
Chapter 4

Material Change

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We understand material change¹ as any diachronically observable change that affects the material nature of inscribed artefacts, whether this be in terms of the writing material itself or the tools and methods used to create this writing. The format, which determines the specific mediality and praxeology of the artefact—such as a panel, book, or scroll, for example—can also be affected by material change, but not necessarily. Material change can be understood as the disappearance or repression, as well as the emergence, of new writing materials, technologies, and their concomitant cultural practices. Examples that come to mind here, for instance, are the transition from non-typographic to typographic writing cultures, the emergence of paper as a writing material (which replaced and supplemented parchment in a process that lasted many decades²), or the change in format from the scroll to the codex.³ Material change should thus be understood as a process leading to a permanent change in the material presence of inscribed artefacts within a culture over the medium- to long-term. This does not mean, however, that traditional practices must necessarily disappear during or after such change; indeed, traditional materials and practices are able to coexist alongside newly introduced ones for quite some time. Nevertheless, such coexistence often entails a redefinition and reassessment of the significance of previous materials and practices. The perspective on material change adopted in what follows is deliberately broader than the examination of how individual types of media develop would allow,⁴ yet this broader perspective allows for material change to become visible in its transcultural and transhistorical relevance.

¹ The present chapter on the topic of material change is a continuation of the discussions that took place in the first two funding periods of the CRC 933 (2011–2019) within the context of the working group ‘Situations of Material Upheaval’ (‘Materiale Umbruchssituationen’).

² Cf. for example Meyer/Schneidmüller 2015; Meyer-Schlenkrich 2018; Schweitzer-Martin 2022a, 145–197.

³ Cf. Cavallo 2016, 51. See also Peltzer 2020 on the use and function of the scroll in the Middle Ages.

⁴ For a basic definition and delimitation of the concept of materiality, cf. the introduction to this volume; on the concept of media, see especially the remarks on the term ‘artefact’, p. 15–16. The immediate transition from the handwritten book to the printed book is described in this chapter from the perspective of material change and not from the perspective of a change in media, since initially only the production changed, but not the medium that was produced (namely, the book). In mid-fifteenth-century Europe, handwritten and printed books differed strikingly in terms of production, but not in terms of the form of the produced artefacts themselves; the communication contexts in which the medium was

In analysing material change, our goal is to precisely describe the lasting changes in the material nature of artefacts and thereby also provide more nuanced answers to questions about the implications of these changes for media. In turn, a conceptualisation of the term ‘material change’ that is viable in a transhistorical sense can only be achieved in a comparative cultural perspective, i. e., by taking into account the respective cultural and historical peculiarities of material-related practices on and with inscribed artefacts. The transition from non-typographic to typographic societies is of particular importance in this context, since it allows for the specific characteristics of non-typographic societies to be cast in higher relief. This perspective of inquiry was also the particular preoccupation of the CRC 933 in its final funding phase, which subsequently directed our gaze all the more intensively back towards other phenomena of material change. The change from the manuscript culture of the Middle Ages to the print culture of the modern era is a topos of cultural memory, at least for Europe, and has accordingly been the subject of research for some time.⁵ Nevertheless, a comparable phenomenon can also be observed in other societies, such as those of East Asia, in which inscribed artefacts of a printed nature had already been reproduced in great numbers since the eighth century at the latest.⁶ Such societies were thus characterised by a special *longue durée* of handwritten and printed forms of writing existing simultaneously.

At present, we face great challenges in trying to manage the accelerated digital transformation in its material and discursive manifestations. On the one hand, we have to organise and manage the large quantities of data that are rapidly assuming dimensions beyond our imagination; at the same time, we know little about the durability of new writing supports, the duration of their readability, and thus the lifespan of the data stored on them. On the other hand, in the course of the multiplication of the data material, the knowledge stocks linked to this data—as well as their discursive negotiation and interpretation—are also multiplying; participants of the most diverse provenance, experts and non-experts alike, are competing over who ends up having a say in how the digital public sphere is interpreted and designed.

