both an economic and social sense.<sup>588</sup> Previous works on Ireland's topography were concerned with specific localities, which were rendered uninteresting to the general reader. Other travel books relating to Ireland previous to Hall's publication were seen to be politically motivated. *The Times* observed that the majority of earlier publications, 'have been composed for party purposes, or party

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<sup>587</sup> Edward Laxton, *The Famine Ships: The Irish Exodus to America 1846-51* (London, 1997), p. 14.

<sup>588</sup> *The Monthly Review*, October 1843, p. 172.

objects; [...] till the appearance of the volumes before us, hardly a single work, within our knowledge, relating to Ireland, [exists] which we should be inclined to praise for its moderation, accuracy and impartiality.<sup>589</sup> Impartiality was vital for Hall who endeavoured to ‘consider every subject, without taking into account whether it is supported or opposed by a party-exercising our judgement only with a view to determine whether it is beneficial, or prejudicial, to the United Kingdom.’<sup>590</sup> It was also observed by *The Times* that works on the social, moral and physical condition of Ireland have resulted from ‘meditation in the closet, rather than from actual observation of the country and its inhabitants.’<sup>591</sup> The publication of *Ireland* was a result of five tours made to the country between 1825 and 1841 in the hope that it would draw public attention and entice visitors to the sister island.

Spanning thirty-two counties, the completed work was divided into three volumes, comprising over one thousand pages. After the volumes were published, they were issued in monthly parts containing two engravings of scenery on steel, an engraved map of a county ‘according to the latest surveys’, and approximately fifteen wood engravings at a cost of half a crown. The letterpress was bound in super-royal octavo. Twenty parts in total were published. The book was illustrated in the same manner of *England in the Nineteenth Century*. Twenty plates were interspersed by hundreds of run-in-relief wood engravings. The steel plates, which were engraved after paintings by Thomas Creswick, were not produced for the work but because of their accuracy and beauty, the addition of further engravings was considered unnecessary. Wood engravings were used to illustrate architecture, ruins, portraits, relics and other objects ‘as shall seem best suited for that class of engraving.’<sup>592</sup> The placement of the in-text illustrations were intended to re-trace the steps of the author in a natural order and to picture everything she encountered.

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<sup>589</sup> *The Times*, 12 October 1843, p. 6.

<sup>590</sup> S. C. Hall, *Ireland, Its Scenery and Character* (London, 1841), p. viii.

<sup>591</sup> *The Times*, 12 October 1843, p. 6

<sup>592</sup> *Ibid.*, p. v.

Despite the beauty of the steel plates, one of the wood engravings, depicting the tossing of the pancake on Shrove Tuesday, was adjudged to be the best example of illustration. Engraved by Landells, reviewers claimed they had ‘rarely seen a more exquisite specimen of art.’<sup>593</sup> The wood engravings both faithfully and amusingly depicted the circumstances and character of the Irish, resulting in large print runs in both London and Scotland. It more than doubled the number of sales originally calculated by the publishers and multiple editions were printed up until the turn of the twentieth century. Not only did the use of wood engraving help to transform the discipline of topography from one of rigorous intellectual enquiry to one more aligned with the democratisation of travel, but also highlights the artistic merit of wood engraving in spite of the inclusion of steel-engraved plates that were used to advertise the pictorial beauty of the volume.

Such was the success of Hall’s work, How went on to publish a subsequent work entitled *A Week at Killarney* by the same author in 1843. Most of the descriptions and illustrations were identical to those published in the former edition. The selling point of this publication was its thin octavo format in the hope that it would accompany the traveller around the Lakes of Killarney. Accounts of the beauty and picturesque scenery of Killarney were abundant dating back to the second half of the eighteenth century, predominantly in the style of the picturesque.<sup>594</sup> Yet the arrangement of word and image perhaps reveals the author’s attempts to attract visitors to Ireland by producing a style of topography familiar to readers across the channel. Ireland’s landscape was being constructed at a time when ties between England and Ireland were changing dramatically through the Act of Union.<sup>595</sup> Hall’s desire to unite England and Ireland was made clear in her advice to

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<sup>593</sup> *The Hull Packet*, 14 May 1841, n.p.

<sup>594</sup> Examples include Anon., *A Description of Killarney* (London, 1776); Jonathan Fisher, *A Picturesque Tour of Killarney* (London, 1789); Isaac Weld, *Illustrations of the Scenery of Killarney and the surrounding Country* (London, 1807); Arthur Atkinson, *The Irish Tourist, in a Series of Picturesque Views* (Dublin, 1815); J. N. Brewer and J. P. Neale, *The Beauties of Ireland, In Two Volumes* (London, 1825).

<sup>595</sup> For an account into the construction of an Irish visual aesthetic see Finola O’Kane, *Ireland and the Picturesque: Design, Landscape Painting and Tourism 1700-1840* (New Haven and London, 2013), pp. 139-174.

travellers from London of the best routes from the metropolis to Killarney.<sup>596</sup> The publication was lauded as ‘one of the most elegant hand books from the traveller ever issued...’<sup>597</sup> More interestingly, however, were the remarks made by another reviewer, who claimed that the book ‘will be equally agreeable as a companion to Killarney and as a memorial of travel when laid upon the drawing-room table at home.’<sup>598</sup> The reviewer’s contention that the volume could be read and enjoyed at the drawing-room table is suggestive of the author’s success in establishing a virtual tour whereby the reader could visualise the travels of the author through word and image. Organising the volume in the form of a virtual tour through the design and arrangement of word and image also served to advance the attempts made by the author to encourage visitors to Ireland. This was predominantly achieved through aligning Ireland’s prosperity and picturesque beauty through a form of topographical reading that had become popular in England.<sup>599</sup>

*A Week in Killarney* was adjudged to be superior to all of the annual periodicals published on this subject in respect of both the engravings and literary description. Keen to reap the reward from its success, other publishers produced subsequent editions of the guide. Queen Victoria’s visit to the country in 1849 prompted James Virtue to republish it with additions made by the authors as a result of a tour there the previous year. The illustrations found afterlives in weekly and monthly periodicals throughout the proceeding two decades. Hall included extracts and illustrations from the guide in *The Art Journal*, of which her husband was one of the editors. In 1865, at the time of the International Exhibition in Dublin, extracts and illustrations were printed in the periodical in order to encourage visitors to the

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<sup>596</sup> For more on the visual culture of the illustrations found in Hall’s work, see Amélie Dochy, ‘Mr and Mrs Hall’s Tour of Ireland in the 1840s, More than a Unionist Guidebook, an Illustrated Definition of Ireland Made to Convince’, *Miranda*, 9 (2014), pp. 1-27.

<sup>597</sup> *Chambers’s Edinburgh Journal*, October 1843, p. 317.

<sup>598</sup> *The Gentleman’s Magazine*, September 1850, p. 302.

<sup>599</sup> Mieke Bal has argued that forms of narration, often through visual and textual means, work ‘between information and persuasion.’ See Mieke Bal, ‘Telling, Showing, Showing Off’, *Critical Enquiry*, 18.3 (1992), pp. 556-594.

country and to promote the 'very great and very important' improvements made since the economic hardships of the 1840s and 1850s.<sup>600</sup>

How's publications exemplified the ability to 're-package' topography to meet the demands of a greater number of consumers. In order to achieve this, wood engraving was an essential component. Publishers, aware of the success of personal travel accounts, framed topography in order to combine information and accuracy with entertainment. Wood engraving allowed readers to virtually encounter objects of topographical interest in an attempt to replicate the tour of the author. How's publications were suggestive of the aesthetic quality of printing on wood as opposed to a cheaper and less time-consuming alternative to intaglio printing. The parts of Tombleson's work that featured steel-engraved topographical views of the Rhine, for example, were far cheaper than How's relatively expensive parts. Wood engraving afforded publishers the opportunity to combine the popular prints of views with the addition of in-text illustrations designed to create a virtual tour that engendered a form of reading whereby the reader could re-enact the travels of the author within the pages of the book. The sophistication of wood engraving coincided with the steady democratisation of domestic travel and tourism. This enabled publishers, artists and authors to reinvent topography that departed from one of rigorous intellectual and artistic enquiry to a discipline bound up with the wider social and cultural changes taking place in Britain within an increasingly competitive market for illustrated publications.

### 'Scissors and Paste' Topography

The use of wood engraving as a printing method for topographical illustrations demonstrates how the surface on which the illustration is printed shifted the focus of the genre from antiquarian, aesthetic and statistical rigour to a virtual tour that aligned topography with domestic and foreign travel writing. The

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<sup>600</sup> *The Art Journal*, April 1865, pp. 118-120.

attempts made by publishers and authors to establish a virtual tour, through the interaction between word and image on the page as well as the overall design and arrangement of the book, were indebted to the mutability of wood engraving.

The simplicity in design and execution that could be achieved through wood engraving allowed publishers and authors of topographical works to copy and reprint illustrations at ease. Publishers often exercised control of the wood blocks that were used to print illustrations in their books and so the reprinting of illustrations across different works published by the same publisher was not uncommon. The prodigious Scottish publisher Archibald Fullarton frequently reprinted illustrations used in previous publications to embellish his new works. *A History of the Highlands and the Highland Clans*, published in 1845, contained a number of illustrations that had been reprinted in a work he published three years prior. The author James Browne was careful to stress, however, that the object of his 1845 work was not to produce a novel and authentic work. He stated in the preface of the work that ‘nothing is more easy than to hazard conjectures, invent theories, construct plausible hypotheses, and indulge in shadowy generalizations’, and that the work ‘makes no pretensions whatever to original discovery, or novel speculation.’<sup>601</sup> The reprinting of illustrations in this case were not used to create a novel or authentic work, but instead were used to invigorate the book within a high market demand for illustrated literature in addition to its utility as a work that would simply remain useful to readers interested in the history of Scotland.

Yet, as has already been discussed in chapter one, antiquarian and topographical illustrations were constitutive of knowledge rather than an objective representation of nature. As Sam Smiles has argued, these illustrations engendered a form of ‘fictional realism’, rendering the text vulnerable to the power of the image.<sup>602</sup> Whilst I agree that the image becomes central to the arrangement and layout of these topographical volumes, the copying and reprinting of wood engravings can be

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<sup>601</sup> James Browne, *A History of the Highlands and of the Highland Clans*, Vol. 1 (London, 1845), p. vii.

<sup>602</sup> Smiles, ‘British Antiquity and Antiquarian Illustration’, in Martin Myrone and Lucy Peltz (eds), *Producing the Past: Aspects of Antiquarian Culture and Practice, 1700-1850* (Surrey, 1999), pp. 58-62.

seen as an attempt to respond to the new taste for ‘the popular tour’ as the reviewer above described, which not only impacted upon the logic of word and image but also the size of the book, the amount of written text, and the publishing format.<sup>603</sup>

Attempts made by publishers and editors to replicate the idea of the virtual tour discussed earlier in the chapter were not only achieved through the production of new illustrations that incurred extra financial capital, but also through copying and reprinting illustrations from other topographical volumes and editions. The level of re-printing was often sporadic, choosing to copy select illustrations they felt best represented the scene or site they were illustrating. The rise of scissors-and-paste journalism around the mid-nineteenth century was suggestive of the manipulation and exploitation by publishers and editors of the ubiquity of printed illustrations on offer by the mid-Victorian period.<sup>604</sup>

This exploitation was also found in the copying of topographical illustrations. Sears’s *A New and Popular Pictorial Description of England, Scotland, Ireland, Wales, and the British Islands* discussed earlier in the chapter included a number of illustrations that were copied from a selection Charles Knight’s works, particularly his serialised work, *London* (1841). Knight often copied illustrations from one publication to the next. Illustrations found in *London* were reprinted in his *Pictorial History of England* (1846) and *Pictorial Half-Hours* (1850). The lack of firm international copyright laws gave editors such as Sears opportunities to re-format works such as Knight’s to establish a market overseas.<sup>605</sup> Knight’s topographical illustrations were copied and shaped to fit the text of French and Dutch accounts of London and England.<sup>606</sup> Sears claimed in the preface to his work that the most

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<sup>603</sup> *The Athenaeum*, 30 July 1842, p. 681.

<sup>604</sup> Stephan Pigeon, ‘Steal It, Change it, Print it: Transatlantic Scissors-and-Paste Journalism in the Ladies’ Treasury, 1857-1895’, *Journal of Victorian Culture*, 22.1 (2017), pp. 24-39, DOI: 10.1080/13555502.2016.1249393; Melodee Beals, ‘Scissors and Paste: The Georgian Reprints, 1800-1837’, *Journal of Open Humanities Data*, 3.1 (2017), DOI: 10.5334/johd.8.

<sup>605</sup> For more on international copyright, see James J. Barnes, *Authors, Publishers, and Politicians: The Quest for an Anglo American Copyright Agreement, 1815-1854* (Columbus, 1974); Simon Nowell Smith, *International Copyright and the Publisher in the Reign of Queen Victoria* (Oxford, 1968); Peter Baldwin, *The Copyright Wars: Three Centuries of Trans-Atlantic Battle* (Princeton, 2014).

<sup>606</sup> Examples include Alfred Roujoux, *Histoire d’Angleterre* (Paris, 1842); Mozes Polak, *Algemeene Geschiedenis der wereld van de Schepping tot op den tegenwoordigen tijd* (Amsterdam, 1841).



instructive subjects had been chosen for illustration ‘to assist the letterpress.’<sup>607</sup> Knight’s publications opened up new opportunities for foreign publishers and editors to establish new markets for illustrated topographical and antiquarian accounts of England.

The sporadic copying of illustrations was also prevalent in the domestic market for topographical literature. Illustrations found in Anna Maria Hall’s *Ireland: Its Scenery and Character* (1841) appeared in other topographical works published later that decade. James Flanagan’s *The Blackwater in Munster*, published three years later, featured numerous wood engravings found in Hall’s work. A wood engraving used to illustrate the remains of the Abbey of Ardfert in Kerry, which was originally printed in Hall’s work was later copied in Flanagan’s work and used instead to visually describe a tomb found in a completely different Abbey at Ballynadroghid. The relatively rough, almost sketchy nature of the illustration allowed Flanagan to adapt its purpose in order to illustrate his text.

The same illustration is also found in Palmer and Crowquill’s *Wanderings of a Pen and Pencil*. They were unapologetic in their attempts to complete a book ‘for [their] own profit and intellectual gratification’ at the risk of the potentially vehement criticisms they may receive from ‘the more learned brethren’.<sup>608</sup> Their aim was to offer a good example of a domestic tour around the southern counties of England by establishing a ‘virtual topography’ whereby readers would be able to visualise the travels of the author through word and image. Yet a number of the wood engravings were merely copied from previous topographical works. The illustration discussed earlier in Hall’s *Ireland* and Flanagan’s *The Blackwater of Munster* is used as a tailpiece to the chapter detailing their travels around the village of Wolvercote. Here it is described as a tomb found at the Church of Tetsworth, ‘which contains the sweetheart of a kind old friend of mine’.<sup>609</sup> Illustrations were also copied from Cyrus Redding’s *An Illustrated Itinerary of The County of Cornwall*

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<sup>607</sup> Sears, *A New and Popular Pictorial Description of England*, p. 7.

<sup>608</sup> Palmer and Crowquill, *Wanderings of a Pen and Pencil*, p. iii.

<sup>609</sup> *Ibid.*, p. 239.

(1842). A depiction of a monument found in the manor of Lanherne in Cornwall was printed in the chapter relative to Palmer and Crowquill's travels around Oxford. The relatively simplistic design of the illustrations meant that the authors and publisher could meet the demand for illustrated topographies through copying earlier illustrations and adapting them with their text.

Palmer and Crowquill's work in particular highlights the role of copying and reprinting within attempts by authors and publishers to establish a virtual tour within the pages of the book. Copying and reprinting illustrations used in other works offered the twofold incentive of providing publishers with financially viable illustrations while successfully establishing a virtual tour founded on the arrangement of word and image throughout the book. More generally, the books described above demonstrate the value attached to wood engraving in shaping the social and cultural shift of topographical literature. The prevalent use of these illustrations satisfied market demand from readers who were desirous for illustrated topographies that responded to wider social and cultural contexts, most notably the rise of middle-class travel and tourism.

### 'Nothing more than vehicles for pretty prints'

Thus far, the chapter has presented a generally positive perspective with regards to how contemporaries viewed the changes to topographical literature against the backdrop of mechanical and technological changes to book illustration. The bridging of the divide between topographical writing and art around the turn of the nineteenth century was generally met with enthusiasm within a society gripped by the rise of affordable illustrated literature. In the same way that the engraver had to follow the faithful depiction of the artist, the artist was supposed to follow what was true in nature in order to satisfy the demands of those who turned away from the 'mere *ideality*' of landscape art and towards 'prototype in nature.'<sup>610</sup> Prints of

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<sup>610</sup> *The Literary Chronicle*, 11 August 1827, p. 508.

views were but one part of a variety of topographical illustrations. Illustrating habits, customs, examples of manufacture and industry as well as social and economic history, became fundamental to topography, for which only the ‘peculiar language of the graphic art, can describe the form and figure of the places themselves.’<sup>611</sup>

However, the rise of steel engraving and the revival of wood engraving, exemplified as markers of progress and improvement, was also regarded as detrimental to both the status of topography as an intellectual discipline and to the public more generally, particularly financially and educationally. A number of the ‘pretty pictures’ that appeared in *A Selection of the Views in the County of Lincoln* (1801) had been engraved after Turner and Girtin. Although they were held in high regard for their beauty, they added nothing to the work and even served to render the remaining illustrations ‘insipid and tasteless.’<sup>612</sup> Moreover, the sheer number of prints covering almost every scene in the county only served to ‘devote too much consequence to trifles’ and ‘tax public curiosity at too high a rate.’<sup>613</sup> The number of pictorial representations were deemed unnecessary in volumes that were already outside the reach of a large percentage of the public.

Despite the developments in mechanical production and printing techniques that enabled extended print runs and thus a reduction in the cost of printing, literary commentators continued to express their disdain. John Bowyer Nichol’s reaction to the changes made to topography through art encapsulated the tensions that arose from innovations in printing technology:

In no department of literature has there been more variety of execution than in topography. It has ranged from the humble (though now curious) compilations of a Gent to the celebrated labours of a Dugdale. In modern times (and particularly since the introduction of engraving on steel) books bearing the name of topography, and of county history, have multiplied apace; but they have been little more than vehicles for pretty prints.<sup>614</sup>

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<sup>611</sup> *Ibid.*

<sup>612</sup> *The Annual Review and History of Literature*, January 1805, p. 422

<sup>613</sup> *Ibid.*

<sup>614</sup> *The Gentleman’s Magazine: and Historical Chronicle*, December 1831, p. 521.

Ironically, the fine detail that could be achieved from etching and engraving on steel was met with vehement criticism. Writing in 1839, Frederick Arnold had even suggested that engraving was of a higher quality before the onset of steel and that the more durable medium actually served to effeminise readers. Prints of this nature merely supported the rage for ‘pretty prints’ through representations of scenery that had sacrificed nature ‘in order that young ladies have nice things for their albums.’<sup>615</sup> Arnold was equally scathing of architectural prints engraved on steel. In contrast to the opinions held by authors of topographical accounts of London, Arnold expressed his regret that buildings formerly having the appearance of being made of stone or bricks were now made of ‘silk and satin’ surrounded by ‘trees of velvet, and skies of a softness and brilliancy surpassing those of Italy, above the Tower of London and St. Paul’s!.’<sup>616</sup>

Engravers and artists were not solely to blame for the ‘sentimental cant [sic]’ exhibited in topographical literature. Referring particularly to wood engraving, publishers were equally blamed for being led astray by ‘inventions in the arts’ and for the subsequent changes to both the style and character of topography. The topographies produced by these publishers were considered to have contributed to a great reduction in the number of respected antiquarians and topographers.<sup>617</sup> The abundance of tourist books and illustrated guides were borne out of the entrepreneurial prowess of publishers who needed to market and sell topography. In an endorsement of How’s *England in the Nineteenth Century*, writers in *The Surveyor, Engineer, and Architect* lamented the design and execution of guides, tourist handbooks and county histories that had formed the majority of topographical literature. The depictions of manufacturing tools and machinery were a refreshing change to the ‘flashy’ but useless character of the commonplace guidebook. Once again, the sentimentality derived from the taste for romantic scenery was of central

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<sup>615</sup> *The Literary Gazette: A Weekly Journal of Literature, Science, and the Fine Arts*, 12 January 1839, p. 28.

<sup>616</sup> *Ibid.*

<sup>617</sup> *The Gentleman’s Magazine and Historical Review*, July 1840, p. 49.

concern. 'Behold the refined, and delicate, and sensitive being, who shrinks from the contact, and almost from the name, of all that is useful, and looks with supreme contempt upon the busy industry of his fellow-mortals.'<sup>618</sup>

Motivated by innovations in image production that prompted public demand, artists, engravers and publishers were charged with the deterioration and near extinction of topography in its classical form. The decision to incorporate steel and wood engraved illustrations, which were widely acknowledged to more accurately represent the landscape in relatively inexpensive cheaper publications, was criticised for adding picturesque sentimentality to topographical enquiry and, perhaps more seriously, contributed to replacing rigorously intellectual topography with illustrated volumes that coincided with the commercialisation of travel and tourism.

## Conclusion

Writing in 1843, John Britton observed that topographical literature was inextricably linked to the developments and progress of printing:

The influence and incalculable benefits of the Press, in the class of literature I am now advocating, must be well known to readers who have had occasion to examine the writings of the earliest and the latest Topographers. Formerly, dry, dull, insipid details of minute events and circumstances were extended, page and page, through a large folio volume: now, we often find much discrimination as to matter, with a terse and luminous manner actuating an author.<sup>619</sup>

Britton perhaps perfectly encapsulates the trajectory of topographical literature during the 70-year period covered in this chapter. Whilst topographical books underwent sustained changes, both in what was written and what was illustrated, I have argued that the form and arrangement of illustrations were the drivers behind

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<sup>618</sup> 'Physical Geography Valuable to all, but More Particularly to the Constructive Professions', *The Surveyor, Engineer and Architect*, September 1842, p. 229.

<sup>619</sup> John Britton, *An Essay on Topographical Literature: Its Province, Attributes, and Varied Utility* (London, 1843), p. xviii.

this transformation, which both shaped and were shaped by the wider social, cultural and commercial contexts in which these books were produced.

The chapter has explored the intellectual, social and cultural development of topography against the wider technical changes to printing in this period. Once considered almost entirely in relation to the aesthetic principles attributed to landscape art, including most notably concepts of the sublime and the picturesque, illustrated topographical accounts began to adapt to the cultural and socio-economic contexts in which they were published. This is not to argue that the sublime and picturesque were no longer considered important by authors, artists and publishers of these accounts in the early-to-mid nineteenth century. Rather, by examining the design, arrangement and production of illustrated topographical books, this chapter has shown that the prints found in these works were designed to contribute to something more than an adherence to particularly artistic and aesthetic principles.

By attributing greater significance to the process by which topographical illustrations were produced, this chapter examined the complex picture of the relationship between the print medium and the artistic representation found in illustrated topographical books. As the taste for illustrated topographical books became steadily more popular through the first half of the nineteenth century, the rise of steel etching and the revival of wood engraving did not just satisfy commercial ambition. The application of aquatint, for instance, aided Ackermann's ambition to produce a distinctly social topography of London, whilst the finer etched lines that could be achieved through steel was used to magnify the grandeur and beauty of London's buildings during a period when London was competing to be the commercial and industrial capital of the world. The aesthetic appearance, therefore was not solely tied to artistic considerations but rather intricately bound up with Britain's wider economic, industrial and political standing in relation to other nations in their own stages of development.

Moreover, the chapter has conveyed a more dynamic picture between the material properties of the printing medium and the format and the arrangement of

the book within the wider context of topography as an intellectual discipline. Through an exploration of the utilization of wood engraving for illustrating topographical books, I have sought to highlight the importance not only of what was represented in topographical books, but also how the design and arrangement of such works reflected the broader cultural and social contexts of the period. This highlights the significance that publishers and authors placed on the physical practice of reading, in addition to the way that the information they included was shaped by the improvement in literacy rates and the rise of middle-class tourism.

Through an analysis of both the intellectual and aesthetic significance of the print mediums used to illustrate topographical books, it is possible to observe on the one hand how the technical developments in print mediums were celebrated for aligning topography with industrial, commercial and wider cultural development of Britain. On the other hand, this chapter has also shown how these print mediums, often eulogized as symbols of 'progress' and 'improvement', were at the forefront of debates concerned with the dramatic regression of topographical enquiry. The softer, more delicate lines that could be achieved through engraving and etching on steel, expounded as a marker of process in the increasingly industrialised age, was adjudged to be detrimental to the subject and to society more generally due to its 'effeminate' nature. Furthermore, the revival of wood engraving and its increasing use in topographical works after 1830 reflected the increasing power of the publisher, which was perceived to have a negative effect on the production of respectable topographical books as well as illustrated literature more generally by 1850. The materiality of the print surfaces used to illustrate topographical accounts had a dramatic effect on the intellectual development of the subject, which reveals as much about the changing social, cultural, commercial and political landscape as it does about artistic development in Britain by the mid-nineteenth century.