According to one of the guidelines behind the research design of the CRC 933, looking back in time can illuminate for us and provide perspectives on experiences

effective also remained the same for the time being. Only over the course of several decades did the design of the books, among other things, become more differentiated and the conditions of reception also change. It is only from this point on that one can speak of different media.

⁵ This change has been described teleologically in older scholarship. Questions about the manifold phenomena of overlapping and interference with regard to manuscript and print have only played a role in recent times; cf. most recently (with references to the history of scholarship here as well) the anthology of Brockstieger/Schweitzer-Martin 2023. Cf. also Augustyn 2003, 5–47; Mentzel-Reuters 2010; Schmitz 2018, 11–41; Kornicki 2019; and Dover 2021, 24–25.

⁶ Moments of material change can be identified in Japan, for example, with the simultaneous importing of movable wooden type by Jesuit missionaries on the one hand and metal type imported from the Korean peninsula on the other in the decades before and after 1600; cf. Sasaki 2023.

of change, acceleration, multiplication, and diversification that result from situations of material upheaval. A quantitative increase and qualitative change in the material(s) used for inscribed artefacts could also go hand in hand in the past.⁷ Thus, the cross-cultural analysis of past text cultures as well as that of the present day characterised by increasing digitality complement each other in the attempt to understand better the phenomenon of material change, its preconditions, and its consequences.

If we take once again the material change that occurred in early modern Europe as a starting point, we can observe that present-day experiences of the abundance and variety of knowledge, media, and material are structurally quite similar to the experience of the dissolution of boundaries that took place at the beginning of the print era in Europe in the fifteenth and sixteenth centuries. Complaints about the number of books—and the occasional reflection of this in criticism, for example in the form of imaginary libraries or satirical book catalogues⁸—went hand in hand at the time with the conviction that people were living in a ‘new age’. Through the conquest of new worlds, of either a geographical or cosmological nature, this new era also opened up new knowledge that had to be processed accordingly by means of the media of the day.⁹ In new encyclopaedias, authors attempted to organise, categorise, and make manageable this newfound knowledge, yet time and time again ran up against the incompleteness of knowledge and thus also of their literary undertakings.¹⁰

The implications of the boom in knowledge and the flood of books—implications perceived as positive, albeit with the potential to spark a crisis—together with the intricate interdependencies of changes to media and knowledge due to the increase in and diversification of the knowledge available in early modern Europe have long been described by researchers in a nuanced way that goes beyond mere narratives of progress.¹¹ The much-described media revolution in the ‘Gutenberg Galaxy’¹² is closely and causally linked to a specific form of material change, with this form often

⁷ The concept of the inscribed artefact for the premodern era may be only partially suitable for the analysis of the ‘digital age’. However, data is also physically present, even if it cannot be directly changed by hand. Thus, one could possibly speak of digital inscribed artefacts.

⁸ Cf. Werle 2007; Dover 2021, 27–30; on the reorganisation of (the vast increase of) knowledge in the print era, cf. generally also Schmidt-Biggemann 1983; Seifert 1976.

⁹ Cf. the recent work of the DFG research unit FOR 2305 ‘Discursivisations of the New. Tradition and Innovation in Medieval and Early Modern Texts and Images’ at the Free University of Berlin.

¹⁰ On the history of encyclopaedias, cf. Schneider 2006; Stammen/Weber 2004; on the organisation of knowledge, cf. also Blair 2020.

¹¹ In this context, the work of the CRC 573 ‘Pluralisation and Authority in the Early Modern Period’ from 2001–2011 at the Ludwig Maximilian University of Munich merits special mention, as it was able to show the tense way in which the authoritative dynamics of demarcation and the pluralising dynamics behind the dissolution of such boundaries shaped the political, epistemic, and literary structure of the early modern period. For an overview, cf. Dover 2021.

¹² In his book of the same name, Marshall McLuhan describes the fundamental change in the social and cognitive layout of the early modern period that was triggered by the printing press, cf. McLuhan 1962; cf. fundamentally and for an introduction on the topic Garncarz 2016.

being lumped in with the concept of media and made synonymous with the problem of changes in media. In order for the book to be able to contribute *qua medium* to the corresponding epistemic, social, political, and cultural advances in early modern Europe, it first had to make the leap from the handwritten book—i. e., the codex—to the printed book. It had to be converted materially—i. e., via the production of paper; the manufacture of type; the development of typesetting boxes, printing ink, and the printing press; as well as via printing and distribution practices—from manuscript to print and become subject to new praxeological conditions.

The following theses describing and explaining material change are the result of the analysis of different situations of cultural upheaval that took place under disparate conditions of transmission and in very different fields of writing. It is precisely this historical, culture-specific variation that plays an important role in the presentation, as does the question as to the relationship between material change and other factors of cultural change.¹³ We can only describe material change by taking into account the actors involved as well as the conditions and consequences of the given cultural context. Furthermore, in doing so, we must also consider the influence of power relations on, as well as culturally specific reactions (cultural and technological critique, but also narratives of progress) to, processes of material change. Finally, we must also be mindful of instances of non-simultaneity and the reasons behind these (Thesis 19) and must focus on the changing functions of material as well as of cultural text practices (Thesis 20).¹⁴

As for the present chapter: we have written this against the backdrop of material change as outlined above—namely, the current change from print culture to the digital age—which has refined our perspective on past processes of material change.¹⁵ This leads to the critical negotiation of the processes of change or their significance for society, as is shown in Theses 21–23 (the critique of processes of change; the valorisation through recourse to traditional forms and formats; and the functionalisation of materiality in power relations).

13 On the relationship of technological change to social change, cf. Ogburn 1965; on cultural change, Elias 1939. Chapter 6 'Political Rule and Administration' shows that a change in the function of a text (for example, when it is transferred from an administrative context to the function of the 'pure' demonstration of power) often coincides with material change.

14 Some of the CRC 933's previous work has focused significantly on the change in meaning of materially altered artefacts and the change in practices associated with them; cf. Bolle 2020; Bolle/von der Höh/Jaspert 2019; Sarri 2017. Important reference projects for this research issue were the subprojects A01 ('Lettered and Inscribed. Inscriptions in Urban Space in the Greco-Roman Period and Middle Ages') and B09 ('Bamboo and Wood as Writing Materials in Early China').

15 Cf. Schneidmüller/Schweitzer-Martin 2020.

Thesis 19

The materiality of text cultures changes not in leaps and bounds, but in processes of a continual nature.

In cultural studies, a wide variety of thought patterns, terms, and metaphors have been used to describe processes of historical change: one finds talk of ‘ruptures’, ‘boundaries’, ‘leaps’, ‘crises’, and ‘revolutions’, but also of ‘evolutions’, ‘development’, ‘change’, and *longue durée*.¹⁶ It is always tempting to reduce historical changes to moments of quick transition, which seems to be an easier explanation than the historically appropriate description of the inner dynamics of processual events.

The same goes for the phenomenon of material change in text cultures. It seems obvious in the course of describing such change to look for specific inventions and to trace the (planned) measures of their implementation within a given material culture; doing so would allow for a ‘new approach’, an innovation, to become tangible as such. The fact that innovators such as Johannes Gutenberg were stylised accordingly for purposes of cultural self-assurance seems to prove this need for a simple linear explanation. We should note, however, that this need is not only observable in modern (popular) scientific reception—Gutenberg still has a fixed place in cultural memory, even though his alleged innovation has long been the subject of critical inquiry—but can also be ascertained much earlier. The invention of typography was claimed as a particularly German achievement as early as the sixteenth century: in Nicodemus Frischlin’s comedy *Iulius Redivivus* (1585), for example, the printing press, gunpowder, and the mathematical and astronomical masterpiece of the Strasbourg Cathedral clock are all mentioned in one single breath in the dialogue between Cicero and Caesar as being a triumvirate of German erudition and inventiveness. Thus, especially in the case of printing, a turning point in material cultural is cast in a patriotic light.¹⁷ Particularly in the case of European letterpress printing, present-day observers must be aware that both the model and language of description are preformed culturally to the highest degree.