## Chapter 5: Between Illustrating the Text and Illustrating the Page: Publishing the Pictorial Past 1780-1860

Reflecting upon the variety of published histories on offer by the 1840s, one anonymous observer claimed that the public had only themselves to blame for their lack of knowledge regarding the history of their country. 'If the world in the present day does not grow very wise, it is entirely its own fault', he claimed, 'everything now is dished up so as to try to suit every palate.'<sup>620</sup> Henry William Dulcken, in the preface to his *Illustrated History of England*, published in 1888, was equally impressed by the variety of styles in which national histories were being written:

The History of England has, especially of late years, been placed before the great English public very fully and in various forms. In some cases it has been the history of the people and the progress of the nation generally that constituted the staple of the work; in others the biographical form has been adhered to, and the lives of the kings and queens are the chief feature.<sup>621</sup>

This variety of publications that had a lasting effect on the book market was a direct consequence of a nascent historical consciousness that appealed to the liberal and democratic spirit of the middle class as opposed to the small milieu of the elite. The 1830s and 1840s gave rise to distinctly national histories, designed to eulogize over the present state of the nation that had been perfected over the past five hundred years of history. Within the columns of *The Athenaeum* under the editorship of the liberal politician Sir Charles Wentworth Dilke, the linear progress of the state of the nation was likened to a shining light, 'brighter and brighter unto the perfect day.'<sup>622</sup> History writing had, by the Victorian period, become synonymous with the

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<sup>620</sup> 'History of England', *The Fine Arts Journal*, 1.18, 6 March 1847, p. 286.

<sup>621</sup> Henry William Dulcken (ed.), *The Illustrated History of England, Comprising also a Summary of the History of the Nations of Europe* (London, 1888), p. v.

<sup>622</sup> 'The History of England', *The Athenaeum*, 185, 14 May 1831, p. 308.



idea of national progress and, perhaps more importantly, social development through the lens of Whig constitutionalism.

The previous two chapters have explored the diverse roles print surfaces, particularly wood engraving, played in geological and topographical accounts by the early-Victorian period. As in *The Athenaeum*, the employment of wood engraving in these genres was synonymised with the concept of technological ‘progress’ within their own literary disciplines. The steady displacement of lithography with wood engraving within geological publications was vital to the democratisation of scientific knowledge from those at the forefront of geological research. In topographical books, the incorporation of wood engravings served to reflect the rise of middle-class tourism and travel by the mid-nineteenth century within the pages of the book, a departure from the close ties between topographical publications and high art earlier in the century. Similarly, the means by which mid-nineteenth-century histories of England were illustrated was considered to reflect a national discourse of social and cultural improvement, not just in terms of the abstract content of the book, but how reading itself was directed. Running parallel to the increasing popularity of national, social, and popular histories by the mid-nineteenth century was a wider reading public.<sup>623</sup> Popular histories, most notably those published by Charles Knight and John Cassell whose histories will be explored later in the chapter, had to be reconfigured in order to create not only a history *of* the people but also *for* the people. The design, layout, and arrangement of the hundreds of illustrations printed in these volumes illustrate the different approaches these publishers adopted, which transcended any strict rules of genre.

This chapter, therefore, examines the role of illustration in published histories of England during a period when the genre of history writing shifted from the philosophical tradition, which displaced detailed antiquarian texts and espoused grand narratives of improvement from the classical period to the Enlightenment, to

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<sup>623</sup> For more on nineteenth-century literacy levels, see William St. Clair, *The Reading Nation in the Romantic Period* (Cambridge, 2004), pp. 103-121.

the establishment of a model of history writing based on a national discourse. I show how an appreciation of the social and commercial history of England was manifest, not only in the contents in these accounts, but in how that information was conveyed through the overall design of the book. In addition to the graphic contents of these illustrations, I explore how word and image were arranged and presented within the dimensions of the page, which complicates the ascription of a specific genre to illustrated histories by the mid-nineteenth century. Furthermore, visualising the overall design and layout of illustrations in these histories from a semiotic perspective will highlight the value of the form, size and position of illustrations in establishing meaning, which transcended genre in favour of the ideological stance of the publisher that underpinned the wider motives for publishing of the book.

Nineteenth-century history writing has commanded a considerable historiography. Twentieth-century publications engaging with this subject have tended to privilege the written word as the predominant mode of communication.<sup>624</sup> These studies have enriched our understanding of the multiplicity of genres that were intricately connected to each other within history writing in the eighteenth and nineteenth centuries.<sup>625</sup> Moreover, a predominant focus on the written word has changed our understanding of the trajectory of history writing, a trajectory that was not governed by the formulation of novel ideas and themes within history writing, but rather a 'repositioning' of similar ideas or statements that were used in changing contexts.<sup>626</sup>

Scholars from an art-historical background have made a valuable contribution to the way we think about representational forms of historical

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<sup>624</sup> The classic text on late-eighteenth and early-nineteenth century history writing is by T.P. Peardon, *The Transition in English Historical Writing, 1760-1830* (New York, 1933). Others include Harry Shaw, *The Forms of Historical Fiction: Sir Walter Scott and his Successors* (Ithaca and London, 1983); Stefan Collini, *English Pasts: Essays in History and Culture* (Oxford, 1999); Stefan Collini, Richard Whatmore, and Brian Young (eds), *History, Religion and Culture: British Intellectual History, 1750-1950* (Cambridge, 2000).

<sup>625</sup> See, for example, Mark Salber Phillips, *Society and Sentiment: Genres of Historical Writing in Britain, 1740-1820* (Princeton, 2000); Lionel Grossman, *Between History and Literature*, Second edition (New Jersey, 2001), pp. 227-285.

<sup>626</sup> Phillips, *Society and Sentiment*, pp. 13-16.

illustrations not only in Britain, but also on the continent and America, which shaped the intellectual trajectory of published histories in these countries.<sup>627</sup> The sophistication of visual culture studies in the last fifteen years has sought to rescue the printed image from the marginalisation it suffered in earlier scholarship.<sup>628</sup> Billie Melman's work on the diverse and often competing representations of history through word and image has revealed the significance of larger constructs such as the state, print culture and gender on these competing representations. By examining the ways in which access to history was negotiated and resisted within different contexts, such as the concept of the state and capitalist trades of publishing and advertising, Melman is able to demonstrate the multiplicity of representations of the past through text and image, which underscores the role of individual agency in ascribing a plethora of different meanings to history as opposed to adherence to larger more singular historical structures and narratives.<sup>629</sup>

Whilst Melman primarily addresses the abstract representations of illustrations found in contemporary histories, this chapter and indeed this thesis as a whole is not only concerned with the aesthetic and subjective contents of illustrations within the production of the illustrated book, but also the significance of the materiality of the printing mediums in informing the intellectual and cultural trajectory of the subjects they were designed to illustrate. Rosemary Mitchell and Patricia Anderson have recognized the significance of the mechanisms of print in the changing forms of early-to-mid nineteenth-century histories and their impact on the intellectual output on these histories.<sup>630</sup> In particular, they highlight the use of wood engraving in the development of these national histories in the nineteenth century was greatly indebted to technological developments within the printing

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<sup>627</sup> See, for example, Stephen Bann, *The Clothing of Clio: A Study of the Representation of History in Nineteenth-Century Britain and France* (Cambridge, 1984).

<sup>628</sup> See, in particular, Rosemary Mitchell, *Picturing the Past: English History in Text and Image* (Oxford, 2000); Kate Flint, *The Victorians and the Visual Imagination* (Cambridge, 2000); Laura MacCulloch, 'Fleshing out' Time: Ford Madox Brown and the Dalziels' Bible Gallery', in Paul Goldman and Simon Cooke (eds), *Reading Victorian Illustration* (Surrey, 2012), pp. 115-137; Mary Elizabeth Leighton and Lisa Surridge, 'Making History: Text and Image in Harriet Martineau's Historiettes', in Goldman and Cooke (eds), *Reading Victorian Illustration*, pp. 137-159.

<sup>629</sup> Billie Melman, *The Culture of History: English Uses of the Past 1800-1953* (Oxford, 2006), pp. 21-28.

<sup>630</sup> Mitchell, *Picturing the Past*, pp. 24-25; Patricia Anderson, *The Printed Image*.

industry. Dana Arnold captured the salience of the development of print production within nineteenth-century history writing when she prompts us to consider the printing press as ‘the beginning of the age of the mechanical reproduction of visual history.’<sup>631</sup> This chapter builds on this statement by looking more closely at how print mediums shaped the composition of word and image from the expensive and relatively impractical method of copper engraving to the more mutable print surface of wood. These changes to the printed image gave authors and publishers more scope to order the layout of the page and the book according to their ideological aims.

Peter Mandler contends the emergence of a distinctly middle-class vision of the past was achieved as a result of these developments, whilst Mitchell has similarly argued that technological advances, particularly in the printed image, transformed the genre of history writing into a distinctly romantic and picturesque version of the past aimed at a middle-class readership.<sup>632</sup> Mitchell and Arnold, in particular, have shown how a national discourse was established through the relationship between word and image. In this sense, these authors examine the ways in which the image transcends the ‘illustrative’ and encroaches upon the interpretative. Laura MacCulloch has gone further, arguing the style of illustration, particularly wood-engraving in the 1840s, triggered responses from artists and authors in the production of their historical texts that contributed to a higher standard of publication by the 1860s.<sup>633</sup> Building upon these works, I show how the developments in the printing industry influenced not only the contents of these histories but also their form, design and arrangement, which reveals the crucial and often diverse roles played by illustrations amidst the wider social and cultural contexts in Britain by the mid-nineteenth century.

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<sup>631</sup> Dana Arnold, ‘Facts or Fragments? Visual Histories in the Age of Mechanical Reproduction’, *Art History*, 25.4 (2002), p. 450.

<sup>632</sup> Mitchell, *Picturing the Past*, pp. 111-139.

<sup>633</sup> Laura MacCulloch, “Fleshing out” Time’, in *Reading Victorian Illustration*, pp. 115-137.

The chapter, therefore, explores the function of illustration amidst the technological changes to illustrations as well as the broader societal, cultural and demographic shifts that shaped the way England's history was understood. It begins with an assessment of the relationship between intaglio methods, particularly copper engraving, and the rise of philosophical histories around the turn of the nineteenth century. The prestige of copper engraving, often used to reproduce grand history paintings, meant that the graphic output of these works was often emblematic and allegorical in style. Although authors of these histories attempted to move beyond the boundaries of the philosophical genre of history writing, particularly David Hume, the limited developments in graphic reproduction at this time rendered it difficult to depart from the metaphoric and emblematic illustrations that were closely tied to the philosophical genre, as well as the close connection with history painting and the artists of the Royal Academy. The illustrations found in these histories served not only to illustrate the book, but also responded to the burgeoning print market and the rise of print exhibitions around the turn of the nineteenth century.

The chapter moves on to examine the rise of national histories against the revival of wood engraving after 1830, particularly Charles Knight's *Pictorial History of England*, originally published in eight volumes between 1837 and 1842. In so doing, I examine how publishers organised word and image according to their intellectual and commercial ambitions, which serves to reveal how professional relationships between author and publisher were affected by the value placed on illustrations by the latter. Given the mutability of wood engraving as a printing medium, I also consider the importance of the position and arrangement of illustrations within these histories. A comparison between Knight's *Pictorial History of England* and John Cassell's *Illustrated History of England* (eight volumes, 1856-1864) highlights the different roles illustration played within books belonging to publishers, whose shared ambition was to produce an illustrated national history of the people for the people. The publication of both Knight and Cassell's histories were borne out of

their motivation to impart knowledge of England's past through the eye, largely due to the expansion of the middle and lower-class market for illustrated books. However, a closer analysis of Knight's work and the illustrated history of Cassell, his great publishing rival, highlights their different perspectives on the function of illustration within their overall ambition to realise 'true eye-knowledge'.<sup>634</sup>

The value attached to the design of these histories shows how publishers considered not only *what* was communicated to the reader but *how* this information was presented, thus revealing how size, shape and position of illustrations informs the graphic contents of the illustrations. A comparison between the design and arrangement of these social, national and richly illustrated histories is evidence of the diverse means by which illustrations signify within attempts to alter and direct reading practices not always defined by the conventional mode of text-to-image. Applying multimodality to the history of illustration within these two histories complicates Gunther Kress's contention that the traditional page engenders a strict order that the reader has to follow, primarily predicated on left-to-right reading.<sup>635</sup> As Bonnie Mak has argued in her study of the transmission of thought and knowledge in medieval manuscripts, the physical page acts as an important proxy between the designer and the reader.<sup>636</sup> In so doing Mak highlights the often complex and creative relationships embodied within the architecture and materiality of the page.<sup>637</sup> I contend through an examination into the size, position and overall arrangement of the illustrations in Cassell's history that wood-engraved illustrations, often eulogized for uniting word and image on the page, can be read independently from the text in order to satisfy the publisher's desire to open up the history of England to a broader demographic.

In a similar approach taken to the analysis of wood-engraved topographical illustrations in the previous chapter, by viewing illustrations as a mode, one part of

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<sup>634</sup> Charles Knight, *Passages of A Working Life During Half a Century*, Vol. 2 (London, 1864), p. 262.

<sup>635</sup> Gunther Kress, 'Gains and Losses: New Forms of Texts, Knowledge, and Learning', *Computers and Composition*, 22 (2005), p. 9.

<sup>636</sup> Mak, *How the Page Matters*, p. 3.

<sup>637</sup> *Ibid.*, pp. 5-17.

a system of signs that makes up the intellectual output of the book, we can move beyond the relationship between word and image in order to find meaning within the design and arrangement of the book.<sup>638</sup> By examining the relationship between image and space within the pages of the book, it is possible to consider the ways in which designers and producers thought about illustrations in relation to the dimensions of the page as opposed to their proximity to the written words they were designed to illustrate. Illustrations do not merely 'depict' or 'relate'; they orientate the viewer's attention and play a fundamental role in the organization of information. Their size, centrality and marginality serve to classify information and shape the way in which readers not only read the text, but the page.<sup>639</sup>

It should be observed at this point that the majority of histories published between 1780 and 1850 remained unillustrated. However, the larger publishing firms such as those of Knight, Cassell and Chambers exploited the market demand for both illustrated literature and a growing interest in the country's history by a wider demographic. All of these publishers utilized wood engraving in order to provide a more popular history than those of Thomas Macaulay and Thomas Carlyle. By analysing these illustrated histories from the perspective of their production and design, I argue that we cannot limit our analysis to the relationship between word and image from a narrative and literary perspective. The differences in the size of illustrations, their arrangement on the page and their distribution throughout the volumes of the histories published by Cassell and Knight were not solely predicated on a conformity to genre, but on a wider concern with how illustrations shaped the physical act of reading by the Victorian period.<sup>640</sup> It is not the intention of this chapter to comprehensively survey the number of printing techniques used to reproduce illustrations in histories over a seventy year period.<sup>641</sup> Rather, it sheds light on the diverse roles illustrations played amidst the broader social, cultural,

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<sup>638</sup> For more on 'modes' of the page, see Kress, *Multimodality*, pp. 82-92.

<sup>639</sup> *Ibid.*, pp. 86-92.

<sup>640</sup> Contemporaries used the term 'popular' to refer to Knight and Cassell's illustrated histories.

<sup>641</sup> Unlike the previous chapter, I do not explore the role of steel engraving here. For more on the role steel engraving played in illustrating historical novels, see Mitchell, *Picturing the Past*, pp. 42-45.

technical and commercial changes to both illustration and history writing in this period, roles that move beyond a study of word/image and narrative.

### Copperplates, Metaphoric Illustration and The Philosophical Tradition of History Writing 1780-1830

As previously discussed in chapter two, eighteenth-century copper engraving was often linked to the status of artists belonging to Royal Academy. Copper was thus valued for replicating history paintings of old masters, particularly during the latter half of the eighteenth century. Running parallel to this was the rise of philosophical histories, a genre of history writing that triumphed grand classical narratives of the past. The addition of emblematic, copper-engraved illustrations served to reinforce this grand philosophical tradition. These illustrations often conflicted with authors' attempts to provide their readers with a tangible, 'objective' account of England's national past. These illustrations were often discussed in terms of their novelty and artistic excellence as opposed to their contribution to the overall narrative of the text. Moreover, whilst authors such as David Hume attempted to depart from the boundaries of the philosophical genre of history writing through the written word, the copper and steel engravings used in numerous editions of his history meant that the visual element remained rooted in the philosophical tradition.

Histories of England produced throughout the second half of the eighteenth century were predominantly founded upon Enlightenment principles which favoured a universalist approach to history writing. These philosophical histories produced by leading thinkers such as François-Marie Voltaire, William Augustus Russell, David Hume and Catharine Macaulay tended to present a grand narrative of history that details the 'great chain of events', from crude beginnings to an enlightened age.<sup>642</sup> Less concerned with the specificity of the changes that took

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<sup>642</sup> Mitchell, *Picturing the Past*, pp. 14-15. For more on the emergence of philosophical history writing in the eighteenth century, see Mark Salber Phillips, *Society and Sentiment: Genres of Historical Writing in Britain, 1740-1820* (Princeton, 2000).



place in their own society, which became the prerequisite of national history writing in the nineteenth century, these histories tended to espouse a grand history that charted a linear path to enlightenment.<sup>643</sup> William John Russell, in the preface to his 1777 work *A New and Authentic History of England*, described the role and the responsibilities of the contemporary historian. 'In fine' he concluded, 'our end is Improvement; our means; Entertainment; and our guide; Truth.'<sup>644</sup> The idea of evolutionary 'improvement' was central to philosophical history writing.

Running parallel to the displacement of antiquarian histories with the more lucid style of writing found in philosophical histories led to increasing claims of impartiality and objectivity.<sup>645</sup> These histories were illustrated with maps, portraits and metaphoric historical scenes and the title pages of such works emphasised claims to an impartial history of England. The title pages of histories belonging to William Augustus Russell, George Courtney Lyttleton, John Baxter and Edward Barnard all included claims to impartiality, authenticity, and objectivity amidst the swelling market for British history.<sup>646</sup>

However, these claims to impartiality and objectivity were predominantly played out through the written word during a period when copper engraving was intricately connected to grand history painting. Engravers and artists of the historical scenes employed to illustrate philosophical histories were not overly concerned with the impartiality and authenticity of history writing as they were in exemplifying the superiority of British art and engraving, particularly during the latter half of the eighteenth century. These images were therefore often derived

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<sup>643</sup> See footnote 645 for works on national history writing.

<sup>644</sup> William John Russell, *A New and Authentic History of England* (London, 1777), n.p.

<sup>645</sup> Although many authors espoused claims to truth and impartiality, they often relied on the elision of fact and myth to establish a historical consciousness, which became even more prominent in national history writing. See Stefan Berger, 'The Invention of European National Traditions During the First Half of the Nineteenth Century', in Stefan Berger (ed.) *The Past as History: National Identity and Historical Consciousness in Modern Europe* (Hampshire, 2015), pp. 80-140. For more on the importance of myth in twentieth-century history writing, see Jan Ifversen, 'Myth in the Writing of European History', in Stefan Berger and Chris Lorenz (eds), *Nationalizing the past: Historians as Nation Builders in Modern Europe* (Basingstoke, 2010), pp. 452-479.

<sup>646</sup> Authors of these works often included the term 'authentic' on the title of their histories in attempt to distinguish them from competing volumes. Devoney Looser has suggested that British histories accounted for over a third of all literary publications around the turn of the nineteenth century. See Devoney Looser, *British Women Writers and the Writing of History, 1670-1820* (Baltimore, 2005), p. 10.

from the imagination of the artist as opposed to any attempt to illustrate events and scenes based on archival records common to nineteenth-century picturesque histories.<sup>647</sup>

Simon Keynes suggests that it was illustrations as opposed to the written prose of many histories of England produced at this time that helped to ‘fix images of English history in the minds of the general public’.<sup>648</sup> Yet they often did so in tension with the intellectual aims of the authors of these histories. The emblematic and allegorical engravings of historical scenes and figures, which often included a depiction of Britannica standing triumphant over the world, were intended to underline the status of British art rather than reflect the narrative of philosophical historians.<sup>649</sup> The engravings in William Russell’s work, for example, were as much a celebration of the work of artists belonging to the Royal Academy as it was to illustrate England’s past. His history featured a number of copper engravings depicting imagined scenes of English history in the manner of grand history painting. The style of illustration that was to feature throughout the work was evident in the book’s highly emblematic frontispiece, which depicts Britannica on a rock surrounded by emblems of courage, naval power and superiority over the continent.

The tension played out between the author’s desire for impartiality and the allegorical and metaphoric style of the copper engravings common in philosophical histories is evident in Edward Barnard’s history of England, which was described in its title as ‘New, Impartial and Complete’, filled with ‘authentic information, and most genuine records of Historical Evidence.’<sup>650</sup> Barnard claimed that his work served as a departure from works such as Russell’s, including the style of illustrations.

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<sup>647</sup> The captions under the illustrations in Charles Knight’s *Pictorial History of England*, which will be examined in more detail later in the chapter, often included the name of the manuscript or historical record that the illustration derived from in an attempt provide visual evidence of the text.

<sup>648</sup> Keynes has suggested that the histories of William Russell, Edward Barnard, George William Spencer and George Courtney Lyttleton were not valuable for their written commentary but their illustrations. See Simon Keynes, ‘The Cult of King Alfred the Great’, in Michael Lapidge, Malcolm Godden and Simon Keynes (eds), *Anglo-Saxon England, Volume. 28* (Cambridge, 1999), pp. 304-305.

<sup>649</sup> Mitchell, *Picturing the Past*, pp. 15-16.

<sup>650</sup> Edward Barnard, *The New, Impartial and Complete History of England: From the Very Earliest Period of Authentic Information, and most Genuine Records of Historical Evidence, to the End of the Present Year* (London, 1790).

He claimed that his illustrations, again printed using copper plates, would correspond with the ‘dignity and elegance of the work they are intended to embellish.’<sup>651</sup> They stood in opposition to illustrations printed in similar works, ‘more a disgrace than an embellishment’, highlighting the common practice of copying illustrations from older, ‘imperfect’ publications.<sup>652</sup>

Yet the vast majority of the illustrations printed in his history conformed to the same style. The design of the frontispiece was in many ways similar to that of Russell’s. Described as an ‘emblematic plate’, it depicts the author surrounded by Wisdom and Justice handing the manuscript of his work to Britannia as a reward for ‘impartiality in which it is written’. Rather than celebrating the authenticity or accuracy of his illustrations in the representation of historical scenes and events, they were instead described as ‘exquisitely curious original designs [...] which, on account of their superior excellence both in size, beauty of stile [sic], and novelty of invention, cannot but be pleasing to people of any discernment[...].’<sup>653</sup> They were designed by the foremost artists of the Royal Academy, including Samuel Wale, Benjamin West and Robert Dodd and engraved on copper by over a dozen of the best copperplate engravers.<sup>654</sup> The publisher’s description of the illustrations in Barnard’s account reveals the connection between the illustrations printed in his *History* and the prestige of copper engraving as well as the status of British history painting. This ensured that claims to objectivity were attempted through the written word.

The histories described above all conformed to the philosophical genre of history writing, a genre which is most immediately associated with metaphoric and allegorical styles of illustration.<sup>655</sup> Given the artistic status afforded to intaglio

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<sup>651</sup> *Ibid.*, p. iv.

<sup>652</sup> *Ibid.*

<sup>653</sup> *Ibid.*

<sup>654</sup> Over half of Samuel Wale’s works, who was admitted to the Royal Academy in 1768, consisted of historical scenes throughout British history. See M. G. Sullivan, ‘Wale, Samuel (1721?–1786), painter and book illustrator.’ *ODNB*, Retrieved 10 March 2018, <http://oxforddnb.com/view/10.1093/ref.odnb/9780198614128.001.0001/odnb-9780198614128-e-28453>.

<sup>655</sup> Mitchell, *Picturing the Past*, pp. 34–55.

engraving, these works continued to feature illustrations of this style, despite attempts by authors to depart from the philosophical genre of history writing. The narrative techniques and writing styles of scholars including David Hume, Catharine Macaulay and William Robertson enabled them to combine philosophical history with contemporary societal concerns more common to national, picturesque histories found later in the nineteenth century.<sup>656</sup> Hume, for example, made frequent comparisons to contemporary society in his *History of England*, a narrative technique rarely displayed in philosophical history writing.<sup>657</sup> Moreover, his disengagement with the pre-occupation of eighteenth-century history writers to construct narratives of the classical world is also suggestive of attempts to break away from the more traditional philosophical genre of history writing.<sup>658</sup> Yet these attempts were not manifested through word and image but rather through textual narrative techniques.