If we approach the phenomena of material change ‘from below’—i. e., from the perspective of textual cultural practice—continuities become more prominent, while sudden ruptures and planned measures recede from view.¹⁸ In the case of the transition from manuscript to print in the cultural sphere of Central Europe in the early

¹⁶ Cf. for example Kuhn 1976; Braudel 1977.

¹⁷ On this connection, cf. Schade 1984, 114–115. As early as 1499, the so-called Koelhoff Chronicle printed in Cologne discusses who was the inventor of letterpress printing with movable type and where it could be found locally. On this, cf. Meyer-Schlenkrich/Schweitzer-Martin 2023, 9–11; on the connection between the publishing activities of the printing houses and patriotic discourse in the early modern period, cf. Brockstieger 2018.

¹⁸ For example Needham 2015; Meyer-Schlenkrich 2018.

modern period, we can observe that we are dealing with a long-lasting process that has not yet come to an end. On the contrary, handwriting has been used to complement print in various ways (for example, in publishing or correction contexts), and can sometimes take on completely new functions (by bestowing a certain aura on a text or imbuing it with authority and/or authenticity, for instance), but has never become completely obsolete.¹⁹ In the course of a new type of “bequest consciousness” (“Nachlassbewusstsein”),²⁰ autographs as well as ephemeral handwritten products came to be viewed as being material worthy of preservation and collection from the late eighteenth century onwards. Before that time, over the course of the ‘long’ early modern period, handwriting was used in a variety of ways. It was employed (in the publication process) to ‘bring books into print’; it was also used to ‘deal with’ printed books—of course, by means of such long-established writing techniques as glossing or annotating. Handwriting was also used when working with and on printed materials in order to engage actively with the knowledge presented in such works and to personalise and adapt the printed text to new contexts of use. Some printed books are even intended to be adapted to personal handwritten activity via the use of leading or of specific page layouts (i. e., a corresponding affordance), such as calendrical diaries (‘Schreibkalender’, cf. Fig. 1) or emblem books replete with white space, which were transferred to new social and textual contexts under the moniker *alba amicorum*.²¹

In Europe, all such practices of individualising what is written testify to a new function of handwriting—one that is more dynamic and more ephemeral than was the case in previous centuries—and points ahead to modern concepts of authorship.

An even deeper form of manuscript and print existing side by side can be observed in seventeenth-century Japan. Here, too, continuity does not appear as a linear chain of events, but rather is characterised by impulses of a reciprocal nature. Even more so than is the case in Europe, the change from handwriting to printing appears in Japan as a retrospective interpretation of a historical phenomenon. For contemporaries, the change was probably not perceived as such, since the use of typography was in most cases limited to a small circle (primarily social elites). Print often remained a complementary medium to handwriting, both in terms of its intensity of use and its cultural prestige. For this reason, various printed genres usually imitate handwritten formats, merely offering a less cost-intensive alternative above a certain print runs compared to works copied out by hand.

¹⁹ Cf. Dover 2021, 24–25. For basic information on phenomena of interference up to ca. 1800, cf. the volume by Brockstieger/Hirt 2023. On continuities and simultaneities: Brockstieger/Schweitzer-Martin 2023.

²⁰ Cf. Sina/Spoerhase 2017, our translation.

²¹ Cf. Brockstieger/Hirt 2023. On the phenomenon of leading/white space, cf. fundamentally Bren-decke 2005; Feuerstein-Herz 2017.



Fig. 1: [Anonymous owner,] Georg Galgenmeyer, *Schreibkalender* [...] [auf 1603] ('Calendrical diary [...] [for 1603]'), Augsburg: Hans Schultes 1602 (Herzog August Bibliothek Wolfenbüttel, Xb 1719), pp. 2[v]–[3]r. © Herzog August Bibliothek Wolfenbüttel, <http://diglib.hab.de/drucke/xb-1719/start.htm?image=00004> (CC BY-SA 3.0).