Attempts made by authors including Hume and Macaulay to align grand history narratives with specific contemporary concerns including the commerce of Britain as well as the manners and habits of society formed part of an attempt to supply readers with an account of what was seen as their own history. James Boswell, having read through the pages of David Hume's *History of England*, first published in six volumes between 1754 and 1761, praised Hume's lucid writing style: 'I have now one great satisfaction', he reflected in his journal, 'which is reading Hume's "History". It entertains and instructs me. It elevates my mind and excites noble feelings of every kind.'<sup>659</sup> Although Hume's history was at times met with vehement

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<sup>656</sup> For more on the disagreements between Hume and Macaulay in their approach to the history of England, see Angelika Epple, 'A Strained Relationship: Epistemology and Historiography in Eighteenth- and Nineteenth-Century Germany and Britain', in Berger and Lorenz (eds), *Nationalizing the Past*, pp.97-105.

<sup>657</sup> Phillips, *Society and Sentiment*, pp. 52-55. Thomas Carlyle criticised this approach: 'To say nothing of [Edward] Gibbon [author of *Decline and Fall of the Roman Empire* 1776-1788], nor of the Watsons the Russels the Voltaires &c known to me only by name. Alas! Thou seest how I am beset...'. See Carlyle to Mitchell, *The Carlyle Letters Online*, DOI: 10.1215/lt-18171119-TC-RM-01 CL 1:111-115, [Accessed 2 September 2016].

<sup>658</sup> Hume's history commenced at the invasion of Julius Caesar, omitting any history that had gone before that point.

<sup>659</sup> Frederick A. Pottle (ed.), *Boswell's London Journal, 1762-1763*, (London, 1982), p. 156, [http://www.open.ac.uk/Arts/reading/UK/record\\_details.php?id=24089](http://www.open.ac.uk/Arts/reading/UK/record_details.php?id=24089), [Accessed 23 September 2016]. Hume's work was also met with criticism. Thomas Carlyle described the thinking of both Hume and Smollett (who would publish his history of England designed as a continuation of

criticism, not least because of his religious scepticism, Hume's lucid writing style as hinted by Boswell ensured that the work enjoyed a considerable afterlife.<sup>660</sup>

Yet despite the attempts to divert from the philosophical genre as well as the production of an objective account of England's past, the slow developments of printing techniques for graphic reproduction meant that the emblematic style of the copper engravings found in these histories tempered a departure from the philosophical genre. Moreover, the addition of illustrations to later editions of Hume's *History* in the early part of the nineteenth century can be viewed as part of a wider aim to improve the commercial potential of both the books and the engravings that were added to them.

The market for reproductive engravings of history paintings grew stronger around the turn of the nineteenth century.<sup>661</sup> Engravings after Hubert Gravelot and George Vertue, and for later editions Benjamin West and Thomas Stothard, featured prominently in early nineteenth-century editions of Hume's *A History of England*. The painter and publisher Robert Bowyer commissioned the best artists to produce illustrations in accordance with Hume's history. The engravings printed in Hume's *History* were subsequently displayed in Bowyer's Historic Gallery on Pall Mall.<sup>662</sup> Bowyer's illustrations provided the means by which publishers of further editions could provide readers with a visual element to Hume's history. The dramatization of Julius Caesar's entrance into Britain, the death of Thomas Beckett and the depiction of the Celtic queen Boadicea's power over Britons are suggestive of the highly emblematic representations found in later editions of Hume's work (Plate 5.1).

The addition of Bowyer's illustrations to Hume's work and their subsequent exhibition at both Pall Mall and the Royal Academy exemplifies the relationship

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Hume's) as 'incorrect and fanciful', although he was more complementary of their 'rich and venerable' style. Letter from Thomas Carlyle to Robert Mitchel, 19 November 1817; *The Carlyle Letters Online*, DOI: 10.1215/lt-18171119-TC-RM-01 CL 1:111-115, [Accessed 2 September 2016].

<sup>660</sup> Editions of Hume's history ran for nearly one hundred years after the publication of the first edition. However, his work was criticized throughout the nineteenth century amidst the establishment of a more antiquarian style of history writing. See below, p. 217.

<sup>661</sup> Keynes, 'The Cult of King Alfred', pp. 312-316.

<sup>662</sup> Keynes, 'The Cult of King Alfred', pp. 314-315; Mitchell, *Picturing the Past*, pp. 40-43.

between book illustration in late-eighteenth and early-nineteenth century British histories and the commercialisation of high art during a period in which intaglio printing techniques remained at the forefront of graphic reproduction. Despite the inclusion of illustrations to later editions, publishers chose to highlight the written style as the marker of the authenticity and objectivity of the author's account of British history. In an abridged version of Hume's work, the Exeter publishers J & B Williams claimed that the author has 'endeavoured to divest himself of all party spirit, and, in recording the successive facts, he has allowed no prejudices of his own to intermingle with the narration.'<sup>663</sup>

The continued reliance on metaphorical and emblematic illustrations in later editions of British histories such as Hume's underlines the dual purpose of the publisher: first to create an illustrated edition within a swelling market for illustrated literature and second, to invigorate the print market with sophisticated works of art.<sup>664</sup> Subsequent editions not only provide the public with newly illustrated editions of these histories but also acted as vehicles for quality intaglio engravings. These illustrations meant that histories with intaglio engravings maintained close ties to an increasingly competitive market for historical prints in this period. The degree of status afforded to intaglio prints meant that these illustrations often pictured grand visions of England's past that were as much a reflection of the prestige of the country's history painters as they were illustrations of the text. The style of these illustrations ensured that the philosophical genre of history was in some degree maintained in these works, despite the attempts from authors to break out of genre boundaries. Furthermore, these illustrations acted as a conduit between the book and print markets, which meant that these histories remained embedded in the philosophical tradition of history writing.

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<sup>663</sup> David Hume and Tobias Smollett, *Hume and Smollett's History of England, Abridged and Continued to the Accession of George IV*, Vol. I (Exeter, 1828), p. iii.

<sup>664</sup> A. J. Valpy's edition of Hume's *History* included numerous steel-engraved plates that resorted to the same style as Bowyer's edition, which is suggestive of the disparity between word and image. See Mitchell, *Picturing the Past*, p. 43.

## Pictorial Histories: Wood Engraving and the Rise of National, Picturesque Histories 1830-1850

Philosophical histories of England were at their most popular until 1830 when they were gradually replaced in favour of picturesque histories. These histories, as Rosemary Mitchell has demonstrated, possessed far greater potential for instilling a sense of national consciousness amidst broader demographic and societal changes in England.<sup>665</sup> Furthermore, Peter Mandler puts forward the argument that the rise of a distinctly middle-class outlook on England's past was dependent on the advances in the printing industry.<sup>666</sup> While philosophical histories were limited in terms of their potential for uniting word and image, primarily as a consequence of the close ties between the intaglio print market and illustration in these histories around the turn of the nineteenth century, picturesque histories relied more heavily on the interaction between textual information and graphic representation. Similar to the development of geology and topography discussed in the previous two chapters, wood engraving had a lasting effect on picturesque histories of England. The capacity to execute any design on wood enabled producers of the book to depart from the emblematic and allegorical illustrations connected to the high arts of the Royal Academy in favour of more antiquarian illustrations derived from archival records and respected antiquarian histories. The displacement of philosophical histories with social, picturesque accounts placed a greater emphasis on the pictorial element, which played a more crucial role in establishing a discourse predicated on the nation and the people as opposed to grand historical narratives of moral improvement.

During the period around the time Knight's history was produced, there were a number of illustrated histories whose authors and publishers utilized wood engraving to illustrate their texts. The sophistication and mutability of wood

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<sup>665</sup> Mitchell, *Picturing the Past*, pp. 111-149.

<sup>666</sup> Peter Mandler, "In the Olden Time": Romantic History and the English National Identity,' in Laurence Brockliss and David Eastwood (eds), *A Union of Multiple Identities: The British Isles, c. 1750-c. 1850* (Manchester, 1997), pp. 78-88.

engraving rendered it a popular method of graphic reproduction that satisfied different objectives and ambitions of the publisher, whether they be intellectual rigour, entertainment, or humour, with varying degrees of success. Thomas Wright's *England Under the House of Hanover*, published by Richard Bentley in 1848, was liberally illustrated with nearly two hundred copies of earlier caricatures and satirical prints. The plan of the work was to rescue caricature from obscurity by using them as visual aids to the text, which was concerned with the political strife of the seventeenth and eighteenth centuries. Although reviewers expressed admiration for its readability and for the originality of the idea, they were less than impressed with it as a 'history'. It was felt that the title was a misleading one insofar as it was less a history of the Hanover period than it was merely a history of caricature. Rather than the illustrations supporting the text, it was the text that provided the aid to the illustrations and, given that Wright's strengths did not lie in history writing, questions were raised as to whether it could be described as an illustrated history.<sup>667</sup> The use of wood engraving to imitate satires and caricatures was also questioned by contemporary critics. Frederick William Fairholt, who had completed illustrations for Charles Dickens, was regarded as an amateur artist who failed to replicate the expression of caricature in his engravings.<sup>668</sup>

Wood engravings were also used in histories designed to provide humour, particularly Gilbert à Beckett's *Comic History of England*, published in 1847. The work featured over two hundred wood engravings and etchings depicting portraits and historical scenes in a distinctly satirical style. It was claimed the objective of the author was to 'blend amusement with instruction, by serving up[...] the facts of English history.'<sup>669</sup> The publisher was careful to stress that this style of publication had a greater potential to establish the true facts of history. Critics lamented the attempt to coalesce humour with truth. 'There is no shortcut to knowledge', one

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<sup>667</sup> *Critic of Books, Society, Pictures, Music and Decorative Art*, 1 November 1848, pp. 437-439.

<sup>668</sup> *The Athenaeum*, September 1848, p. 925. For an insight into the styles of wood-engraving and their importance to the aesthetics of the illustration, see William Vaughan, 'Facsimile Versus White Line: An Anglo-German Disparity', in Goldman and Cooke (eds), *Reading Victorian Illustration*, pp. 33-53.

<sup>669</sup> Gilbert à Beckett, *The Comic History of England* (London, 1847), p. v.



critic wrote, 'and the garb in which it is natural clothed being rather of a sombre character if those who wish to acquire it are not content with it as it is, we doubt whether any artificial style of dress would be likely to allure them to it.'<sup>670</sup>

The pursuit of historical truth was adjudged to be more commonly found in the rise of picturesque histories. Writers of the *Edinburgh Review* captured the changes that had taken place by the mid-century with regards to the style of history writing:

As far as picturesque effect, and the minute particularities which give colour to history and fiction are concerned, there is, of course, no ground for quarrel with this progressive change in public taste. It is an advance towards truth, just of the same kind as the improvements from the Chinese-Gothic of Strawberry Hill to the designs of Rickford and Barry.<sup>671</sup>

Within this new commercial taste for national history, the intellectual stature of David Hume's history began to subside. Although his 'rare sagacity' enabled him to convey a broad narrative of the influence of each period on the character of civilisation, 'a manner which the soundest antiquary could not have surpassed', he was considered 'too careless a writer even if the taste of the public in his time had required it, to trouble himself with the minute labour necessary for this kind of investigation.' Consequently they doubted whether the work attracted so many readers as it did formerly.<sup>672</sup> In 1838, reviewers for *The Eclectic Review* expressed their astonishment that Hume had been one of the most popular and influential historians despite the content of his writing, which they considered to 'mislead and pervert the judgement [...] disfigured by a thousand inaccuracies, with a shallow philosophy, and an un-English hostility to freedom[...].'<sup>673</sup>

The period between 1820 and 1850 witnessed a sea-change in history writing, which served to depart from the grand civilising histories of their predecessors and

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<sup>670</sup> 'The Comic History of England', *The Fine Arts Journal*, 6 March 1847, p. 286.

<sup>671</sup> 'The Pictorial History of England: being a History of the People, as well as a History of the Kingdom', *The Edinburgh Review*, January 1842, p. 431.

<sup>672</sup> *Ibid.*, pp. 432-433.

<sup>673</sup> *The Eclectic Review*, March 1838, p. 580.

provided an intellectual alternative to the humorous histories with which they were competing. Histories that harboured a national consciousness began to flourish by the mid-nineteenth century, which supplanted the universalist histories that relied more upon the historical imagination. Thomas Macaulay's *History of England*, for example, foregrounded his account of the past within the overarching concept of the nation.<sup>674</sup> As Stefan Berger has argued, national histories were constructed in an attempt to underscore the liberty of the people.<sup>675</sup> The concept of the nation formed both the start and end point of these histories, serving to establish a form of reading that positioned their readers from the vantage point of the nation, which had been perfected in their own time.<sup>676</sup> National histories of England, therefore, tended to place the concept of 'the people' at the heart of their histories.<sup>677</sup> The popularity of these histories, in addition to a rising middle-class readership, placed a greater emphasis on illustration in producing a history based on utilitarian principles in an effort to reinforce a national identity. The technical and commercial advantages offered by wood engraving enabled publishers such as Charles Knight to reconceptualise the role illustration played in communicating a sense of nationhood.

### The Establishment of 'True Eye Knowledge'

Despite the arrival of a number of pictorial histories dedicated to revealing the socio-economic history of England, Charles Knight was at the forefront of the movement to popularise this antiquarian genre of English national histories. Knight's *Pictorial History of England*, comprising of eight volumes and published in weekly parts, encapsulated his vision to create a picturesque and heavily illustrated history of England that focused more upon England's social past as opposed to

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<sup>674</sup> Epple, 'A Strained Relationship', p. 87.

<sup>675</sup> Stefan Berger, *The Past as History: National Identity and Historical Consciousness in Modern Europe* (Hampshire, 2015), pp. 120-121.

<sup>676</sup> Stefan Berger and Chris Lorenz label this narrative technique 'presentism' See Stefan Berger and Chris Lorenz, 'Introduction', in Berger and Lorenz (eds), *Nationalizing the Past*, pp. 11-12.

<sup>677</sup> Given that I focus primarily on how authors and publishers projected a national history through their illustrated works, I do not consider how people thought about their national identity. For more on this, see Peter Mandler, *The English National Character: The History of an Idea from Edmund Burke to Tony Blair* (New Haven and London, 2006), pp. 1-26.

grander classical narratives common to philosophical histories. Furthermore, Knight's history was predicated on the crucial dynamic between word and image in order to realise his ambition of creating 'true eye-knowledge'. Nevertheless, as we discover later in the chapter, a close analysis of the arrangement and distribution of the illustrations printed in Knight's history reveals the importance attached to illustration as well as the difficulties he encountered when attempting to produce a consistently illustrated history using illustrations recycled from previous publications. By examining the distribution of illustrations, we can begin to explore the tensions between publisher and author through the lens of the pages of the book. Before moving on to analyse Knight's eight-volume history, a brief insight into his publishing career helps to reveal the role he believed illustrations should serve more generally, which perhaps sheds further light on the reasons for the difficulties Knight experienced in producing an illustrated history in which illustrations were evenly and consistently distributed across all volumes.

Much of Knight's publishing activity was concerned with the education of the middle-to-lower classes and younger readers as a way of engendering a national community. Knight's use of illustrations in his more ephemeral publications such as *The Penny Magazine* and *Penny Cyclopaedia* highlights the value he attached to illustration in communicating knowledge to an expanding lower-to-middle-class readership. He had, in his own words, become 'somewhat extensively mixed up with vast changes in the social condition of the people. In the progress of which, elementary education and popular literature have been amongst the most efficient instruments of amelioration.'<sup>678</sup> Knight's influence can perhaps be captured in the recollections of James Glass Bertram, an apprentice of Tait's *Edinburgh Magazine*. 'Much is being said and written now-a-days about the influence of books on the formation of character', he observed, 'Let me therefore mention that my prime favourites while at Tait's were "Cobbett's advice to young men", and Charles

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<sup>678</sup> Charles Knight, *Passages of A Working Life During Half a Century: with a Prelude of Early Reminiscences*, Volume 1 (London, 1864), p. iv.

Knight's "Pursuit of Knowledge under Difficulties"; which I read over and over again with great zest, and, I hope, much benefit.'<sup>679</sup> Knight's desire to produce popular literature did not, he was careful to stress, limit him to the tastes of the poor and lower-middle class. Moreover, he questioned the attribution of popular literature to the working classes: 'We *all* want popular literature; we all want to get at real and substantial knowledge by the most compendious process.'<sup>680</sup>

In order to bring popular literature to the people, the developments in wood engraving were crucial for Knight. Reflecting on his passage into the business of publishing popular periodical literature in the opening two decades of the nineteenth century, he lamented the condition of wood engraving for attractive illustration, 'the good engravers were few, and the Art had been almost lost since the death of Bewick.'<sup>681</sup> The commercial and technological printing climate in the 1840s and 1850s provided Knight with the opportunity to establish 'true eye-knowledge, sometimes more instructive than words.'<sup>682</sup>

Of the more considerable publications produced by Knight, perhaps none were more successful than *The Pictorial Bible*, published in weekly and monthly parts that commenced in 1836 and took two-and-a-half years to complete. It was highly successful as a commercial project despite the great expense incurred in producing and printing the wood engravings.<sup>683</sup> Bibles were one of the first historical publications to be illustrated. Allegorical illustrations that conformed to the tradition of grand history painting were well suited to religious texts of the seventeenth and eighteenth centuries. These illustrations undoubtedly belonged to the domain of the elite and Knight was perfectly aware of these privileged publications. In order to achieve his aim of 'spread[ing] the light of Christianity', new adaptations of the 'old instruments for advancing the great work of civilisation'

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<sup>679</sup> James Glass Bertram, *Some Memories of Books, Authors and Events* (Westminster, 1893), p. 26, [http://www.open.ac.uk/Arts/reading/UK/record\\_details.php?id=8183](http://www.open.ac.uk/Arts/reading/UK/record_details.php?id=8183), [Accessed: 23 September 2016].

<sup>680</sup> Alice A. Clowes, *Charles Knight: A Sketch* (London, 1892), p. 66.

<sup>681</sup> Knight, *Passages*, Vol. 1, p. 244.

<sup>682</sup> Knight, *Passages of a Working Life During Half a Century*, Vol. 2 (London, 1864), p. 262.

<sup>683</sup> *Ibid.*, pp. 254-255.

were required as he felt that it was relationship between pen and pencil that ‘would always create the fitting modes for reaching the minds of all.’<sup>684</sup>

The wood engravings altered the way in which the Bible history was written. The use of more emblematic and metaphoric illustrations in previous publications devoted to scripture meant that the relationship between the visual and the textual was often sporadic and indirect; ‘their attention was given rather to the sound of the trumpet, than to the shape of the instrument or the music of the peal.’<sup>685</sup> Facsimiles of old master paintings were replaced by metonymic illustrations depicting costume, plants, animals and scenes in order to provide the reader with an ‘ethnography’ of scripture.<sup>686</sup> Illustrations that did conform to those found in earlier scriptural histories were used more for ornamental purposes than as descriptive signifiers of the text and some were even removed in later editions.

*The Pictorial Bible* as well as his *Pictorial History of England* were regarded as successful embodiments of Knight’s intention to render wood engravings ‘real illustrations of the text, instead of fanciful devices[...]’.<sup>687</sup> Knight’s perspective on the function of illustration here is crucial to his use of the page, reflecting his attempts to print word and image in close proximity. The illustrations found in Knight’s work generally comprised of historical artefacts, representations of dress, buildings and architecture, portraits and a variety of historical scenes derived from manuscript sources, historical institutions and respected historians. Together, these illustrations were used to visually describe the text, reinforcing his desire to create a social and popular history to which his readers could more easily relate compared with the grand philosophical histories of the preceding decades.

Knight adhered to the traditional concept of illustration offered by Thomas Bewick at the turn of the nineteenth century, namely that illustrations were used to

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<sup>684</sup> *Ibid.*, p. 255.

<sup>685</sup> John Eadie, *The Life of John Kitto* (London, 1861), p. 303.

<sup>686</sup> Metonymic illustrations included authentic copies of portraits and views, whereas metaphoric illustrations were imaginary reconstructions. For more on the differences between metaphoric and metonymic illustrations, see Stephen Bann, *Romanticism and the Rise of History: Studies in Intellectual and Cultural History* (New York, 1995), pp. 3-17; Rosemary Mitchell, *Picturing The Past*, pp. 24-25, 111-138.

<sup>687</sup> Knight, *Passages of a Working Life*, p. 262.

visually support the written text. They were explanatory rather than metaphoric and were printed in close proximity to the related written text. Rather than endorsing the quality of their design or execution that was common to illustrated books, Knight instead chose to highlight examples where 'authentic' representations of the period were not possible and so employed illustrations from a different period that he believed would convey 'a sufficiently accurate representation of the thing spoken of.'<sup>688</sup> The way in which the page was designed was crucial to realising Knight's ambitions.

Knight's *Pictorial History of England* represented a sea-change in the way national history was conceived and written. He considered the nation to be 'all too ignorant [...] of the real history of passages - of the manners and political condition of the other members of the great human family.'<sup>689</sup> Knight was admired for his attempts to provide an accurate account of the nation's past through his inclusion of such a large corpus of illustrations. Knight's *Pictorial History* was adjudged to epitomize the claim made by the reviewer for *The Literary Gazetteer* that historical truth should be the 'leading object of all such writers.'<sup>690</sup> The reviewer continued to state that 'men of all opinions are quoted, and that their arguments are brought together with the view to elicit truth.'<sup>691</sup> The artistic merit of the engravings was of secondary importance to the way in which they contributed to Knight's objective of producing 'eye knowledge.' 'With the help of these illustrations', one critic observed, 'simple and palpable ideas of things most difficult to understand without their aid [...] will now be made attractive even to children.'<sup>692</sup> The structure was divided into periods and then subdivided into subjective categories that included civil and military history, religion, the government, the history of literature and the sciences, manners and customs, eventually ending with the history of the condition

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<sup>688</sup> Knight, *The Pictorial History of England, Being a History of the People as Well as a History of the Kingdom*, Vol. 1 (2<sup>nd</sup> Edn., London, 1849), n.p.

<sup>689</sup> Clowes, *Knight*, p. 66.

<sup>690</sup> 'The Pictorial History of England', *The Literary Gazetteer: A Weekly Journal of Literature, Science, and the Fine Arts*, Issue 1139, 17 November 1838, p. 721.

<sup>691</sup> *Ibid.*

<sup>692</sup> 'The Pictorial History of England', *The Examiner*, 14 May 1837, pp. 309-310.

of the people. The abundance of illustrations rendered his history useful for all members of society from the antiquarian and the scholar, to the artist and the ‘picture-lover.’<sup>693</sup>

As mentioned previously, picturesque histories have been considered within scholarship dedicated to word and image as the primary vehicle for the development of a sense of national identity in which the producers of these histories used the coalescence of word and image to produce an authentic picture of the past.<sup>694</sup> Nevertheless, a closer analysis of the arrangement of the illustrations across Knight’s volumes raises questions over the success he had in uniting word and image, which is thus suggestive of the tensions between author and publisher, the latter considering illustrations to be visual descriptors of the written word. Rosemary Mitchell has contended that Knight’s approach enabled him to coalesce political narrative and a social history of the people.<sup>695</sup> However, a more detailed analysis of the distribution of Knight’s illustrations points to a lack of control over illustrating his volumes, despite his authority over those involved in the production of his history.<sup>696</sup>

### Publishing the *Pictorial History of England*: True Eye Knowledge and the (Dis)Unity between Word and Image

The majority of commentators chose to highlight the sheer number of illustrations found across the eight volumes of Knight’s *Pictorial History*.<sup>697</sup> The graph below (*Figure 5.1*) shows the image distribution as well as the percentage of the page each of the 1600 illustrations occupy in all eight volumes of the second

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<sup>693</sup> Knight’s work also had an influence on histories published on the continent and America. For more on those histories, See Gregory M. Pfitzer, *Picturing the Past: Illustrated Histories and the American Imagination, 1840-1900* (Washington D.C. and London, 2002); Gregory M. Pfitzer, *Popular History and the Literary Marketplace 1840-1920* (Amherst and Boston, 2008). For a history of wood engraving in America that dictated the way in which these histories were illustrated, see W. J. Linton, ‘The History of Wood-Engraving in America’, Seven Chapters, *American Art Review*, 1.7 (May, 1880).

<sup>694</sup> Mitchell, *Picturing the Past*, p. 15.

<sup>695</sup> *Ibid.*, p. 132.

<sup>696</sup> For a discussion on the increasing power of the publisher by the early-Victorian period, see chapter 2, pp. 89-95.