In East Asia, the norm was not for prints to be made with movable type; rather, block books were made, i. e., books whose pages were each printed with wooden blocks into which images and texts were carved. Although block books appeared in Europe in the fifteenth century at about the same time as did incunabula, they were only used for certain prints. Thus, we see the block book technique being regularly used in the fifteenth and sixteenth centuries especially for lavishly illustrated genres and text-books, which were frequently reprinted.²² The different status and range of use of the two reproduction techniques in Asia and Europe can be attributed to various factors, ranging from the number of characters used in the respective writing systems to layout conventions and reader expectations.

Japanese block books did not simply reproduce handwriting, so they did not simply look like books written by hand. Rather, they imitated the individual hand of a single calligrapher, with print and manuscript thus being almost indistinguishable. Since the technique of woodblock printing required only a small investment, private printing with such blocks was more widespread in East Asia and often contributed significantly to enhancing the reputation of texts and their authors, as in the case of Zhang Chao or Ihara Saikaku, who self-published and distributed their texts

²² Cf. Wagner 2012 and 2017; Schmitz 2018, 1–11.

to a select circle of acquaintances.²³ In these cases, printing is not an autonomous practice, but rather one that reproduces the social practices of preceding manuscript cultures.

Continuities between manuscripts and printed works can also be seen in the area of content, since prints often contain allusions and references to manuscript traditions. Emerging text media such as commercially printed books benefited from the cultural prestige of famous manuscript texts by reproducing the latter. This is evident in printed versions of calligraphy miscellanea, such as the *Album of Venerable Calligraphy* (*Kohitsu tekagami* 古筆手鑑) from 1651, in which we can read the following in the preface: “I applied myself diligently to the rendering of fine brushwork, the intensity, the angle of the brush and so on. While there may be mistakes in the block printing, the shape of characters should not be doubted at all.”²⁴ This admission of the limitations of the reproduction technique subordinates the printed book to the manuscripts it imitates. In this way, in a predominantly manuscript culture, the shared knowledge of readers is shaped by handwritten texts, and thus printed media often contain allusions and references to handwritten media.²⁵

This ‘phenomenon of persistence’ is also attested elsewhere: the advent of cheaper printing alternatives made manuscripts more desirable on account of their higher prestige. In Japan, for example, hand-painted silk scrolls enjoyed great popularity once again in the seventeenth century. Before the early modern period, only very few scrolls—just three in number have survived to our knowledge—had been painted on silk. The norm, by contrast, was to paint on *washi* (和紙, a Japanese paper that is tougher than paper made from wood pulp). In the seventeenth century, however, a newly wealthy class of merchants began to commission scrolls with hitherto unknown decoration as symbols of their social status. In truth, such artefacts were mostly intended as purely representational items, being displayed on special occasions or given as part of a dowry; they were probably not read as such. The social practice associated with the artefact was in turn replicated through printing. In the prefaces of some block book editions that contained selected illustrated stories previously reproduced in manuscript form, for example, there was a note that every bride should have this book amongst her accoutrements.²⁶

²³ Cf. Son 2018, 53.

²⁴ Kanai 1989, 146; English translation in Leca 2022a, 84; see also Komatsu 1972, 95–102.

²⁵ Cf. Leca 2022a, 84.

²⁶ Cf. Ishikawa 2020.

Thesis 20

The affordance and function of inscribed artefacts, as well as practices of production and reception, change asynchronously along with processes of material change.

The material constitution of inscribed artefacts and thus their production processes are subject to constant change, along with the expected and actual use of the artefacts. Writing and reading²⁷—to name the most common, but by no means only text-related activities—are not historically and culturally constant practices. They change with the form, material, and socially assigned function of textual artefacts. At the same time, the affordance of inscribed artefacts also changes: i. e., the common use that is proffered or suggested by the material form and the knowledge ‘expected’ from a text about which writing-related practices are to be carried out on and with it.²⁸ Furthermore, as we address in the following, this change in practices does not proceed in leaps and bounds, nor does it take place synchronously with material change. Thus, practices of writing and reading can either emerge intact after an instance of material change, or such practices themselves can change and in turn influence the processes of material change with respect to writing supports or implements. The institutions responsible for the production, dissemination, or use of the artefacts (or at least those that promote them) also continue to change or even disappear, which additionally influences material change and changes in material-related practices.