<sup>697</sup> Knight’s volumes consisted of over 1600 illustrations.

edition of Knight's *Pictorial History of England* (1849). Knight's intention to 'speak of the mind through the medium of the eye' in his *Pictorial History* as outlined above is revealed in the number of illustrations spread across the eight volumes of his history.<sup>698</sup> The graph clearly shows the predominance of smaller illustrations that occupy less than fifty percent of the page, whilst the production of larger illustrations appear relatively infrequently.<sup>699</sup> This points to the close interaction between word and image throughout his history. Yet in mapping the spread of illustrations across these volumes, we can see that Knight's vision of illustrations as pictorial aids to the text led to difficulties in establishing eye-knowledge, which relied on the consistent application of illustration throughout his volumes. The clustering of illustrations suggests that while Knight had control over his illustrations and the production of the work more generally, he experienced difficulty in uniting the written word produced by Charles Macfarlane, a historian whom he employed to write his history, and his illustrations, many of which were recycled from previous works.

The overall design of the multi-volume history received widespread praise, with one reviewer claiming it was the best designed and executed publication 'amidst the literary trash which, with the aid of artistical [sic] illustrations, is seeking to press itself into public notice.'<sup>700</sup> Despite Knight's ambition to educate through the eye, further analysis into the distribution of illustrations reveals the difficulty Knight had in producing a consistently illustrated history. The layout of the pages in Knight's history was undoubtedly borne out of his concern for the intellectual over the aesthetic.<sup>701</sup> Yet this, paradoxically, served to establish a textual hierarchy, despite Knight's intention to establish 'eye knowledge'. *Figure 5.2* reveals the uneven distribution of illustrations in volume one of the *Pictorial History*. It contains 463

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<sup>698</sup> 'The Pictorial History of England', *The Gentleman's Magazine*, November 1838, p. 516.

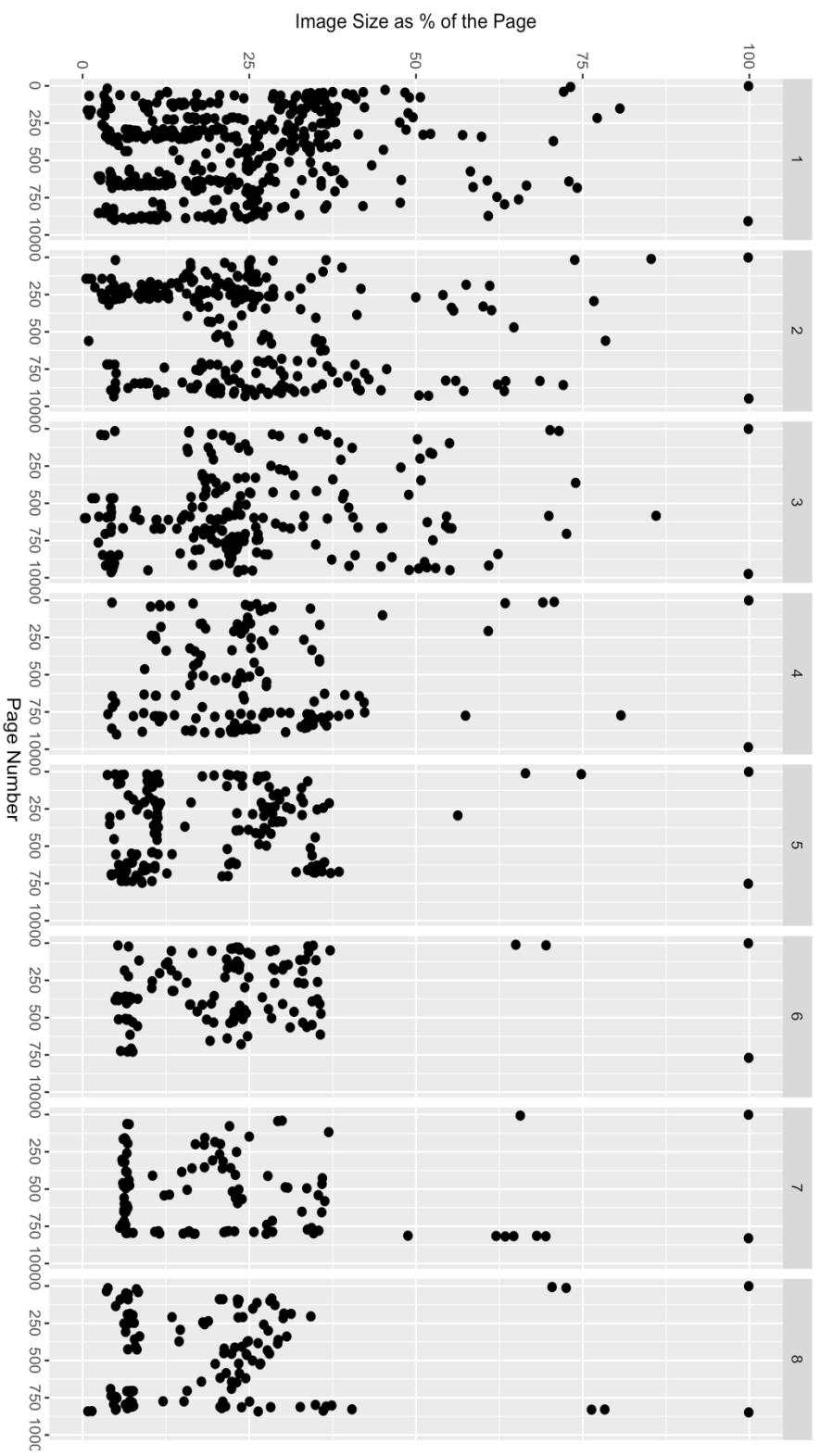
<sup>699</sup> This engendered a sense of 'fictional realism'. See Smiles, 'British Antiquity and Antiquarian Illustration', pp. 57-63.

<sup>700</sup> *The Eclectic Review*, March 1838, p. 579.

<sup>701</sup> Mitchell, *Picturing the Past*, p. 121.



### Illustration area by page for Charles Knight's Pictorial History of England in 8 Volumes



*Figure 5.1* Graph showing the distribution of illustrations in all eight volumes of Charles Knight's *Pictorial History of England*. The Y Axis represents the percentage of the page the illustration takes up and the x axis represents the page number. The data takes the first page printed as page 1, as opposed to the first page of text. Similar to previous graphs of this nature, the black dots represent an illustration. There are clear vertical clusters of illustrations in all volumes of the publication, most notably towards the end of the volumes.

illustrations at a rough average of one illustration for every two pages. There are three vertical clusters of illustrations: between pages 250 and 375, pages 625 and 650 and again around page 875. The three clusters all correspond to chapters that reveal the social elements of English history, aspects of history that Knight was primarily interested. In chapters concerned with national industry, the customs and manners of the people as well as their social condition were liberally illustrated, while chapters on religion and the mechanisms of government were far more textual.

This pattern is reflected in the distribution of illustrations across book four of the first volume. The chapter on 'civil and military transactions' consisted of 130 pages but featured just thirty-seven illustrations. In contrast, the chapter on the manners and customs of the people within the same book totalled eighteen pages of text but was embellished with thirty-one illustrations. Whilst Knight's work has been exemplified as as one of the most richly illustrated histories of the early-Victorian period, the uneven distribution of illustrations is suggestive of the difficulties he encountered in combining social, political and economic history within his overall ambition to create eye-knowledge.

Illustration Area For Knight's Pictorial History of England Vol. 1

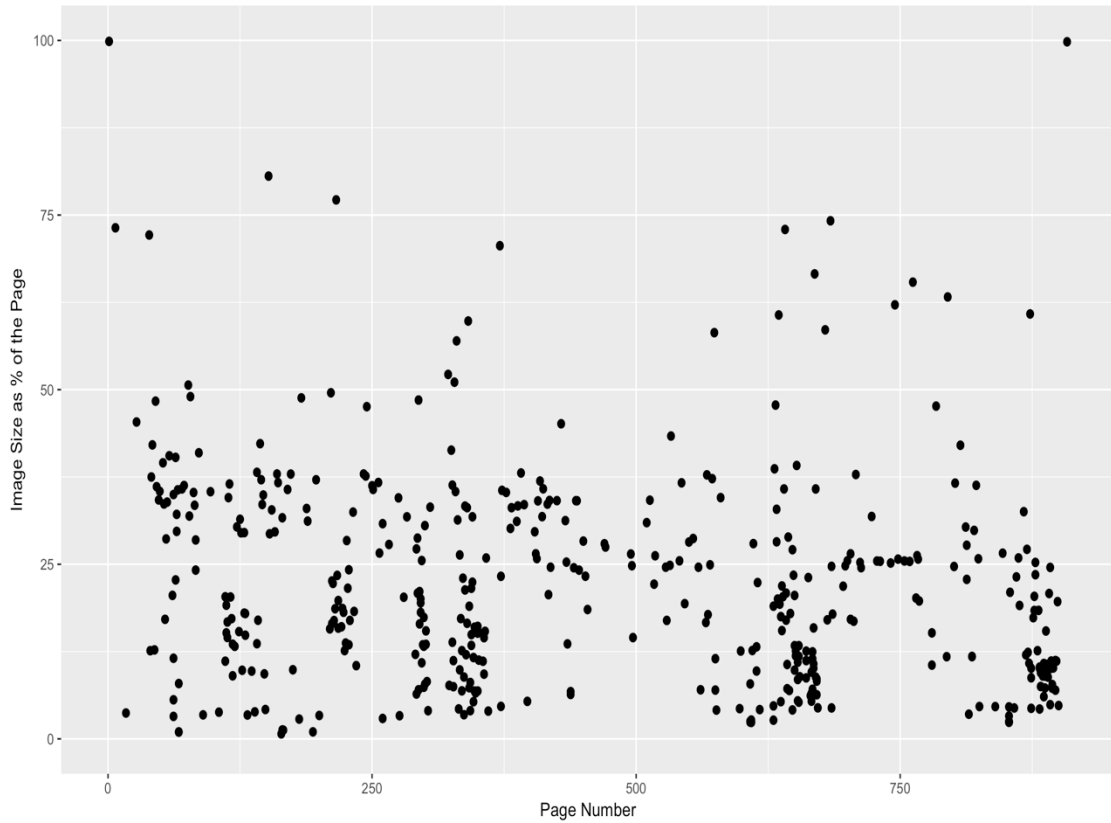


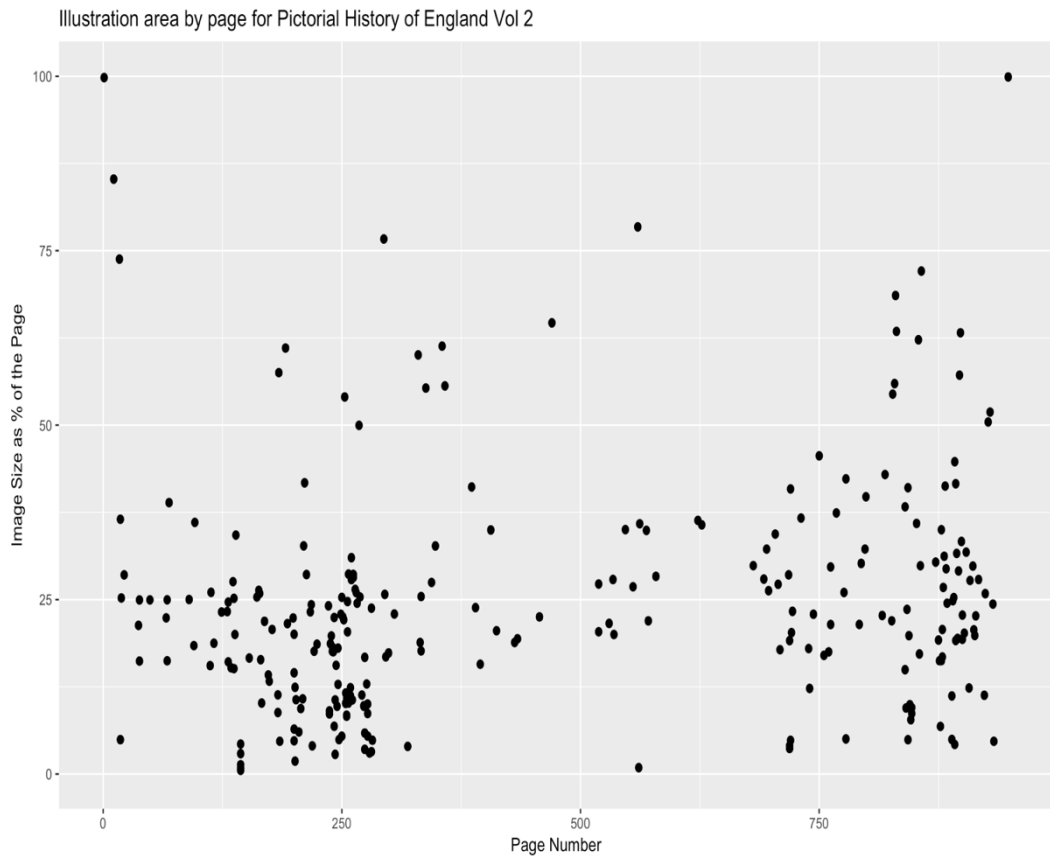
Figure 5.2. Showing the size and distribution of illustrations in Volume 1 of *The Pictorial History of England*. There are clear clusters between pages 250 and 350, 650 and 725 and 825 and 850.

The clustering of illustrations is perhaps even more striking in the second volume (*Figure 5.3*). In the second book of volume two covering the period between the accession of Henry VIII and the end of the reign of Elizabeth, over four hundred of the nine hundred pages of that book were dedicated to military history. Within those four hundred pages, only forty-eight illustrations were printed. The considerable clustering of illustrations at around page 250 and 850 correspond to the chapters detailing the manners and customs of the people within the historical period under review. A similar pattern emerges in volume seven (*Figure 5.4*). The clustering of illustrations at the end of the volume corresponds to the chapter on 'The History and Condition of the People'. The sporadic manner in the way in which Knight's history was illustrated within and between volumes points to the difficulties in coalescing text and image within a 'pictorial' publication bound by the picturesque and antiquarian genre of history writing that Knight subscribed to.

Despite Knight's control over the design and production of his history, this uneven distribution of illustrations reveals his difficulty in establishing that control within the pages of the book itself. Leslie Howsam's work on the publishing practices of academic histories from 1850 to 1950 has drawn attention to the vitality of collaboration in the production of these histories.<sup>702</sup> For Knight's *Pictorial History*, however, the tension between publisher and author disrupted the synthesis between image and text on the page. Knight hinted at the sometimes fraught relationship he had with his group of writers, particularly Charles McFarlane, who wrote a considerable proportion of the text. Knight attributed the work's limited commercial success to the difficulty he faced pictorialising McFarlane's words. Although Knight praised him for his 'considerable power of narrative',

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<sup>702</sup> Howsam, *Past into Print*, pp. 5-9.



*Graph 5.3. Showing the size and distribution of illustrations in Volume 2 of The Pictorial History of England*

he did not possess the ‘prime quality of the historian, impartiality.’<sup>703</sup> He went on to suggest that had he not formed such a close relationship with Macfarlane, who had been employed by Knight’s company for many years, he may have stopped the publication altogether. However, he was all too aware that such an undertaking would be impossible, ‘to go on is dangerous but to halt midway through would be suicide.’<sup>704</sup> Macfarlane and Knight were completely opposed in their political affiliations. Macfarlane was a staunch conservative, while Knight adhered to a more liberal and whiggish school of political thought.

The irregular, unregimented distribution of illustrations from volumes five to eight are suggestive of the tensions played out between Knight and Macfarlane. Volume seven of Knight’s history (*Figure 5.4*), for example, which focuses primarily on the French Revolution, exemplifies the tension between the writing of the author and the illustrations of the publisher. The full-page illustrations within this cluster were primarily concerned with the changes to dress and costume during the period towards the end of the eighteenth century; ‘an almost entire change took place in costume during the course of it. The French Revolution [...] affected the fashionable as much as the political world.’<sup>705</sup> The wood engravings in the chapter on manners and customs were printed together as full page illustrations rather than printing them amongst the text, which was uncommon to Knight’s history and perhaps exemplifies the difficulty in uniting word and image. The chapter featured a mere twelve pages, five of which were dedicated solely to Knight’s illustrations. These chapters, conveying a distinctly social representation of English history were undoubtedly the focus of contemporary critics who held that the book belonged to the ‘increased zeal’ in antiquarian investigation that ‘cannot fail to have struck the most inattentive.’<sup>706</sup>

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<sup>703</sup> Knight, *Passages of a Working Life*, Vol. 2, p. 261.

<sup>704</sup> *Ibid.*

<sup>705</sup> George L. Craik and Charles Macfarlane, *The Pictorial History of England (to the death of George III)*, Volume VII (London, 1849), p. 760.

<sup>706</sup> *The Edinburgh Review*, January 1842, p. 430.

Illustration area by page for Pictorial History of England Vol 7

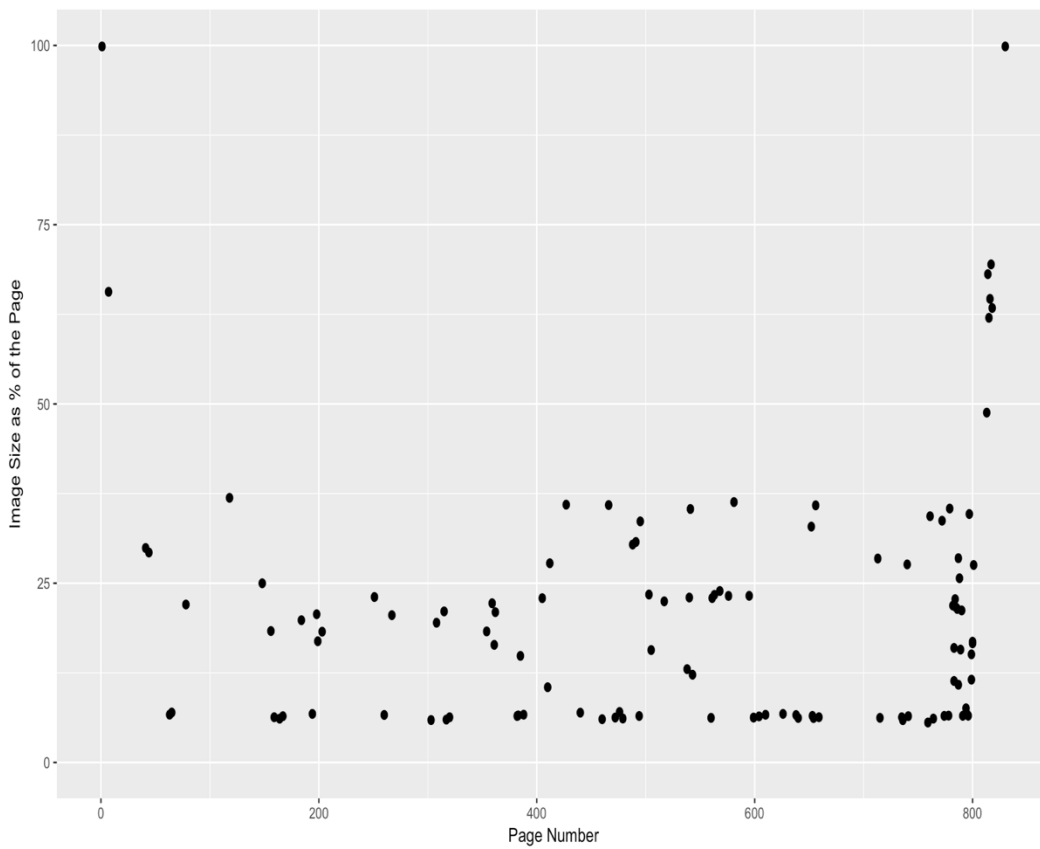


Figure 5.4 Showing the size and distribution of illustrations of Volume 7 of *The Pictorial History of England*

The contrast between the number of illustrations found in the chapter on manners and customs and the chapter on civil and military history is stark. Over six hundred pages of text were dedicated to civil and military history but were sparsely illustrated.<sup>707</sup> Macfarlane's prose contained very little detail about the social consequences of the revolution. Knight was particularly displeased with Macfarlane's devotion to, 'whole volumes of folio that might dwell upon its countless abominations, and say no word about the mighty changes which it was destined to produce upon the conditions of mass society.'<sup>708</sup> Despite Knight's decision to assign the majority of the writing to Macfarlane, the uneven distribution of illustrations throughout the eight volumes indicates Knight's inability to achieve knowledge through the eye.

Despite a claim by a reviewer for the *Metropolitan Magazine* that the illustrations found in *The Pictorial History of England* were 'in themselves a little history of the progress of art in Britain', Knight's attempts to inaugurate a history that placed equal value on word and image were constrained by the lack of control over his author.<sup>709</sup> Regardless of the claims from contemporary reviewers that Knight's volumes were abundantly illustrated, the difficulty Knight experienced in producing an illustrated history that belonged to an antiquarian and national genre of history writing points to tensions within the collaborative nature of the books' production, regardless of the assumed authority Knight held over other contributors to the work. Knight used his illustrations to provide a popular history of England as part of his wider objective to break down class divisions. In so doing, he remained attached to antiquarian and national history, which meant that he was constrained in his ability to fully and consistently illustrate his history.

Charles Knight has been acknowledged, both contemporaneously and from a scholarly perspective, to have produced a richly illustrated work that achieved 'an

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<sup>707</sup> It should be noted here that the chapter on civil and military history formed a continuation of the previous volume. The chapter in its complete form actually amounted to 1,288 pages.

<sup>708</sup> Knight, *Passages*, Vol 2, p. 261.

<sup>709</sup> *The Metropolitan Magazine*, September 1838, p. 16.



intensive integration of text and image which [...] characterised works of picturesque history.’<sup>710</sup> Yet a closer analysis of the arrangement and distribution of the illustrations found in *The Pictorial History of England* suggests that Knight struggled to realise his ambition, that is, to establish ‘true eye knowledge’ and to ‘speak to the mind through the eye.’<sup>711</sup> A closer analysis of the arrangement of illustrations can also reveal how tensions between author and publisher were reflected in the pages of the book. During a period that gave rise to the power and authority of the publisher within the production of the book, an assessment of Knight’s *Pictorial History* reveals that this power was not always reflected in the book itself. Even though Knight chose Macfarlane to complete the written element of *The Pictorial History* and directed him to write a social history of England, Knight’s aim to produce a history that relied as much on pictorial representations of the past as the text was somewhat constrained by his inability to illustrate large sections of Macfarlane’s work. Knight’s decision to author his next history confirms further the challenges he, as publisher, faced in creating ‘eye-knowledge’.

### Roles Reversed: Knight as Author of *The Popular History of England* (1856-1862)

Pondering the factors necessary in order to produce a commercially successful publication in the early part of his career, Knight felt that the roles of publisher and author did not conflict:

I may truly say—and I say it for the encouragement of any young man who is sighing over the fetters of his daily labour, and pining for weeks and months of uninterrupted study—that I have found through life that the acquisition of knowledge, and a regular course of literary employment, are far from being incompatible with commercial pursuits. I doubt whether, if I had been all author or all publisher, I should have succeeded better in either capacity.<sup>712</sup>

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<sup>710</sup> Mitchell, *Picturing the Past*, p. 120.

<sup>711</sup> ‘The Pictorial History of England’, *The Gentleman’s Magazine*, November 1838, p. 516.

<sup>712</sup> Knight, *Passages of a Working Life*, Vol. I, p. 205.

Despite Knight's contention that his role as either an author or publisher was irrelevant in producing a richly and consistently illustrated publication, his role as the author of *The Popular History of England* as opposed to publisher reinforces the difficulties he had producing 'eye knowledge' in his former publication. The intellectual objectives of *The Popular History* in many ways mirrored that of his previous history.<sup>713</sup> His commitment to popular education through a distinctly social history of the nation was maintained in his *Popular History*. The metonymic style of illustration was again adopted in his latest history, 'not as mere embellishments but as illustrations of the text.'<sup>714</sup> However, a more detailed examination of the arrangement and distribution of illustrations in Knight's *Popular History* in comparison to his previous history confirms the difficulties he encountered in his role as publisher in producing a history that placed equal value on word and image, despite the control he exercised over the illustrations and the book more generally.

Knight was careful to distance his new publication from his previous undertaking, which he considered too voluminous for the younger reader: 'As a publisher of that valuable history, I had cause to regret that its limits went beyond what as its projector, I originally contemplated.'<sup>715</sup> Moreover, he suggested that his new illustrated history of England was a response to John Russell's claim that 'We have no other *History of England* than Hume's.'<sup>716</sup> Knight made clear his vision to produce a history of the nation in order to convey to the reader that the history of the state and history of the nation are inseparable: 'Properly to trace this essential connection between Government and People, we must look at history from a new point of view. We must put the People in the foreground. We must study events

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<sup>713</sup> *The Popular History* was also sold at a similar price to *The Pictorial History of England*. *The Popular History of England* was sold in weekly parts at 6d each, while the *Popular History* was sold in monthly parts priced at one shilling. These prices ensured that both of Knight's histories were affordable to a relatively wide readership.

<sup>714</sup> Charles Knight, *The Popular History of England*, Vol. 1 (London, 1856), p. viii. In addition to the metonymic illustrations, he did include a greater number of metaphoric illustrations than was found in his previous history. The number of metonymic illustrations, however, far outweighed those of a metaphoric style.

<sup>715</sup> Knight, *The Popular History of England*, Vol. 1, p. iii.

<sup>716</sup> *Ibid.*, p. i.

and institutions, not as abstract facts, but as influencing the condition of a whole nation.<sup>717</sup>

The illustrations he used in *Popular History* were, with the exception of a few additions, copied from his *Pictorial History*. What is noticeable, however, is that he dramatically reduced the amount of written text and re-organised its structure in an attempt to unify word and image consistently throughout the volumes, presenting it instead as chronological 'state history' in which the history of everyday life was foregrounded throughout the edition. The predominant focus on the period from the reign of the Elizabeth I onwards, when records of people and accounts of social history were more easily accessible, is reflective of the greater potential to elide his history with the concept of nationhood and the people.<sup>718</sup>

In addition to the changes made to the content of his new history, Knight's aspiration can also be traced in the design of his contents page. The difference in the way in which the contents page is structured in his *Popular History of England* reveals the efforts of Knight in aligning word and image consistently. Rather than separating the contents and the list of illustrations as he did in his *Pictorial History*, each chapter was followed by a list of illustrations for that chapter. The decision to change the format of the contents page reflected his emphasis on the greater interaction between word and image in his new history.

*Figure 5.5* reveals the size, arrangement and distribution of illustrations across the eight volumes of Knight's *Popular History*. It is clear when comparing these volumes with the eight volumes of his *Pictorial History of England* (*Figure 5.1*) that there is a much greater consistency in the distribution of illustrations across the volumes of his *Popular History of England*. Knight's departure from the traditional structure of history writing, which organized history into thematic 'divisions',

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<sup>717</sup> *Ibid.*, p. iv.

<sup>718</sup> Gray, *Charles Knight*, p. 113.

reflected his ability as author to shape the written narrative in accordance with the principles that drove him to establish a popular history of the nation.<sup>719</sup>

Knight's greater success in integrating word and image evenly throughout his *Popular History* is perhaps most evident in a comparison of the second volumes of both histories.<sup>720</sup> The clustering of illustrations found near the beginning and towards the end of volume two of *The Pictorial History* (Figure 5.3) is not reflected in the second volume of *The Popular History*. Reverting to the role of author rather than publisher enabled Knight to integrate word and image more successfully in his previous work. This satisfied his dual objective of bringing to the public a history that satisfied the genre of antiquarian and national history writing within his broader aim to impart 'true eye knowledge'.<sup>721</sup>

The steady displacement of the metaphoric and allegorical copper engravings commonly found in philosophical histories with metonymic wood engravings for illustrating histories of England reflected the desire of publishers such as Knight to authenticate their histories through the pictorial element of these publications in order to produce a history of the nation founded upon a whiggish constitutionalism. Wood engraving was considered to satisfy, albeit partially, the dual purpose of constructing a genre that placed equal emphasis on word and image in addition to a greater emphasis on the concept of nationhood that appealed to a broadened demographic. However, a comparison between Charles Knight's *Pictorial History* and his *Popular History* published over ten years later, has demonstrated that the application of wood engraving alone did not necessarily resolve the disparity between word and image that was evident in illustrated philosophical histories. Despite Rosemary Mitchell's claim that Charles Knight achieved 'an intensive

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<sup>719</sup> These themes were organized into categories including: 'Civil and military', 'Ecclesiastical', 'Constitution', 'Arts', 'Commerce', 'Manners'. Knight felt an arrangement such as this, which he loosely adopted in his *Pictorial History*, involved too much repetition. See Knight, *Popular History*, pp. vi-vii.

<sup>720</sup> See Figure 5.3 for the distribution of illustrations in the second volume of *The Pictorial History*.

<sup>721</sup> Knight, *Passages of A Working Life*, Vol. 2, p. 262.

Illustration area by page for Knight's Popular History of England in 8 Volumes

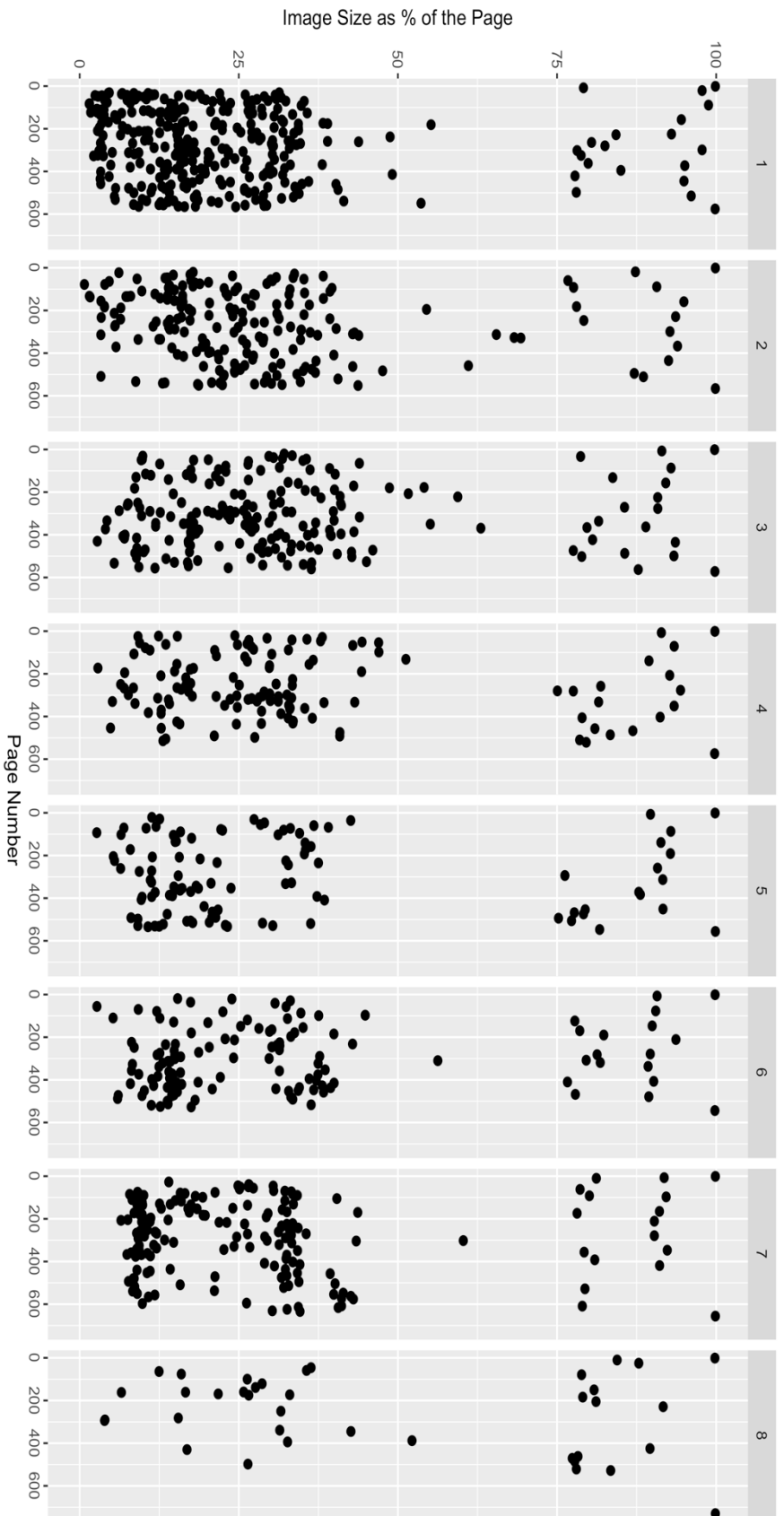


Figure 5.5 Graph showing the size and distribution of illustrations in all volumes of Charles Knight's *Popular History of England (1856-1862)*. A comparison with the illustration distribution of his Pictorial History suggests that the illustrations are much less clustered and are relatively evenly distributed throughout each volume. Although there is an increase in the number of illustrations that occupy over seventy-five percent of the page, there remains a reliance on smaller illustrations. The larger illustrations are generally steel-engraved portraits of historical figures.

integration of text and image', a comparison between the arrangement and distribution of illustrations within his two voluminous histories suggests this could only be achieved through a successful collaboration between publisher and author. Even a publisher as adroit as Knight, who held jurisdiction over both the pictorial element of his history and those he employed to complete the written element, failed to produce a consistently illustrated history which served to reflect his ambition to impart knowledge through the eye.

The disunity between word and image across Knight's first history in particular also reveals more about the significance of how individuals conceived illustrations from a theoretical standpoint. Knight's perception of the inherent function of illustration broadly aligns with the traditional concept of illustration, namely that it pictures the text. A comparison between Knight's histories and that of his rival publisher John Cassell reveal the different roles illustrations assumed in both works. Whereas the unity between word and image was key for Knight in producing 'eye-knowledge', a closer analysis of the distribution, size and location of illustrations on the page within Cassell's *Illustrated History of England* reveals the contrasting function of illustrations in the latter's work, which often did not rely on the close proximity between word and image on the page.

### John Cassell's *Illustrated History of England*: Impressing National History upon 'Ignorant Minds'

As in the previous two chapters on wood engravings in topographical and geological works, the distribution and arrangement of illustrations in Knight's histories often depended on the proximity to the text that they were designed to illustrate. Indeed, Knight explained the role of illustrations as visual aids to the text in the prefaces of both of his *Histories*.<sup>722</sup> However, as highlighted in chapter two, the number of wood engravings printed as larger illustrations began to rise after

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<sup>722</sup> Knight, *The Pictorial History of England*, Vol. 1, Knight, *The Popular History of England*, Vol. 1.

1840 as result of the practical developments of bolting woodblocks together. In 1856, Charles Knight's great publishing rival John Cassell, together with printers Thomas Galpin and George Petter, published the first volume of his *Illustrated History of England*, which eventually ran through eight volumes with the final volume published in 1864. The writer and biographer Godfrey Holden-Pike was full of praise for its utility to educate. 'Some us of who are, in a degree, the instructors of the people today', he observed, 'can gratefully admit that, in those good old days, we were indebted both to this educator and to his History for a portion of knowledge we have since been enabled to turn to account.' Specifically referring to Cassell's history, he suggested that it was 'clear from the outset the aim was to educate the people.'<sup>723</sup>

Cassell and Knight were similar in their outlook of what national histories should accomplish intellectually. Both Cassell's and Knight's histories were intended as social, popular histories of England. Furthermore, Cassell, similar to Knight, employed a historian to undertake the writing of the work.<sup>724</sup> Yet the way in which both publishers used illustration in their histories somewhat differed. Rather than aligning word and image on the page, which was so important to Knight, I argue that Cassell was more concerned with the way in which his history was framed and organised, placing a greater emphasis on the size and position of illustration relative to the dimensions of the page and across the book more generally. A comparison between the eight-volume illustrated history published by John Cassell and Charles Knight's *Pictorial History* shows that an appreciation of the size, position and arrangement of illustrations, rather than limiting analysis to the visual contents, is key to understanding their crucial role in the semiotic design of the page and arrangement of the book.

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<sup>723</sup> Godfrey Holden-Pike, *John Cassell* (London, 1894), p. 97.

<sup>724</sup> It should be observed here that Cassell, like Knight, encountered difficulties with the author of his *History*. John Frederick Smith, who was considered one of the most talented novelists of the Victorian period, was replaced by the historian William Howitt as the author and editor of the *History*. See *The House of John Cassell*, p. 33. It is significant, however, that this did not prevent Cassell from producing an abundantly and consistently illustrated history, unlike Knight.

As Michael Bhaskar has observed in his theoretical approach to publishing, content is framed, packaged and presented to an audience; content is ‘impoverished’ without the frame and model, which underpins the ideological goals and motivations for publishing a book.<sup>725</sup> In this sense, Cassell’s work also shows how the mutability of wood engraving by the mid-nineteenth century prompted publishers to consider not only what was communicated, but how information was framed and arranged on the page. Whilst Cassell included many illustrations that were metaphoric and allegorical in style, I argue these illustrations were not included to reflect or adhere to a specific genre, but rather illustrations suited the frame and model that Cassell wished to implement in order to satisfy his ideological ambition to impress history upon ‘ignorant minds.’<sup>726</sup> We can therefore begin to understand the crucial role illustrations played in framing and communicating, thus disrupting the idea that books followed a strict order of design by which readers were required to follow.

By assessing the relationship between image and page in relation to the book as a commodity form, it is possible to approach illustration not from a genre-specific perspective common to art history, but rather from a semiotic perspective that engenders a greater appreciation of design and layout.<sup>727</sup> Tom Gretton’s study of illustrated newspapers in Paris and London in the second half of the nineteenth century, when wood-engraving and photo-mechanical methods of graphic reproduction were at their most popular, has shown that as a consequence of the newspaper’s layout, their readers were encouraged to look at text as much as read it.<sup>728</sup> In this way, the hierarchical division between text and illustration became blurred; the latter was no longer designed to act as a supporting role to the former. Unlike works of art or single-sheet prints, the intricacies of illustrations in books depended on their sequential relationship to each other, their relationship to the

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<sup>725</sup> Michael Bhaskar, *The Content Machine: Towards a Theory of Publishing From the Printing Press to the Digital Network* (London, 2013), pp. 6-7, 79-80.

<sup>726</sup> Holden-Pike, *John Cassell*, p. 33.

<sup>727</sup> Tom Gretton, ‘The Pragmatics of Page Design in Nineteenth-Century General Interest Weekly Illustrated News Magazines in London and Paris’, *Art History*, 33.4 (2010), pp. 680-709.

<sup>728</sup> *Ibid.*, p. 683.



text, as well as their location on the page.<sup>729</sup> The mutability of wood engraving allowed publishers, authors, and artists to experiment with page design, which involved encouraging the reader to ‘view’ the book as well as read it. By considering the page as a system of signs, one can begin to appreciate the importance of the physical dimensions of illustrations in relation to the page and subsequently the means by which publishers and authors intended their books to be ‘read’.

As detailed in the introduction to the thesis, studies in social semiotics have sought to reveal the importance of design and layout in the production of meaning.<sup>730</sup> Engrained within semiotic thought is the way in which information is communicated. Newspapers and web interfaces have benefited most from this approach, where layout of information, whether visual or textual, is essential to communication and meaning.<sup>731</sup> Communication is framed by the designer, or the ‘rhetor’, who considers questions such as the environment in which information is being communicated, the power relations between different components of the page and how that is displayed, and how these components are best arranged. All of these questions help determine what the purpose of the design is, whether it is to entertain, instruct or both.<sup>732</sup> Adopting a semiotic approach to Cassell’s history enables us to consider the different role illustrations played across his volumes compared to Knight’s history. Cassell’s decision to include larger illustrations speaks to the importance their capacity to occupy a central position on the page as opposed to their position in accordance with the written text. If we consider the page to be a semiotic space, meaning is generated through three interrelated systems: information value, salience, and framing.<sup>733</sup> Although all three systems consider the page, and everything contained within it, as an ‘integrated text’, the

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<sup>729</sup> Tom Gretton, ‘Difference and Competition: The Imitation and Reproduction of Fine Art in a Nineteenth-Century Illustrated Weekly News Magazine’, *Oxford Art Journal*, 23.2 (2000), pp. 145-146.

<sup>730</sup> Gunther Kress and Theo Van Leeuwen, *Reading Images: The Grammar of Visual Design*, (6<sup>th</sup> edn., London, 2006), pp. 1-16.

<sup>731</sup> See, for example, Gunther Kress and Theo Van Leeuwen, ‘Front Pages: The (Critical) Analysis of Newspaper Layout’, in Allan Ball and Peter Garrett (eds), *Approaches to Media Discourse* (Oxford, 1998), pp. 186-220.

<sup>732</sup> *Ibid.*, p. 44.

<sup>733</sup> Kress and Van Leeuwen, *Reading Images*, p. 183.

second and third systems relate more to the image's relation to the text and page. Framing in particular considers space, which informs upon the content of the image.

These systems affect the reading process from a conventional linear system of left to right. The logic of the page may dictate vertical reading, or centre-to-margin, for example. It is the 'centre-to-margin' reading that is of interest here. Gunther Kress has argued that for something to be presented as 'center' means that it is presented as the 'nucleus' of the information. Consequently, all other elements that complete the design of the page are subordinate or 'subservient'.<sup>734</sup> The pages of Cassell's *Illustrated History* are framed in a way that treats illustration as inscriptive as opposed to descriptive markers of the text. It is common in Cassell's *Illustrated History* to find the text related to the historic event or scene illustrated appear later in the volume. An emblematic illustration of the murder of the sister of King Sweyn, for example, was printed three pages earlier than the text that describes the scene (*Plate 5.2*).<sup>735</sup> In the majority of cases the illustration is printed in advance of the text related to it when the textual and visual are not printed on the same page. The image/text union that wood engraving provided is of secondary importance in Cassell's history.

Cassell's motivation to produce an illustrated history was to provide 'something to please old eyes and those who cannot read.' He continued, 'I know from experience what an impression illustrations make upon ignorant minds.'<sup>736</sup> Cassell's arrangement of illustration within the overall design of his *Illustrated History* reflects these ambitions. The distribution of illustrations across all eight volumes of the work (*Figure 5.6*) highlights the regularity of larger illustrations that occupy around 75% of the page. What is particularly striking about these illustrations is their similarity in style to the emblematic and allegorical illustrations found in philosophical histories that were popular in the late-eighteenth and early-nineteenth centuries, a style at odds with the antiquarian style of illustrations that

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<sup>734</sup> *Ibid.*, p. 206.

<sup>735</sup> Cassell, *The Illustrated History of England*, Vol. 1, pp. 49-52.

<sup>736</sup> Holden-Pike, *John Cassell*, p. 33.

were considered more suitable for a national history of England founded on the people. All eight volumes of Cassell's *Illustrated History* begin with an emblematic frontispiece, detailing a scene that will be described later in the book, in much the same way frontispieces acted as a marketing strategy by publishers of novels in their attempts to appeal to the curiosity of their readers. The frontispiece to the fourth volume, for example, depicts a scene of William Maxwell's escape from the Tower of London in 1716, which serves as a dramatization of the event described later in the volume in much the same style in a historical novel.<sup>737</sup>

Antiquarian illustrations of the style found in Knight's history are included in Cassell's edition. Illustrations that occupy under 50% of the page are similar to the metonymic style found in Knight's history, picturing historical objects and buildings derived from archival records. Yet the frequency of more allegorical illustrations across Cassell's *Illustrated History*, which were also engraved on wood, suggests that illustrations were used not only to illustrate the text but rather to illustrate the book, which could be read or viewed independently of the text. *Figure 5.7* shows the percentage of different sizes of illustrations according to the areas of the page they occupy. It is perhaps noteworthy that while the number of illustrations that occupy up to 40% of the page make up nearly 92% of the total number of illustrations found in Knight's history, illustrations of that size make up only 46% of the total number of illustrations in Cassell's work. This stark difference suggests that while Knight was pre-occupied with the proximity of word and image in establishing knowledge through the eye, Cassell's use of illustration reflected a greater appreciation of the capacity to read the latter's history independent of the text.

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<sup>737</sup> Cole, 'From the Familiar to the New', pp. 494-495. Allegorical illustrations conceived from the imagination of the artist were also vital to the rise of the historiette, which conflated historical fact with literary fiction. For an excellent account of the rise of the historiette and the importance of illustration to its success, see Mary Elizabeth Leighton and Lisa Sturridge, 'Making History: Text and Image in Harriet Martineau's Historiettes', in Goldman and Cooke (eds), *Reading Victorian Illustration*, pp. 137-158.

Illustration area by page for Cassell's Illustrated History of England in 8 Volumes

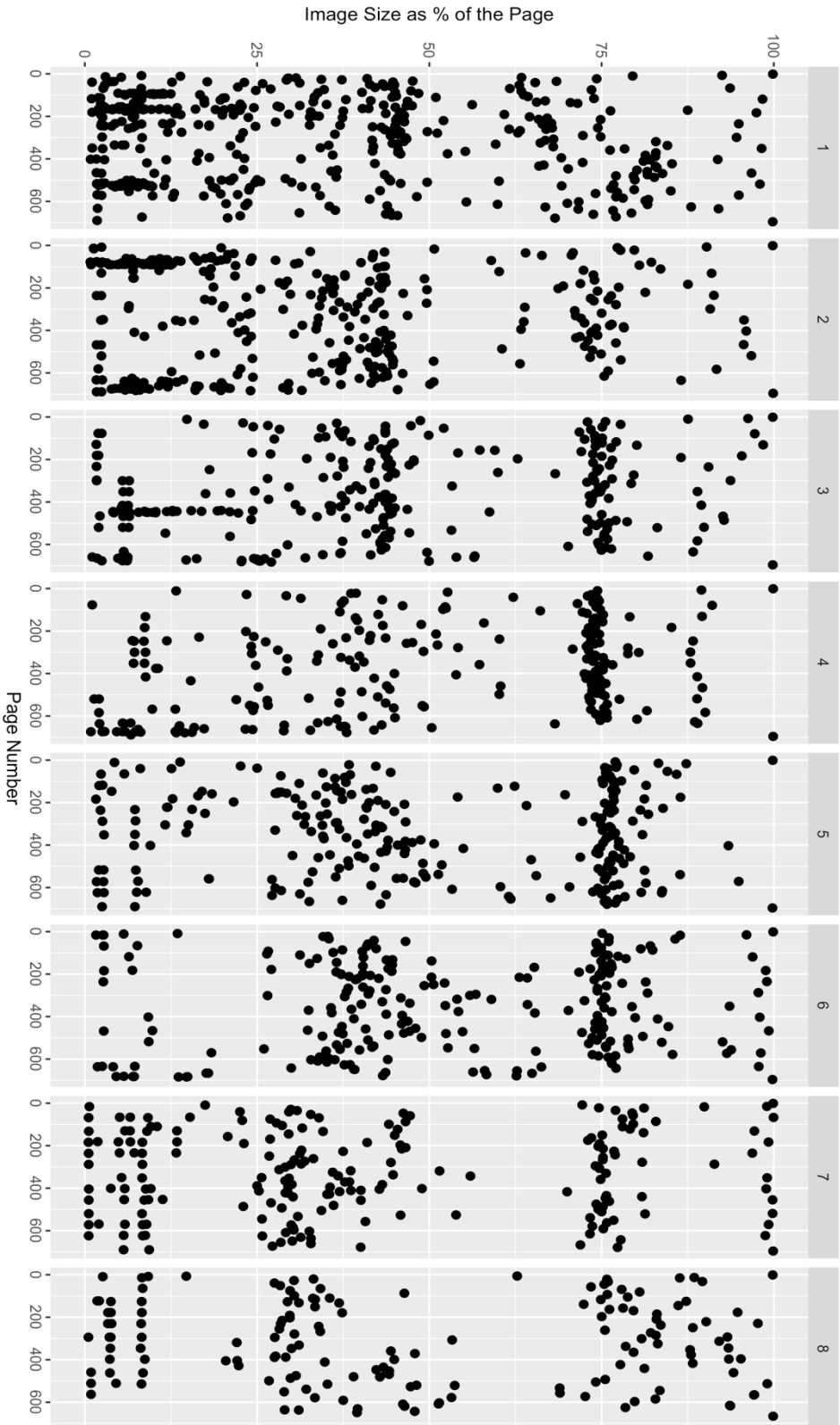


Figure 5.6 Graph showing the size and distribution of illustrations in John Cassell's *Illustrated History of England, Eight Volumes (1856-1862)*. In comparison to Knight's history, it is clear that Cassell not only includes more illustrations but also a greater variety in terms of size.

A brief survey of Cassell's previous publications helps to reveal more about what he considers to be the inherent function of illustration. The reception of Cassell's previous work, *The Illustrated Family Bible History*, provides an insight into the role he considered illustrations to fulfil in the book.<sup>738</sup> The arrangement of illustrations in his *Illustrated Family Bible* mirrored that of his *Illustrated History*. The work was received relatively well, adjudged to 'command interest and attention where nothing else will.'<sup>739</sup> Although the abundance of illustration was considered useful in the 'diffusion of Sacred Scripture', some commentators felt that the illustrations were not in keeping with the written narrative.<sup>740</sup> One reviewer praised the utility of the work but expressed regret at the 'preponderance of illustrations of incidents over illustrations explanatory of manners and customs.'<sup>741</sup> The desire for illustrations that served to explain or pictorially represent the text over more metaphoric representations is further evident in this review of Cassell's Bible history.

Others were more scathing in their critique. Referring to one particular allegorical illustration, the reviewer lamented the disconnect between word and image:

Left to his own imagination, he would collect from the text a certain solemn and reverential idea of the Lord speaking to Moses out of the Tabernacle; but he opens these pages, and his idea is dissipated into the winds. It will be well, indeed, if his previous conceptions of the Divine nature [...] be not lowered and degraded beyond redemption by studying the Scriptures in an edition where his sense of the ridiculous is perpetually called into play in direct connection with the most sacred subjects.<sup>742</sup>

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<sup>738</sup> Similar to *The Illustrated History of England*, *The Illustrated Family Bible* was published in partnership with Petter and Galpin. For more on the use of illustration in the publication of Bible histories during this period, see M. H. Black, 'The Printed Bible', in S. L. Greenslade (ed.), *The Cambridge History of the Bible*, Online Edition (Cambridge: Cambridge University Press, 2008), pp. 464-472; Laura MacCulloch, "Fleshing out" Time: Ford Madox Brown and the *Dalziels' Bible Gallery*' in Goldman et al. (eds), *Reading Victorian Illustration*, pp. 115-136.

<sup>739</sup> Cassell and Company, *The Story of the House of Cassell* (New York, 1922), p. 32.

<sup>740</sup> Quoted in *The Athenaeum*, 14 November 1863, p. 640.

<sup>741</sup> 'Cassell's Illustrated Family Bible', *The Examiner*, 21 September 1861, p. 601.

<sup>742</sup> *The London Review and Weekly Journal of Politics*, 7 July 1861.

Percentage of the Page Illustrations Occupy (%)	Number of Illustrations in <i>The Pictorial History of England</i>	Percentage of the Total Number of illustrations in <i>The Pictorial History of England</i> (%)	Number of Illustrations in <i>The Illustrated History of England</i>	Percentage of the Total Number of Illustrations in <i>The Illustrated History of England</i> (%)
0-10	388	23.92	423	19.96
11-20	378	23.31	63	2.97
21-30	480	29.61	206	9.72
31-40	238	14.68	287	13.54
0-40	1484	91.55	979	46.20

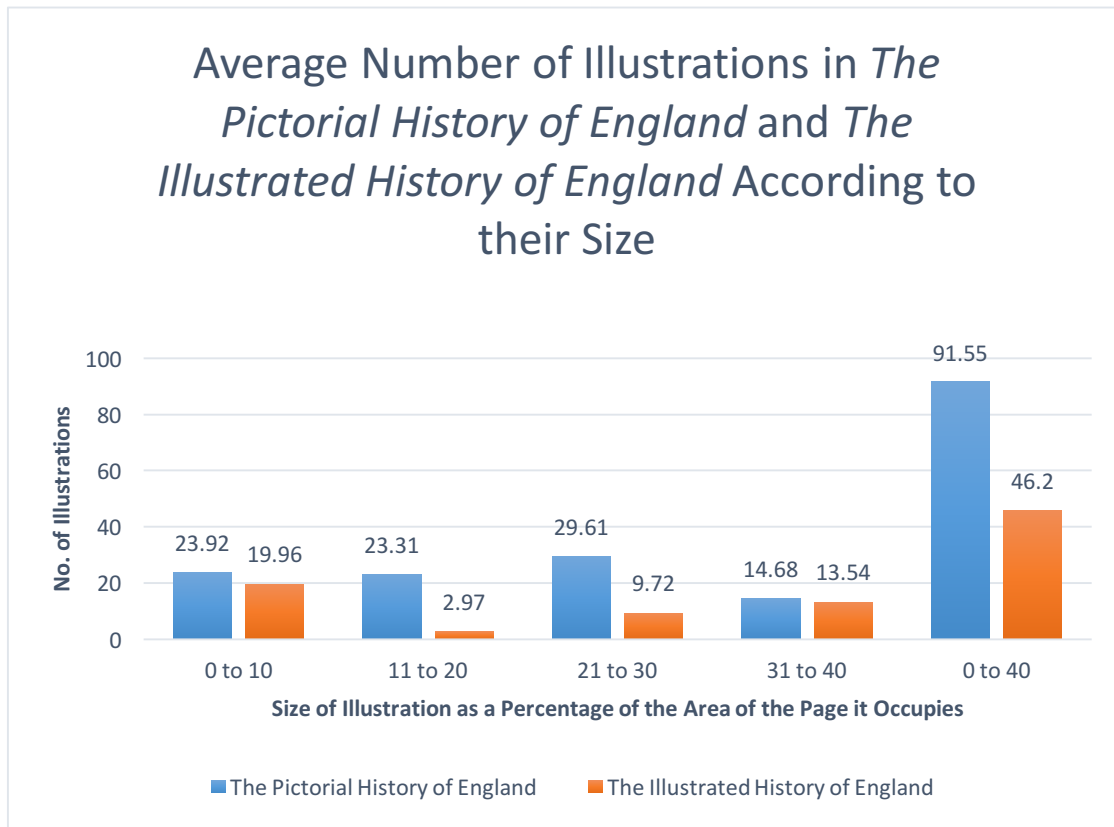


Figure 5.7. The graph reveals the percentage of illustrations belonging to a particular size in both Knight's *Pictorial History of England* and Cassell's *Illustrated History of England* as a percentage of the size of the page. While the percentages are broadly similar for each size group, it is striking that illustrations that occupy up to 40% of the page make up almost 92% of the total number of illustrations in the *Pictorial History of England* whilst illustrations that occupy up to 40% of the page in Cassell's *Illustrated History* make up less than half the total number of illustrations.

The reviewer went on to criticize the artistic merit of the wood engravings, claiming that ‘they were no less offensive, even to the least cultivated taste, than its application to Holy Writ is revolting to minds the least affected by religious sentiment.’<sup>743</sup> The critique of Cassell’s *Illustrated Family Bible* was therefore centred upon the disparity between the content of the illustration and what was considered the more authentic narrative found in the text.

Despite these criticisms, Cassell’s illustrated publications sold well.<sup>744</sup> Cassell’s decision to adopt a similar design in his *Illustrated History* in spite of this criticism serves to reveal something more about the function illustration satisfied. A closer examination into the illustrations found in the *Illustrated History* in terms of their position on the page suggests that his concern lay not in the union between word and image but in considerations of design and the capacity of illustrations to ‘inscribe’ as opposed to ‘describe’. This reversed the traditional hierarchy afforded to word and image, a hierarchy reinforced in Knight’s *Pictorial History*.<sup>745</sup>

Similar patterns emerge in the histories of Knight and Cassell in terms of the arrangement of illustrations. As mentioned previously, both publishers incorporated smaller wood engravings that were used to illustrate antiquarian elements of their histories. There is also noticeable clustering of illustrations in both sets of volumes (See *Figures 5.1* and *5.6*), particularly in the first three volumes. Looking closely at volume two of Cassell’s *History*, for example (*Figure 5.8*), there are clear clusters near the beginning and towards the end of the volume, similar to the clusters found in volume two of Knight’s *Pictorial History* (*Figure 5.3*). However, unlike Knight’s *Pictorial History*, the gaps between the clusters of illustrations that occupy under 25% of the pages are supplemented by larger illustrations that are

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<sup>743</sup> *Ibid.*

<sup>744</sup> The early numbers of *The Illustrated Family Bible*, which cost £100,000 to produce and sold in weekly penny parts, sold 300,000 copies at a price of a penny, while the first edition *The Illustrated History of England*, also sold in weekly penny parts, sold over one million copies. See Anon., *The Story of the House of Cassell* (New York: Cassell and Company, 1922), p. 32, 34.

<sup>745</sup> Gretton, ‘The Pragmatics of Page Design’, p. 684.

Illustration area by page for Cassell's Illustrated History of England Volume 2

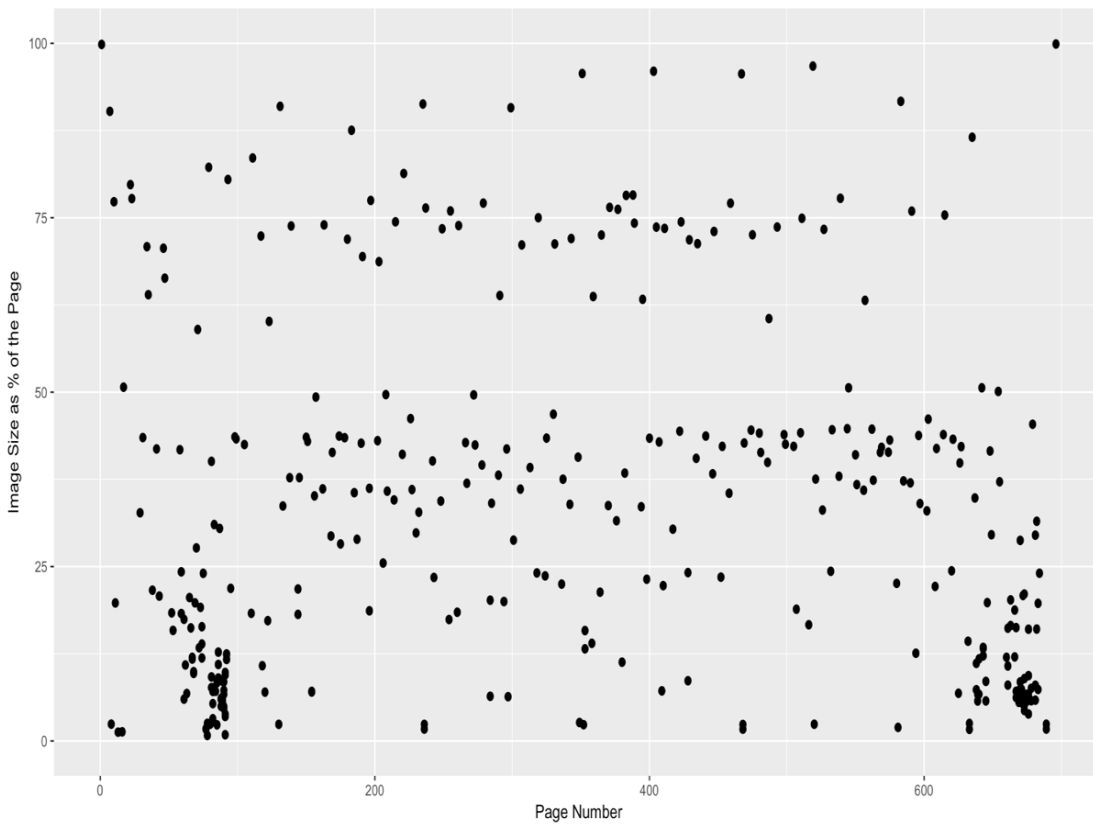


Figure 5.8 Showing the size and distribution of illustrations in volume 2 of *Cassell's Illustrated History of England* (1856-1864).



printed relatively uniformly throughout the volume. The distribution of these larger illustrations, which ensured that his volumes were consistently and liberally illustrated throughout, points to Cassell's ambition to use illustration as means of impressing his history upon the entire nation, including those who could not read.<sup>746</sup>

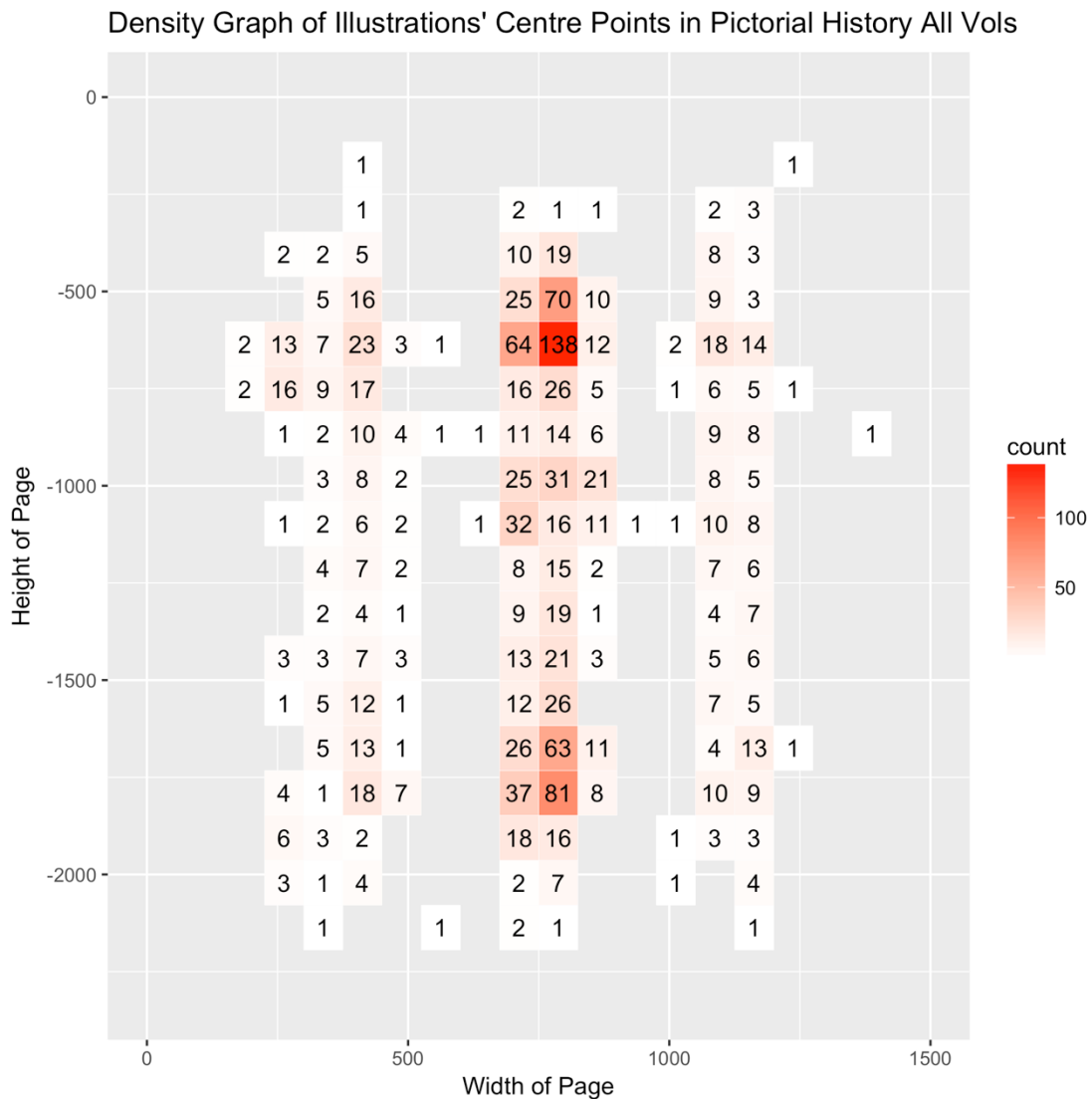
The decision to include grand visions of England's past akin to the philosophical history that preceded Cassell's work reflects his intention to frame the page so that readers encounter the illustrations first and foremost. The illustration depicting King Sweyn's sister's murder referred to earlier in the chapter appeals to the imagination of the reader. A greater appreciation of the design of the page almost renders the text surrounding the illustration as paratext, particularly in light of the fact that the text related to the illustration itself is printed three pages later. This style of design, where the illustration is printed centrally, with only very small amount of text surrounding it, is a constant theme in Cassell's multi-volume work. Metaphorical illustrations were more suited to this style of page design, which helped to realise Cassell's objective of producing a history that could be 'viewed' as well as 'read'.

Cassell's decision to frame illustrations centrally, however, is not limited to the larger allegorical illustrations found in his *History*. Mapping the frequency of the centre-points of illustrations that occupy under forty percent of the page in both Knight's and Cassell's volumes reveals a stark difference in the design of their respective histories. *Figure 5.9* and *Figure 5.10* show the frequency of the centre-points of illustrations on pages of all volumes of Knight's *Pictorial History* (*Figure 5.9*) and Cassell's *Illustrated History* (*Figure 5.10*). There is a striking difference between the centre-point frequency found in both works. The high frequency areas around the page of Knight's *Pictorial History* highlight's Knight's approach to illustrations, namely as pictorial aids to the text.

The role of illustration in the design of the page is far more rigid in Cassell's *Illustrated History*. *Figure 5.10* clearly shows the centrality of illustrations within

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<sup>746</sup> Holden-Pike, *John Cassell*, p. 33.



*Figure 5.9* Density graph showing the location of illustrations' centre points on the page found in 8 volumes of Charles Knight's *Pictorial History of England* (for all illustrations that occupy less than 40% of the page). The numbers in the squares represent the count of centre points belonging to that area of the page. The graph shows that illustrations were printed towards the top and the bottom of the page, most notably towards the top.

Density Graph of Illustrations' Centre Points in Illustrated History All Vols

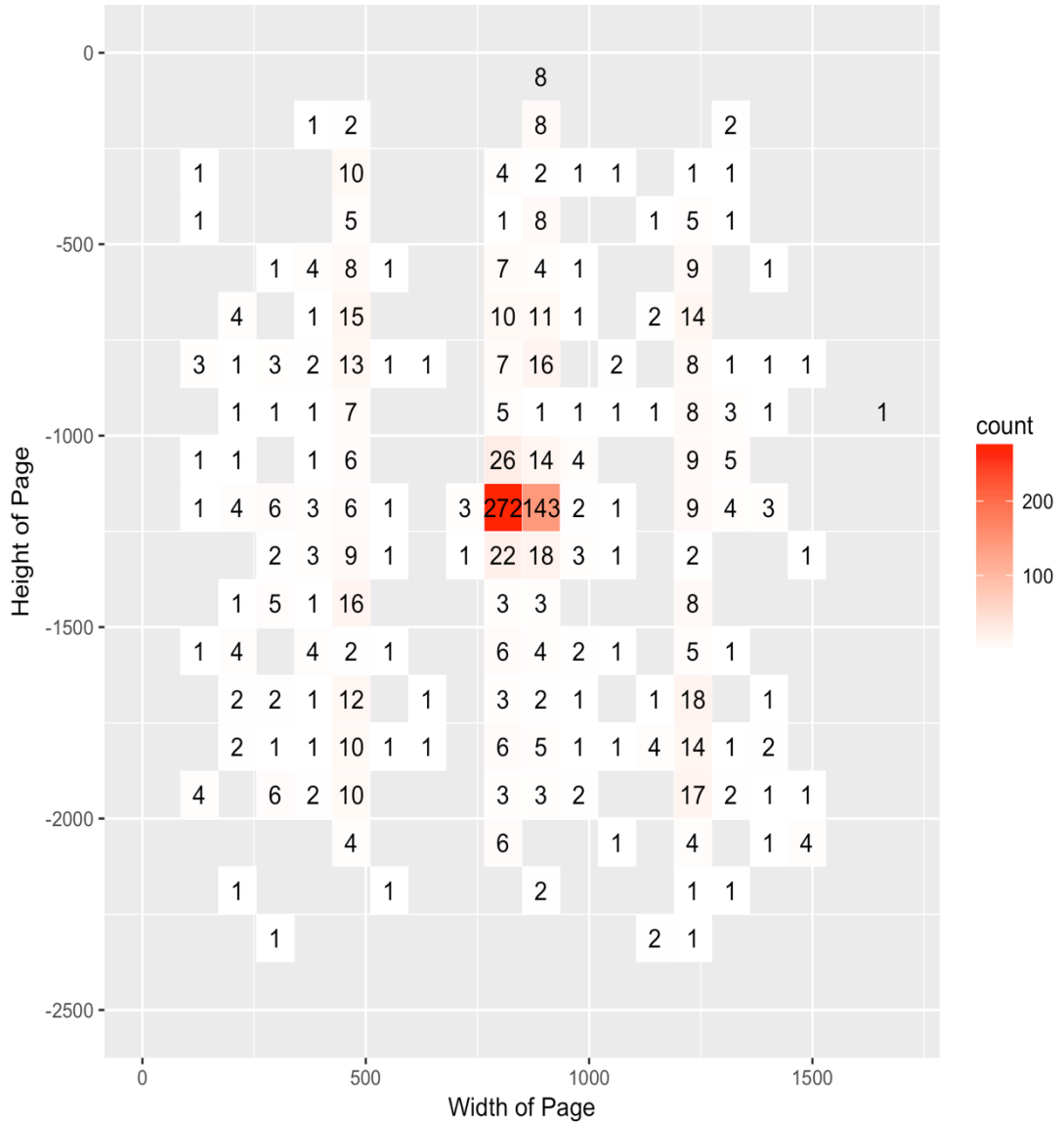


Figure 5.10. Density graph showing the location of illustrations' centre-points on the page of all found in 8 volumes of *Cassell's Illustrated History of England* (for all illustrations that occupy under 40% of the page). Compared to Knight's volumes, this graph clearly shows the overwhelming tendency to print illustrations at the centre of the page.

Cassell's pages. The contrast between the frequency towards the centre of the page and the periphery of the page is marked, whilst the fluctuation in the frequency around the page is far less striking than Knight's *History*. Mapping the centre-point densities in each of the first four volumes of Knight's and Cassell's works further highlights the rigidity of design in the latter's history. Despite the reduction in the number of illustrations in later volumes of both histories, the frequency patterns remain similar (Figures 5.11 and 5.12). The maintenance of these patterns in many ways highlights the mutability of wood engraving and its capacity to spatially re-order the hierarchy between image and text.

Similar to Knight's *Pictorial History*, the illustrations that occupy under forty percent of the page in Cassell's work are predominantly antiquarian as opposed to metaphoric and allegorical in style. The depiction of Roman Urns (Plate 5.3) exemplifies the greater value attached to the centrality of illustrations as opposed to the proximity to the written text they were designed to illustrate. The illustration is in many ways unremarkable. It does not possess any real artistic quality both in terms of design and content. Furthermore, the text that surrounds the illustration details the invasion of the Anglo-Saxons into Britain.<sup>747</sup> The position of the illustration on the page outweighed the position of the illustration in relation to the text it was designed to illustrate.

Even when the illustration and the written word are both tied to the narrative, the centrality of the pictorial element points to the role of illustration as the first point of connection between the reader and Cassell's *History*. Separating the frequency of the position of illustrations on the page according to their size further highlights the difference between illustrating the text and illustrating the page in these histories. Figures 5.13 and 5.14 reveal the centre-point frequencies of illustrations that occupy between 0 and 10%, 11 and 20%, 21 and 30%, and 31 and 40% of the page in the two histories. If we compare graphs that denote the density

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<sup>747</sup> *Ibid.*, p. 23.

Density Graphs of the Location of Illustrations' centre points in the First Four Volumes of Knight's *Pictorial History of England*

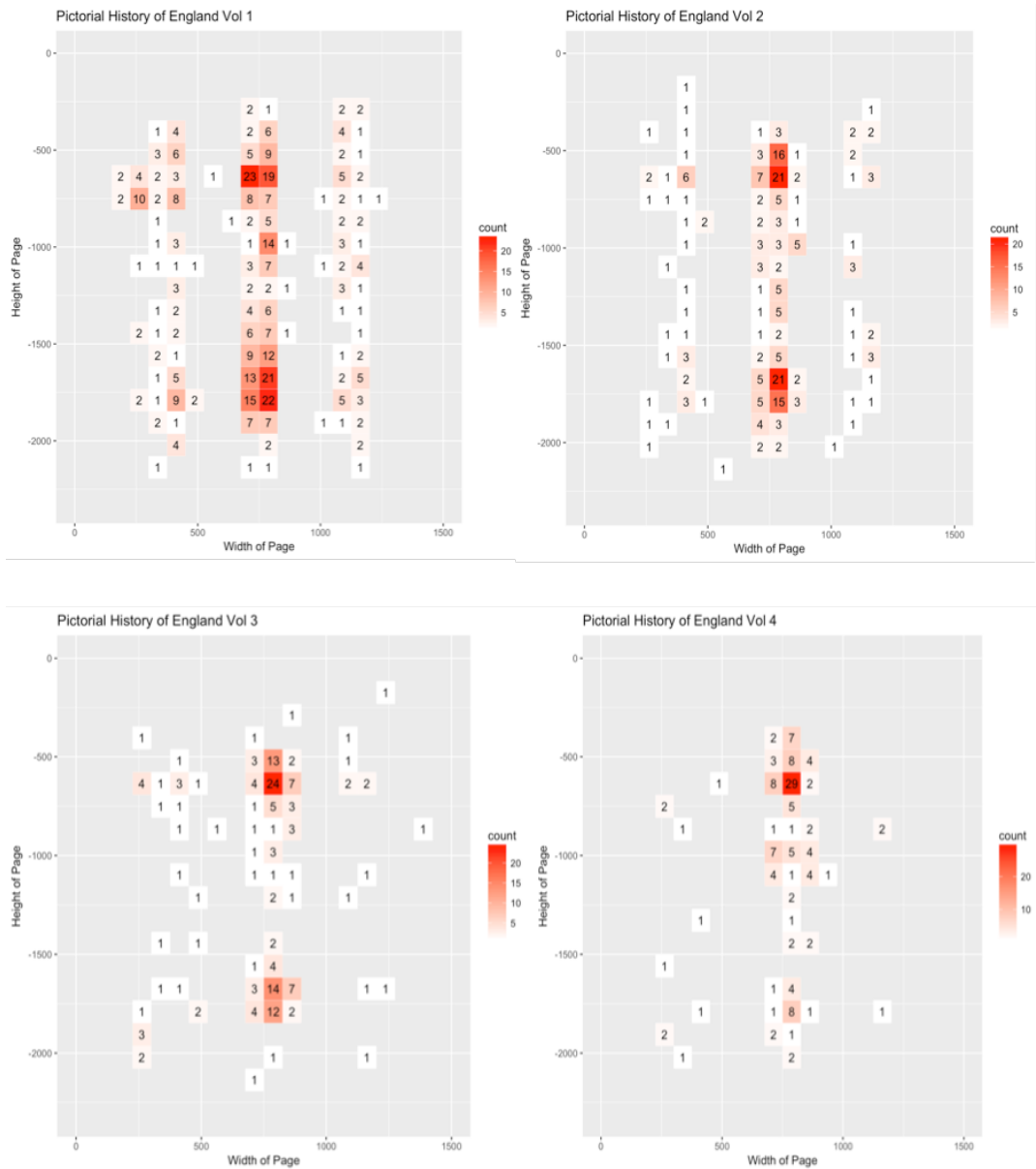


Figure 5.11 Graphs showing the frequency (in pixels) of illustrations' centre points found in the first four volumes of Charles Knight's *Pictorial History of England*. The graphs reveal broadly the same patterns, where the frequency of centre points is spread around the page.

### Density Graphs of the Location of Illustrations' centre points in the First Four Volumes of Cassell's *Illustrated History of England*

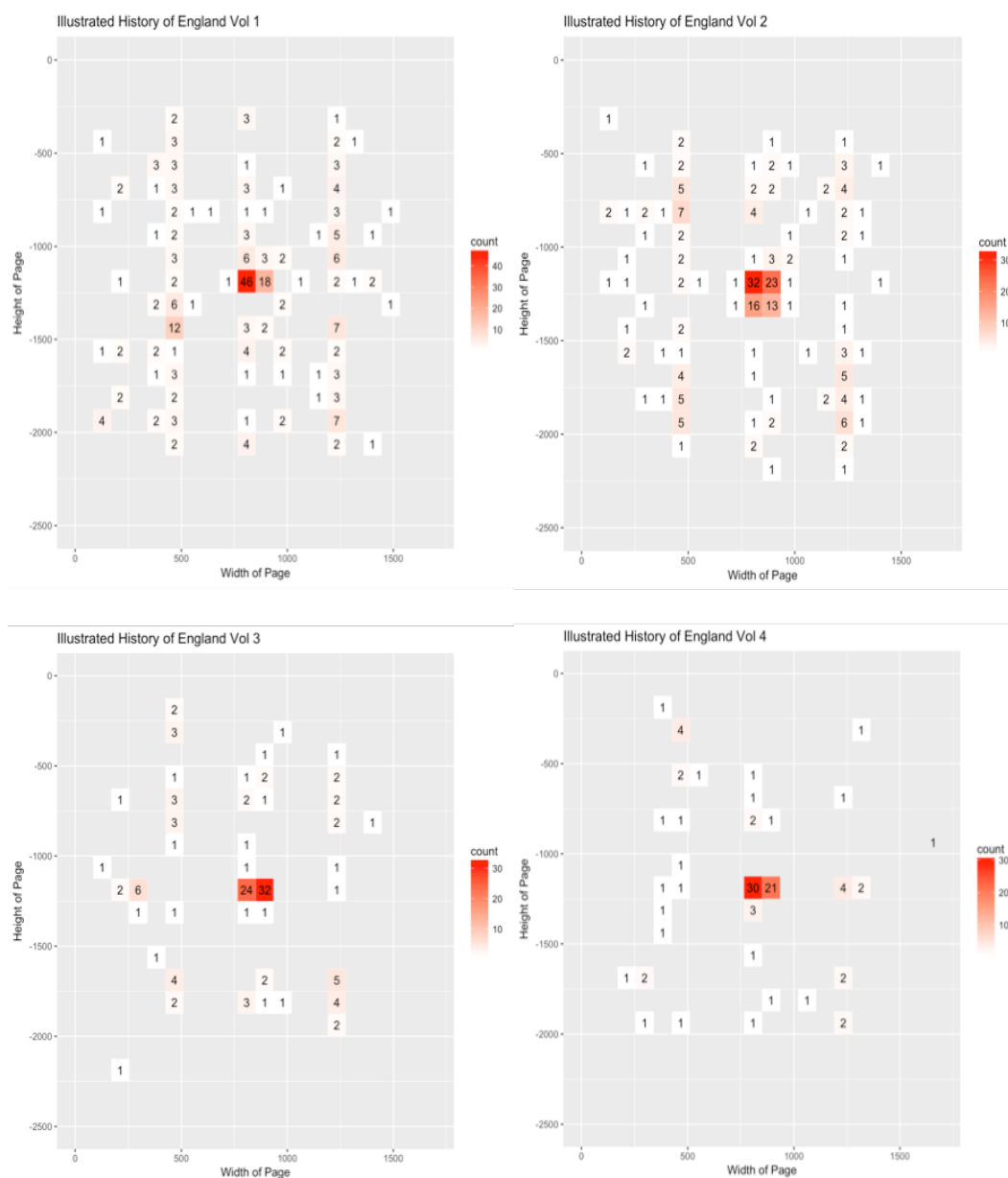


Figure 5.12 Graphs showing the frequency (in pixels) of illustrations' centre points found in the first four volumes of John Cassell's *Illustrated History of England*. Despite the reduction in the number of illustrations by the fourth volume, the rigid design remains the same.

Density Graphs of the Location of Illustrations' centre points according to their Size as a Percentage of the Page in all Volumes of Knight's *Pictorial History of England*

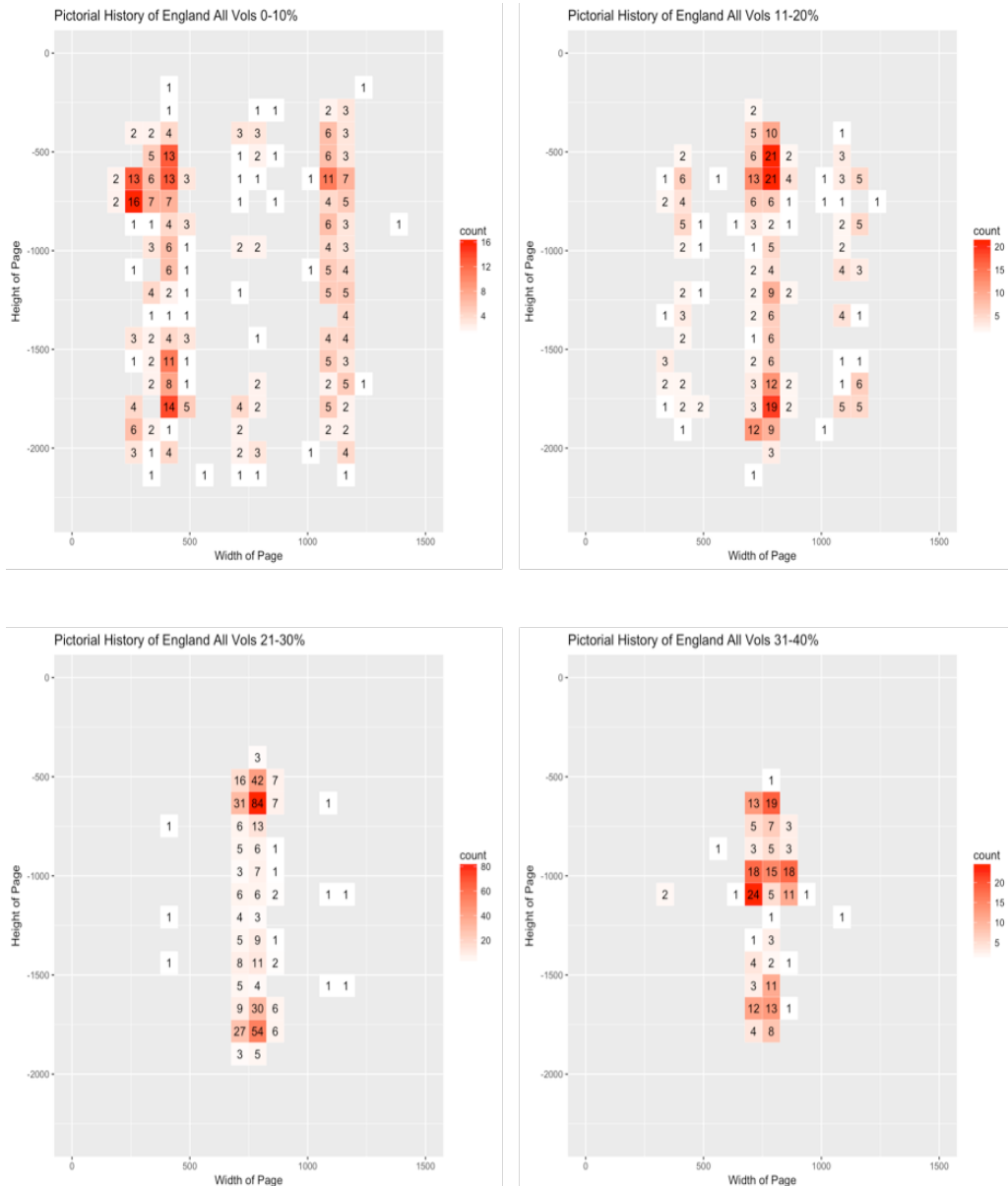


Figure 5.13 Graphs showing the the frequency (in pixels) of illustrations' centre points found in Charles Knight's *Pictorial History of England*, The figure is divided into four graphs in order to demarcate the different sizes of illustrations as a percentage of the page. As can be seen from the first two graphs in this figure, the frequency of the smaller illustrations (between 0 and 10% and 11 and 20% of the page) is mapped around the page. It is only until the graph showing the frequency of centre points belonging to illustrations occupying 31-40% of the page that they are printed more centrally, although the centre points are rarely found at the centre of the page.

Density Graphs of the Location of Illustrations' centre points according to their Size as a Percentage of the page in all Volumes of Cassell's *Illustrated History of England*

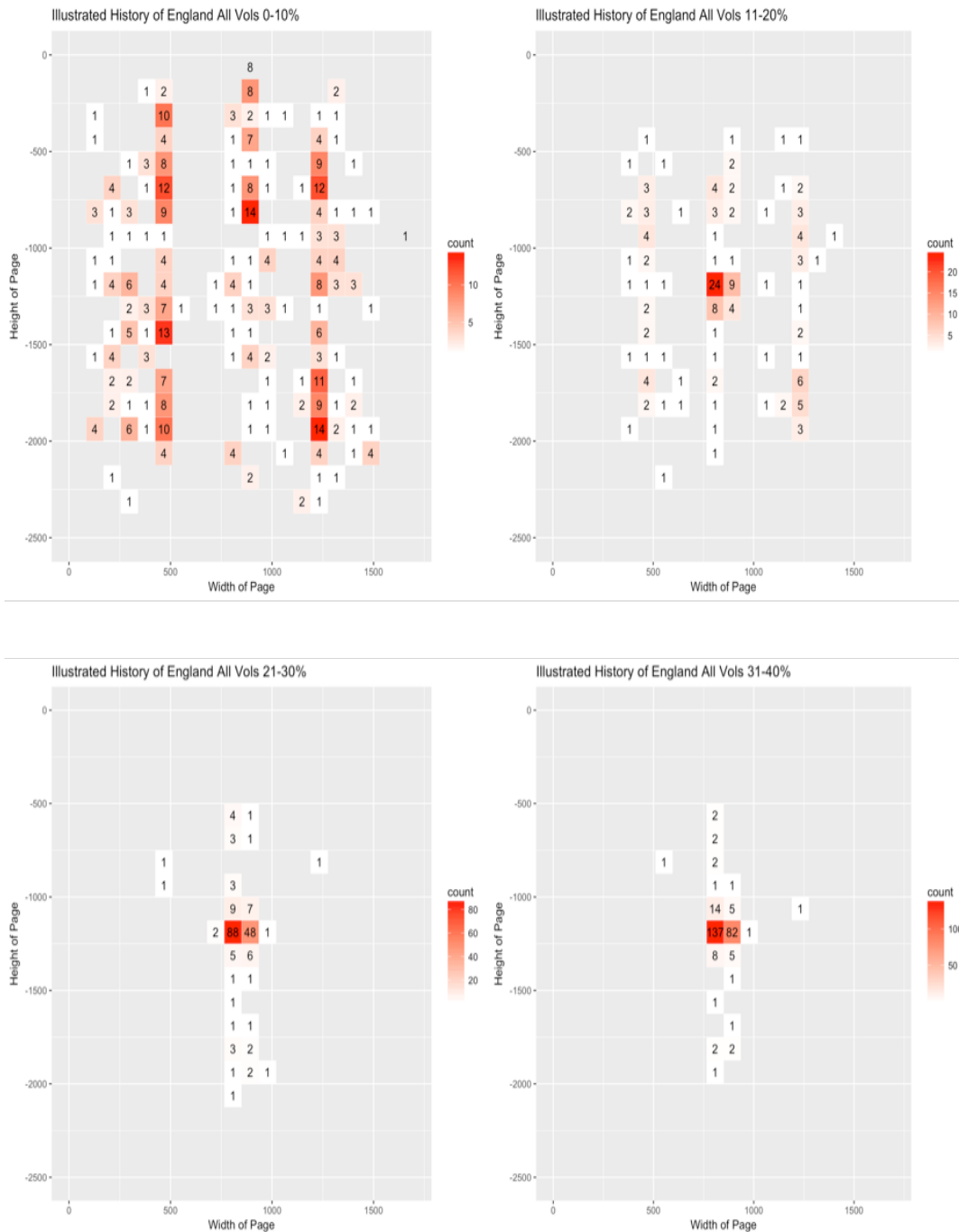


Figure 5.14 Graphs showing the the frequency (in pixels) of illustrations' centre points found in John Cassell's *Illustrated History of England*, according to their size as a percentage of the page. Whilst the frequency of illustrations occupying between 0 and 10% of the page (first graph of this figure) is similar to that of the frequency of illustrations in the corresponding graph for *The Pictorial History England*, illustrations that occupy between 11 and 20%, 21 and 30% and 31 and 40% of the page are printed centrally as opposed to the area where the corresponding text is printed.



of illustrations that occupy 0-10%, there is a discernible similarity between Knight and Cassell's work. The density of illustrations of this size is quite evenly spread around the page, which suggests that some of the illustrations found in Cassell's work mirrored the role played by those found in that of Knight's, albeit far less frequently.

However, the graphs showing the area density of larger illustrations (Graphs B, C and D in both *Figures 5.13* and *5.14*), reveal the importance of centrality to Cassell. It is noticeable that the centrality of illustrations on the page is rare across all of Knight's volumes, which is indicative of the role of the written word in determining the position of the illustration. In contrast, the vast majority of Cassell's illustrations that occupy over 10% of the page are printed centrally, which suggests that the role of illustration was wholly different within two histories that shared similar intellectual objectives.

A comparison between the two histories belonging to two of the foremost popular publishers of their time complicates the intellectual relationship between wood engraving and the unison of word and image. An analysis of the properties of these illustrations including their size, shape and position on the page shows the different roles performed by illustration despite the shared objective held by these publishers to produce knowledge through the eye. Whilst the desire to create a distinctly social history of England was shared by Cassell and Knight, the arrangement of the pictorial element suggests that Knight and Cassell held wholly different philosophies with regards to the overall function of illustration. The wood engravings in Knight's histories satisfied his intellectual ambition to provide pictorial descriptions of the text, the illustrations in Cassell's work formed the 'nucleus' of information, and points to a greater concern with the design of the page and book as opposed to the close proximity between word and image.<sup>748</sup>

Cassell's history was something to be viewed as well as read, in the same way illustrated magazines and newspapers used the layout of the page to reverse the

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<sup>748</sup> Kress and Van Leeuwen, *Reading Images*, p. 183.

hierarchy between image and text.<sup>749</sup> The use of allegorical, emblematic illustrations common to philosophical histories were not, I argue, used, in an attempt to align with that genre of history writing. Rather, the contents of these illustrations were more suited to larger illustrations that took up the majority of the page. The value attached to the design of the page was predicated upon Cassell's ambition to produce a popular and social history of England that had the potential to appeal to all levels of society and would be understood primarily and even completely through illustration.

## Conclusion

The illustrated histories produced by Knight and Cassell gradually became undermined towards the end of the nineteenth century as a consequence of the professionalization of history writing. Dissatisfied with the focus on narrative and the close ties with historical fiction, authors and publishers of these new histories adhered to a more analytical approach that aligned histories of England more closely with scientific knowledge in order to produce accounts based on objective historical truth.<sup>750</sup> The expansion of the university system as well as the arrival of new legislation including the 1870 Education Act and Lord Sandon's Elementary Education Act of 1876 ensured that history as a discipline was gradually divorced from such histories as those produced by Hume, Knight and Cassell.

While it is true that both Cassell and Knight's histories conformed to a more literary style and were accommodated within the national, social, popular histories that were celebrated in the mid-nineteenth century, a closer analysis of the illustrations in Cassell's account reflected styles belonging to multiple genres. Mark Salber Phillips, in his study of the role of 'historical distance' in the construction of narrative in eighteenth and nineteenth-century history writing, questioned the

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<sup>749</sup> Gretton, 'Pragmatics of Page Design', p. 684.

<sup>750</sup> Howsam argues that the period between 1880 and the beginning of World War One witnessed the decline in narrative in favour of a more analytical approach. see Howsam, *Past into Print*, pp. 49-75.

importance of genre for the authors and publishers of these histories. For Phillips, construction of narrative is not exclusively or even primarily founded upon considerations of genre, with elements from what have been perceived as opposing genres found in a single history. By paying closer attention to design and arrangement of the page and book, I have argued that limiting one's analysis to genre masks other important factors that help us to understand how illustrations signified in these histories. Both Knight and Cassell's works were designed to reveal the social aspects of England's past in order to achieve a wider ambition of promoting a national discourse based on the Whiggish ideal of progress. Yet a greater appreciation of the shape, size and arrangement of the illustrations printed across these volumes reveals alternative aims of these publishers that transcended any rules of genre writing. Importantly, this also questions the commonly-held assumption that wood engraving served to unite word and image. The utility of wood engraving allowed a publisher such as Cassell to re-order that underpinned his broader ideological ambition to impart the history of the nation to all levels of society.

The predominance of metonymic, antiquarian illustrations in Knight's *Pictorial History of England* reflected the departure from a philosophical style of history and towards a social, picturesque account of England's past, which relied more heavily on the unison between word and image. However, a closer analysis of the arrangement and distribution of illustrations across Knight's volumes reveals the difficulty he had producing a history predicated upon the communication of 'eye-knowledge'. Knight's ascription to the traditionally-held belief that illustrations served as pictorial descriptions of the text, established difficulties in illustrating large parts of his work, which reveals how tensions between author and publisher were reflected on the pages of the book. Although Knight's volumes were eulogized for producing a cheap, illustrated, national history of England, a closer analysis of the distribution of illustrations reveals that one of the country's foremost pictorial publishers reveals the difficulties in producing a history predicated on the proximity of word and image within his overarching aim to produce 'eye-knowledge.'

John Cassell, on the other hand, was less concerned with the proximity of word and image, which has often been considered the primary advantage of wood engraving. Instead, he was concerned with the design of the page so that readers could 'view' his history in addition to reading it. The centrality of Cassell's illustrations points to a greater concern with regards to the semiotic design of the page, which is suggestive of the greater value placed on his illustrations rather than the text. The size and position of the illustrations, which were printed on almost every page of the book, directed readers to the centre of the page, invited them to read his history primarily through the illustrations. A comparison between the size, shape and distribution of illustrations belonging to the histories of two of the foremost popular and pictorial publishers of the period, highlights the value Cassell placed on the physiological act of reading or viewing the book that enabled him to produce a history for all levels of society. For Knight, a successful social history of the people, for the people was bound up in the intellectual alchemy of word and image. By contrast, the success of a social history for Cassell depended on the role of illustration to shape and dictate the physiological act of reading.

Furthermore, a detailed comparison of the arrangement and distribution of illustrations across these histories, as well as their design more generally, helps to reveal more about the function illustrations satisfied in this period. Both sets of illustrations were produced before the text yet their incorporation into the book differed substantially. While the illustrations in Knight's work relied completely on the written text, and therefore disrupted the even distribution of illustrations across his volumes, Cassell's history points to the interpretative potential of illustrations and their power in dictating narrative regardless of the text. Cassell's work underlines the importance of illustration in relation to the design of the page and book as opposed to their ties to the written word.

Finally, an analysis of Knight and Cassell's illustrated histories stresses the advantages of multimodality and semiotic theory in order to understand the function of illustration. Cassell's history in particular counters the idea that the

design and order of information was fixed in this period. Multimodal analysis has been predominantly used to understand the 'digital revolution' whereby platforms such as web pages often featured diverse and complex arrangements of information. I suggest that multimodal analysis can be a useful approach to understanding the function of illustration during a period that witnessed sustained technological changes to the printed image. The mutability of wood engraving allowed publishers and printers to alter the way in which information was communicated. Within a social semiotic approach, an image is bound up in the logic of space; meaning is derived from its size and shape and 'exists only as materialised in mode.'<sup>751</sup> Moreover, the classification of information has social consequences. By applying semiotic theory to Cassell's work, I have argued that, just as web designers and newspaper editors today organise information according to social and cultural ideologies, the design of the page was equally crucial to nineteenth-century publishers in ways that transcended considerations of genre or narrative and directed reading towards the visual as opposed to the textual.

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<sup>751</sup> Kress, 'What is Mode', Jewitt (ed.), *Multimodal Analysis*, p. 64.

## Conclusion

Alice was beginning to get very tired of sitting by her sister on the bank and of having nothing to do; once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice, 'without pictures or conversation?'<sup>752</sup>

This passage found in Lewis Carroll's famous literary undertaking *Alice's Adventures in Wonderland* (1865) is not unfamiliar to literary scholars interested in nineteenth-century illustration, as it perhaps perfectly embodies the establishment of an illustration culture within mid-Victorian society. Whilst it may seem trivial to begin the conclusion of a thesis that has largely been pre-occupied with books loosely defined as 'non-fiction', it nonetheless reflects a central concern of this thesis, namely understanding how illustration became so embedded within the act of reading by the second half of the nineteenth century.

In a similar outlook to the one posited by Alice at the beginning of the novel, the art critic John Berger's opening remarks in his famous theoretical work *Ways of Seeing*, published over a century after the publication of Carroll's novel, underlines the significance of the visual within twentieth-century society: 'seeing comes before words.'<sup>753</sup> In light of this claim, this thesis has been pre-occupied with one central question: what purpose did illustration serve amidst rapid and significant changes to the printing industry? In answering this, I have approached book illustrations from the point of their production, which affords a greater appreciation of these images as both material and cultural objects that shaped the overall meaning and purpose of the book.

The establishment of an illustration culture by the mid-Victorian period can be detected earlier in the century at a time when methods for reproducing illustrations were undergoing sustained and formative changes. To make this case, this thesis has provided a complex picture of the different roles illustrations played,

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<sup>752</sup> Lewis Carroll, *Alice's Adventures in Wonderland* (London, 1865), p. 4.

<sup>753</sup> John Berger, *Ways of Seeing* (London, 1972), p. 7.

which were intricately connected to their materiality. Rather than focusing solely on the role individual illustrations played in the book, I have looked more closely at the function of illustrations collectively, both within individual volumes and editions and across different disciplines more widely. In doing so, I have argued that illustrations do not just depict or represent, but also play a fundamental role in shaping the cultural and intellectual significance of the subjects they illustrated through their materiality, design, layout and arrangement.

Throughout this project, the aim has been to put the material properties of illustration at the forefront of historical enquiry. To this end, I have contended that it is difficult to gauge what illustrations are 'doing' or how they 'function' throughout the book without an appreciation of how they were produced. Through a greater recognition of the print surfaces alongside the final impression, I have argued that the materiality and form of illustrations show how illustrated books both shaped and were shaped by changing intellectual, social and commercial contexts. The phrase 'reading illustrations' is commonplace in scholarship, particularly scholarship dedicated to visual culture. However, if we treat seriously and critically John Berger's claim that we see before we read, this raises further questions over the significance ascribed to the placement and arrangement of illustrations. Whilst the subjective content remains integral to understanding the wider cultural significance of illustration, I have argued that the material properties of such illustrations play a more crucial role than has previously been acknowledged.

It remains crucial to recognise that illustrations were not always two-dimensional impressions on the page. By critically engaging with the processes by which illustrations were transformed from three-dimensional objects to two-dimensional prints, it is possible to make wider connections between technological changes within the world of printed illustration and grander narratives of Britain during the first half of the nineteenth century.<sup>754</sup> These narratives are not solely

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<sup>754</sup> Evanhelia Stead's edited volume has been a welcome addition to the field, although there is a more sustained focus on the books as cultural objects, whilst analyses of prints remain rooted in

predicated on Britain's artistic standing by the mid-nineteenth century, but rather I have attempted to show how the material properties of book illustrations were exploited in order to underline Britain's intellectual, commercial and imperial capital. As explored in chapter four of this thesis, steel engravings used to reproduce illustrations in topographical accounts were used not only to underscore Britain's technological prowess but were also used to heighten her commercial, industrial and economic strength within the wider objective of confirming London as the most powerful European metropolis.

Similarly, by exploring the use of wood engraving within the contexts of the subjects it was used to illustrate, it has been possible to frame the significance of the printing medium according to the wider intellectual, cultural and social contexts of nineteenth-century Britain. Wood engraving was frequently extolled by contemporaries for the commercial and financial advantages it afforded to both the production and marketing of the book. A closer investigation into its application in geological publications reveals how important it was for British scientists, in both democratising what was a relatively novel branch of science, as well as reinforcing Britain's scientific progress within wider attempts to exert intellectual capital over scientists both on the continent and America. The use of wood engraving in topographical volumes by 1850 highlights the value placed on the design and arrangement of the book in order to reflect the democratisation of travel within the pages of the book. Print surfaces and techniques not only symbolized Britain's artistic status but also communicated the imperial, commercial, social and demographic changes to Britain. They did so not only through what was illustrated, but also how the book was illustrated both through the materiality of the medium as well as the arrangement of illustrations across individual books and across literary subjects more generally.

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visual culture methodologies. See, for example, Bachleitner, 'Illustration and the Book', in Stead (ed.), *Reading Books and Prints*, pp. 209-230.



As scholars of nineteenth-century illustration have in recent years drawn our attention to, the means by which an illustration is produced or who produced it is seldom acknowledged or critically analysed within scholarship interested in the visual culture of the period. As Julia Thomas has stressed, neglecting the inherent properties of illustrations, their size, shape, materiality and form, has far-reaching implications for how we come to define an illustration. Thomas asks whether we should consider illustrations to be essentially textual, visual or a hybrid that mediates between the two. Do they rely upon the text? Or do they function irrespective of the written word?<sup>755</sup> Through an approach that traces the trajectory of illustration across different subjects, this thesis further complicates our understanding of what an illustration is or does. Indeed, I would even argue that illustrations are defined by their very hybridity, as demonstrated by the diverse ways in which illustrations were deployed across different genres and subjects. Norbet Bachleitner argues that an illustration ‘oscillates between two poles’; on the one hand they are receptive and picture the text, ‘leading more or less to tautological effects’, whilst on the other hand they offer ‘adaptational’ purposes.<sup>756</sup>

In this thesis, I contend that there is a third dimension to illustrations that Bachleitner misses, namely what illustrations do collectively across volumes and subjects more broadly. They shape, reflect, and inform the culture in which the book is produced. The addition of wood engravings to topographical works from 1830 onwards, for example, had a significant bearing on the movement away from antiquated county histories, reflecting instead the rise of middle-class travel and the attempts to virtually replicate those travels within the pages of the book. The decisions by authors and publishers to include wood engravings in nineteenth century histories were not predicated solely on their receptivity or ‘adaptational’ potential in relation to the text, but rather within the position and arrangement of illustrations on the page and across the book to frame reading so that England’s

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<sup>755</sup> Thomas, ‘Illustrations and the Victorian Novel’, in John (ed.), *Victorian Literary Culture*, p. 619.

<sup>756</sup> Bachleitner, ‘Illustration and the Book as Cultural Object’, in Stead (ed.), *Reading Books and Prints*, p. 226.

history can be viewed as well as read by a broader reading demographic. I have therefore argued that we can learn more about the collective function of illustration that reveals more about the social, cultural, economic and intellectual contexts in which illustrated books were produced in this period.

In a similar call to recognise the importance of the processes involved in producing an illustration, Aileen Fyfe, in her illuminating study of the Chambers brothers' publishing business, laments the neglect of technology within research dedicated to understanding the cultural and economic contexts of print. She rightly goes on to suggest that accounts of technological change often tend to limit themselves to description, which in turn limits our understanding of how they were used in practice: 'There remains a widespread assumption in the history of publishing that it is sufficient to remark that the arrival of new technologies and methods of production were hugely significant, without asking why, or how, or whom, or where.'<sup>757</sup> This thesis has attempted to answer Fyfe's call. It has done so by moving beyond the descriptive histories of printing techniques and print production in order to examine more fully not only the technical significance but also the social, cultural and intellectual significance ascribed to print mediums within different literary contexts.

The thesis began with both a quantitative analysis into the development of printing techniques and an assessment of the utility of programming languages and computational techniques in order to assess levels of continuity and change within and across illustrated books. Eulogised as a period of novelty, progress, innovation and improvement, chapter one served to balance this against the survival of older practices that remained important to the actors involved in the book's production. The second chapter grounded these technological changes within the networks of those invested in the success of the illustrated book. By incorporating the artist and author into these networks, as opposed to restricting the study to the relations between author and publisher as has been common, I have shown that concepts of

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<sup>757</sup> Aileen Fyfe, *Steam-Powered Knowledge*, p. 6.

civility and sociability that were played out within these networks affected the financial remuneration of those belonging to different trades. Furthermore, the chapter served to provide a more complex picture of the degree of status afforded to those who specialised in intaglio or relief print methods.

The remaining three chapters explored the technical and mechanical developments to print in relation to the intellectual, social, cultural, and commercial contexts belonging to different subjects. Far from reducing the illustrations found in geological works to mere pictorial aids to the written text, chapter three served to demonstrate the importance of these illustrations in democratising geological knowledge during a period in which geology was a rapidly emerging science. Furthermore, these illustrations also formed an ecology of knowledge whereby gentlemen of science could share and circulate visual rather than exclusively textual forms of knowledge.

Chapter four served to build upon the established link between topography and art in this period in order to understand how the materiality, design and arrangement of illustrations contributed to both an intellectual and literary transformation of topography by 1850. In doing so the chapter demonstrated diametrically opposed discourses of progress and improvement within the world of print and the regression of topography as a rigorously intellectual discipline, which was considered a consequence of the changes to illustration as opposed to the written word.

The final chapter considered the role of illustration across published histories within the wider context of a new national discourse that served to depart from the grand philosophical histories popular in the late-eighteenth and early-nineteenth centuries. Through a greater appreciation of the design, position and distribution of illustrations, the chapter advocated a departure from reading these histories solely in terms of genre in order to understand more fully the varied roles illustration played in these books. A comparison between the national, heavily illustrated histories of two of the most prominent popular publishers of the period

highlighted the mutability of wood engraving amidst the different intellectual and popularising aims of these publishers, in addition to their contrasting philosophies over the role illustrations played more generally. Much depended, I argue, on the illustrations' size and position on the page and across the volumes in order to satisfy the type of national history these publishers wished to project, including the way in which they wanted it to be read or 'viewed'. Together, these chapters demonstrate that the print medium by which illustrations were produced were tools for achieving the often strategic motives of those invested in the book's production within specific social, cultural, economic and intellectual contexts.

Given the geographical limitations of this thesis, it would be interesting to compare the trajectory of illustration from a continental perspective within a similar approach to the one adopted in this thesis. Contemporaries often referred to France as the premier rival to England for illustrated literature. Charting the trajectory of illustration in a similar capacity to this thesis would provide an interesting comparison of the role illustrations played within different national cultures. Furthermore, although briefly touched upon at various junctures throughout this thesis, much more work is needed on the movement of illustrations between different forms of print in order to provide a more comprehensive account of the role illustrations played in print culture more generally.

By adopting an approach that analyses discursively and materially the broader changes to these subjects through the lens of illustration, I hope to have demonstrated that the graphic elements of books were fundamental to the communication of the book and culture of print. The distinction made here between 'print culture' and the 'culture of print', first put forward by Roger Chartier, is an important one for this thesis. I move away from the idea of fixity discussed by Elizabeth Eisenstein in order to reveal the diverse contexts in which these surfaces were harnessed and exploited.<sup>758</sup> To this end, it is intended that this thesis

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<sup>758</sup> Chartier, 'The Order of Books Revisited' pp. 516-517; Eisenstein, *The Printing Press as an Agent of Change* (Cambridge, 1980).

highlights the fundamental role the physical properties of printed illustrations played in the communication of the book, a dynamic that has sometimes been neglected within the history of the book itself.

In addition to providing an intellectual contribution to the history of illustration in the eighteenth and nineteenth centuries, this thesis has demonstrated the advantages of applying established humanities practices in conjunction with computational and programming methods not only for the purpose of more fully understanding the importance of materiality, design and arrangement of illustrations within the history of the book, but also visualising the significance of illustration on both a micro and macro scale. It has shown that computational and programming techniques are insufficient without the analytical rigour of well-established humanities methods. These computational methods provide a starting point to research, not the end point. In this way, it is hoped that it will aid future researchers as they embark on such interdisciplinary research.

Finally, although this thesis is firmly rooted in eighteenth- and nineteenth-century illustrations, I believe it feeds into a wider debate surrounding technology, media and communication more generally. We frequently hear in both social and theoretical discourse the permutations that have resulted from ‘the digital revolution.’ Quentin Fiore and Marshall McLuhan’s in their landmark book *The Medium is the Massage*, highlighted the role of the medium in shaping our experiences: ‘the medium, or process, of our time – electric technology – is reshaping and restricting patterns of social interdependence and every aspect of our personal life.’<sup>759</sup> Angus Phillips, in his study of the rise of the digital book, claims that the period in which we are living ‘is an exciting period for the book, a time of innovation, experimentation, and change.’<sup>760</sup> Furthermore, the concept of multimodality applied in this thesis was borne out of attempts to consider the ways in which communication might ‘work.’

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<sup>759</sup> Marshall McLuhan and Quentin Fiore, *The Medium is the Massage* (2<sup>nd</sup> edn., London, 1996), p. 8.

<sup>760</sup> Angus Phillips, *Turning the Page: The Evolution of the Book* (London, 2012).

This thesis can serve as an important reminder that ideas of innovation in the processes of design and communication that harnessed technological advances, so ubiquitous in our digital or even 'post'-digital age, were equally fundamental to those invested in the production and success of the illustrated book during the eighteenth and nineteenth centuries. Similar to Phillips, rather than viewing periods that harness different communicative technologies as 'revolutions' - digital, illustration, or otherwise - we can instead view these periods of technological and industrial change as part of a more general evolution of technology.

However, a critical engagement with the means by which printing technologies were applied allows us to move beyond general trends of evolutionary changes to technology in order to recognise the specific cultural, social and intellectual significance of the printing techniques and surfaces used to produce illustrations belonging to different subjects. As Gunther Kress has recognised, forms of communication in today's world have changed and are still in the process of change, the reasons for which, he argues, 'lie in the vast web of intertwined social, economic, cultural and technological changes.'<sup>761</sup> What this thesis has demonstrated is that printing techniques and surfaces, as well as their overall arrangement, both shaped and were shaped by the cultural, social and intellectual contexts in which they were printed. Furthermore, aligning technological and industrial change with social and cultural developments provides checks and balances against the broader narratives of technological and industrial evolutionary changes to the printing industry throughout this period. The intentions behind and consequences of printing a steel engraving in a poetry book, for example, could contrast significantly with the inclusion of steel-engraved prints in published topographies. Whilst steel engraving generally symbolised technical and industrial progress, its use in specific intellectual and cultural contexts did not always reflect this; rather steel engraving was at times considered to contribute to an intellectual decline of the subject it was used to illustrate. To say that new printing techniques

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<sup>761</sup> Kress, *Multimodality*, p. 5.

became more pervasive in this period neglects the diverse and multifarious ways in which these technologies shaped, both positively and negatively, the intellectual trajectory of the subjects they were designed to illustrate. These techniques and surfaces, therefore, cannot be extracted from the particular cultural contexts of learning, seeing, reading, and experiencing in which the illustrated book was printed.

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The master dataset used in this thesis comprised of metadata including book titles, publication dates, places of publication, author, publisher, British Library book identifier and the number of illustrations in the book. Additional metadata, such as the printing technique, the size of the illustrations, and their location on the page have been added as part of this project. The number of book titles totals 5748 and are taken from the 'Rare books'

collection of the British library. The datasets that have derived from the larger collection and have been used to inform the quantitative aspect of this thesis, can be found at the following link: DOI [10.5281/zenodo.1412136](https://doi.org/10.5281/zenodo.1412136), and are listed below.

1810-1850\_Plate\_Techniques\_no\_stipple\_no\_woodengraving.csv

1810-1850\_Plate\_Techniques\_with\_wood\_eng.csv

1810-1850\_Topography\_Print\_Techniques.csv

Book\_list\_British\_Library\_dataset.csv

Cassell\_Illustrated\_History\_code.csv

find\_all\_figures\_pictorialhistoryofengland\_code.csv

image\_distribution\_1800.csv

image\_distribution\_1810.csv

image\_distribution\_1820.csv

image\_distribution\_1830.csv

image\_distribution\_1840.csv

image\_distribution\_1850.csv

image\_distribution\_1840.csv

geology\_count.csv

sample\_print\_techniques\_final\_final.csv

topography\_count.csv

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# Illustrations



Plate 1.1. Steel-engraved illustration by William Miller in Thomas Hervey, *The English Lexicon; a selection of modern poetry* (London, 1845).



Plate 1.2. Steel-engraved illustration by Henry Adland in Eliza Cook, *Melaia; and other poems* (1840).



*Printed by W. Day.*

*On Stone by C. Haghe.*

A View of the Town of ST. GEORGE GRENADA with the Carenage & Surrounding Scenery

Plate 1.3. Lithograph by Louis Haghe in William Bayley, *Four Years' Residence in the West Indies* (1830)



Plate 1.4 Lithograph drawn by the author in Richard Cobbold, *Valentine Verses* (1827)



S. Bowdich del. et lithog.

B A K K O W .

Printed by C. Hummandel

Plate 1.5. Lithograph drawn by Sarah Bowditch, printed by Charles Hummandel in Thomas Bowditch, *Excursions in Madeira and Porto Santo* (1825).



Plate 4.1 'The Royal Exchange', taken from Richard Phillips *Modern London* (London, 1804)

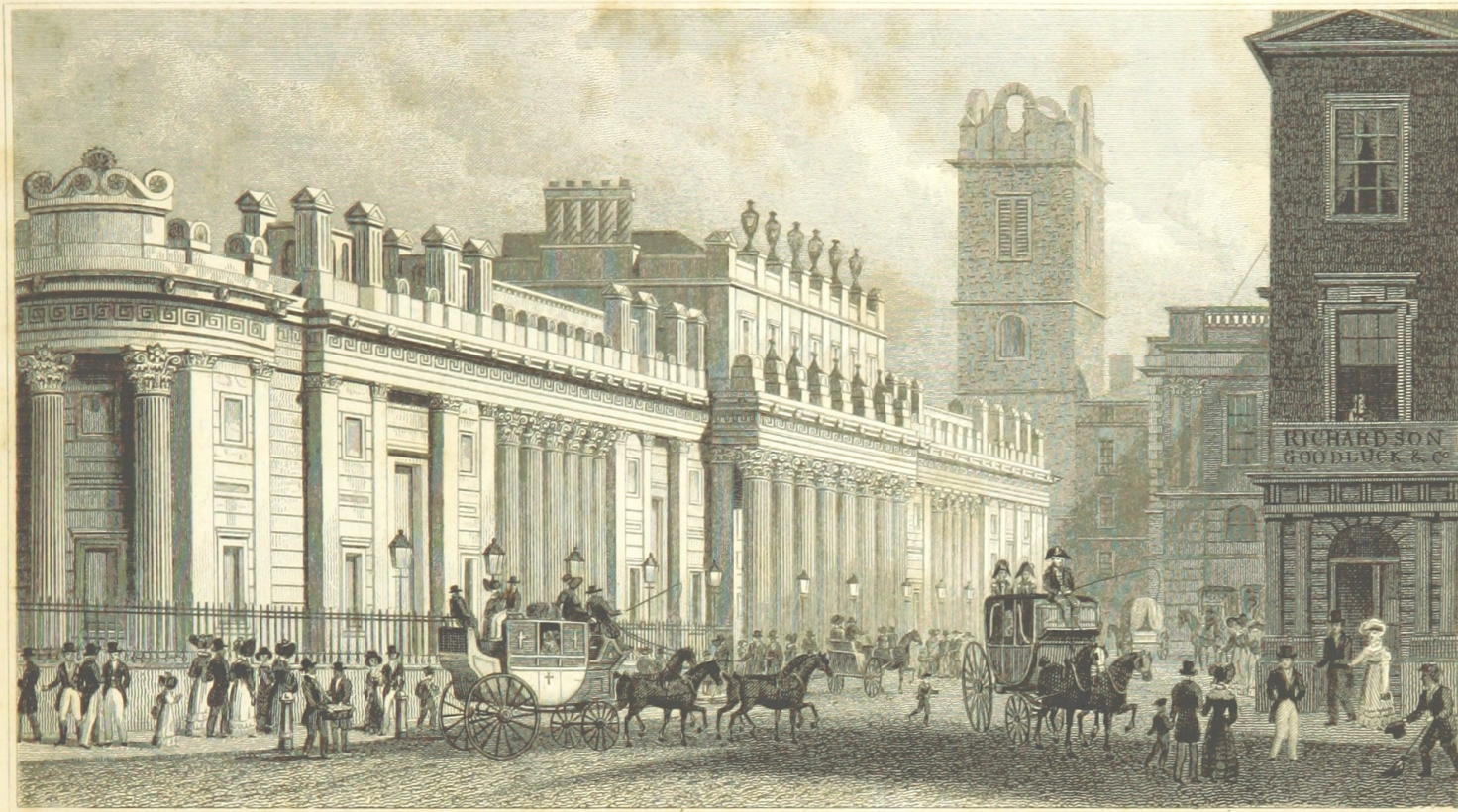




Plate 4.2 'The Royal Exchange', in Rudolph Ackermann, *The Microcosm of London* (1808-1810). Courtesy of The Lewis Walpole Library, Yale University.



Plate 4.3. 'The Great Hall', in Rudolph Ackermann, *The Microcosm of London* (1808-1810). Courtesy of The Lewis Walpole Library, Yale University.



Drawn by Tho. H. Shepherd.

Engraved by R. Acon.

BANK OF ENGLAND.

Plate 4.4 'Bank of England', in James Elmes and Thomas Shephard, *Metropolitan Improvements* (London, 1827-1830)



THE QUADRANGLE ROYAL EXCHANGE.

*Plate 4.5 'The Quadrangle, Royal Exchange', printed in W.I. Bicknell, Illustrated London (London, 1846)*



Plate 5.1 Copper engraving of Boadicea's arrival into Britain. Courtesy of the British Museum, Image no. AN1035981001

was to be burnt in a clear fire, and the ashes laid under the altar.

The forty-third forbids the eating of blood.

The fifty-second orders priests to preach every Sunday.

The sixty-fourth declares hunting and hawking are im-

After these canons, there follows a very particular form of confession, with what penances the confessor is to enjoyn. We find here that the penitent was ordered to say the Lord's prayer threescore times a-day.

The following are the names of some of the most learned



The Sister of King Sweyn murdered in the General Massacre of the Danes by the Saxons, on the Eve of St. Brice, 1002. (See p. 52.)

proper diversions for a priest, who is to make books his entertainment.

These canons were translated by Sir H. Spelman, from a Saxon manuscript in Bennet College, Cambridge. It is not known where or by what authority they were drawn up.

churchmen and saints who flourished from the time of Ethelwulph to the death of Edmund the Martyr.

The first saint is Swithin, or Swithun, who, having been preceptor to king Ethelwulph, was promoted to the see of Winchester; and it is sa'd, that it was by his advice that

Plate 5.2 Scene Depicting the Death of the Sister of King Sweyn, in *Cassell's Illustrated History of England, Volume 1* (London, 1856)

existence of that portion of the Scythian race settled on the borders of the seas and great rivers of Europe. They were the spoilers of the ocean, and undertook frequent expeditions to the coast of Gaul in their frail barks, made of osier, and covered with skins, pillaging wherever they landed; and retreating as soon as the booty was gathered, or a sufficient force collected to oppose them.

Here it is impossible not to be struck by the wonderful unity which characterises all the designs of Providence, the fitness of the means to the end proposed. In the same manner as the Jews were disciplined to become a nation by their sojourn of forty years in the desert, so were the Saxons, who descended from the Scythians, a people of Asiatic origin, gradually led to follow a maritime life from the localities in which they had settled; and finally led to the conquest of Britain, destined, from its geographical position, to be one day the centre of the commerce of the world.

Rude and savage as were our forefathers, they possessed one redeeming virtue: women were respected amongst them; polygamy was a law unknown; the wife was the companion and friend of her husband, not the slave; and we have never yet seen any nation arrive to great eminence in civilisation where such was not the case.

If we look at the East, the truth of this observation will at once become apparent. It is stagnant, and gives no sign of healthful life by progress or improvement: polygamy is its sin and punishment.

The chiefs of Britain were holding a council as to the most efficient means of repelling the invasion of the Picts and Scots, when intelligence was brought of the landing of a body of pirates under Hengist and Horsa, on the neighbouring coasts. Vortigern proposed that the strangers should be invited to assist them against the common enemy, which proposal was adopted, despite the repugnance of the Cambrian rulers, who vainly protested against the measure.

In consequence of this arrangement, a negotiation with the strangers was entered into; the Saxons were promised money and supplies in exchange for their swords and arms. The offers were acceded to, and the Picts and Scots driven back to their own country. Although the Saxons were far from being numerous, Vortigern became anxious to insure their services for the future, and a treaty was accordingly concluded between him and the two brothers, Hengist and Horsa, by which the latter bound themselves to return with a much larger number of their countrymen, on condition of receiving a tract of land and subsidies of various kinds.

The island of Thanet was assigned to them for their abode.

Faithful to their promise the allies returned with con-

siderable reinforcements, and landed on the coast of Kent.

For some time the Saxons remained faithful to their engagement; but becoming tired of fighting for others, their pride increased with their success, and they demanded a large increase of territory, which was indignantly refused. That which they could not obtain by concession they resolved to gain by conquest, to which end they treacherously entered into an alliance with the Picts and Scots, whom they had hitherto combated. This fatal treaty made the Britons comprehend at last the error they had fallen into. Instead of allies they had given themselves masters. Indignation at the treachery, however, did not permit them at once to succumb; the struggle was a fierce and protracted one. Several British chiefs immortalised themselves in the contest by deeds worthy of the heroic age: amongst others Guortemir, the son of Vortigern, who, being pressed in battle, tore up a young tree by its roots, with which he killed Horsa, and put the Saxons to flight.

It is incontestable that the Britons obtained several victories, for Hengist and the rest of his companions re-embarked, and for five years the island was free from their presence.

The Saxons once more returned under the leadership of the surviving brother, Hengist, in formidable numbers, and soon afterwards gained the battle of Crayford, the result of which was the secession of the greater

part of Kent to the conquerors, in 473. Eight years later they obtained a second victory, which assured Hengist in his new possessions, from that date called the kingdom of Kent.

Twenty-eight years after the first landing of the Saxons, Ælla, another chief of their race, who boasted himself, like his predecessor, the descendant of Odin, arrived with his three sons in the same number of vessels, on the coast of Kent, and founded the kingdom of Sussex.

Sixteen years elapsed between the invasion of the last adventurer and that of the famous Gerdic, who landed in 493 on the west of Sussex and Kent, with a numerous body of troops. For nearly forty years his contests with the Britons were continued. He succeeded in seizing on the Isle of Wight and that portion of the main island now known as Hampshire. His son Cynric, and his grandson Ceatwin, conquered the country between the south coast and the Severn, and established the kingdom of Wessex.

Gerdic, in this fierce and protracted struggle, had for his chief adversary the renowned Arthur, who gained, amongst other battles, those of Longborth and Mador, celebrated in the poems of his friend and companion, the bard Llywarch



Roman Urns.