When we think of text-related practices, the first thing that comes to mind today (besides writing) is reading, which has also changed fundamentally over the centuries and, as a practice, varies greatly depending on the text’s intended function. Reading in religious contexts is different from reading in legal contexts; the same practice undertaken in scientific contexts differs again from that in literary contexts. And reading as a silent practice on the part of an individual, for example, has taken centuries to develop; in European antiquity, people read aloud.²⁹ Augustine specifically highlights the experience of reading aloud in his *Confessions* (VI.3). In the early 1990s, Ivan Illich presented his study *In the Vineyard of the Text*,³⁰ in which he posits the thesis that reading developed in the twelfth century from a quiet murmuring to the practice of silent reading, and that the emergence of our modern concept of a ‘text’ as something independent of the material of the text is connected to this. Similar processes can be

²⁷ Cf. Gertz et al. 2015; Berti et al. 2015.

²⁸ Cf. Fox/Panagiotopoulos/Tsouparopoulou 2015.

²⁹ Fundamental here is Svenbro 1988. The general preponderance of reading done aloud in European antiquity is a point of consensus in research, even if a categorical exclusion of silent reading is controversial (see Gavrilov 1997). Cf. also Leipziger 2021.

³⁰ Cf. Illich 1993.

found in other cultural contexts, with changes in text-related practices going hand in hand with changings to the text supports as well.³¹

Sometimes, text-related practices change and subsequently material change takes place. In other cases, text-related practices remain the same, although the material form of the texts has changed considerably. This can be observed particularly well in a typical set of reading and writing practices of contemporary culture in industrialised countries: namely, writing and reading on digital devices. Many practices of the ‘analogue’ era or even the manuscript age have not disappeared, but have simply been incorporated into these new developments, probably in part so as to simplify processes of adaptation. Transitions from one material to another, as well as from one medium to another, do not happen quickly, but rather slowly and discontinuously. At the same time, traditional practices flow into the design of new forms. Present-day word processing programs, for instance, include fonts that imitate handwriting. This entails either that the creators of such programs assume that the customers are interested in imitating handwriting in texts created digitally, or that they want to narrow the gap between the handwritten and the digital. Moreover, despite extensive digitalisation, traditional materials, techniques, and practices are not on their way out, much less disappearing of a sudden. Writing by hand, just like paper, remains widespread even after the vast deployment of digital techniques. Another practice that possibly refers to the material form of the scroll—or at least takes up the layout of scrolls, which we rarely deal with in everyday life—is in fact common when reading on the internet: we speak of ‘scrolling’ up and down a webpage. Again, the haptics of the scroll properly speaking are absent, but the notion of the material artefact of the scroll prefigures the digital practice. Other practices, such as turning pages or ‘leafing’ through a text, are also possible digitally (although only in a visual and not haptic sense). It seems as if this is a deliberate imitation of the practice of reading books, which contributes to the easier use of the new form.

In addition to this continuity of text-related practices after the occurrence of material change, however, we find completely new forms of text-person interaction also emerging in the digital space. Through these new forms of interaction, the formerly fixed functions of author, editor, and reader have transitioned into a more complex interrelationship. This is the case, for example, with so-called kinetic typography, which combines classical typography with animation in the form of a film, and three-dimensional typography, which has only become possible by the use of interactive Internet 2.0 technology. In his dissertation entitled *Rethinking the Book* from 1999, David Small has attempted to create a completely new, user-generated layout of the Talmud through kinetic typography (cf. Fig. 2).³² The traditional idea

³¹ Cf. Burnyeat 1997. For a philosophical interpretation of the concept of ‘silent reading’, cf. Stock 2009, 62–63. For an emotional or phenomenological reading of Augustine’s Confessions, cf. the commentary on *Conf.* IV.3 in De Monticelli 1990.

³² Cf. Small 1999.

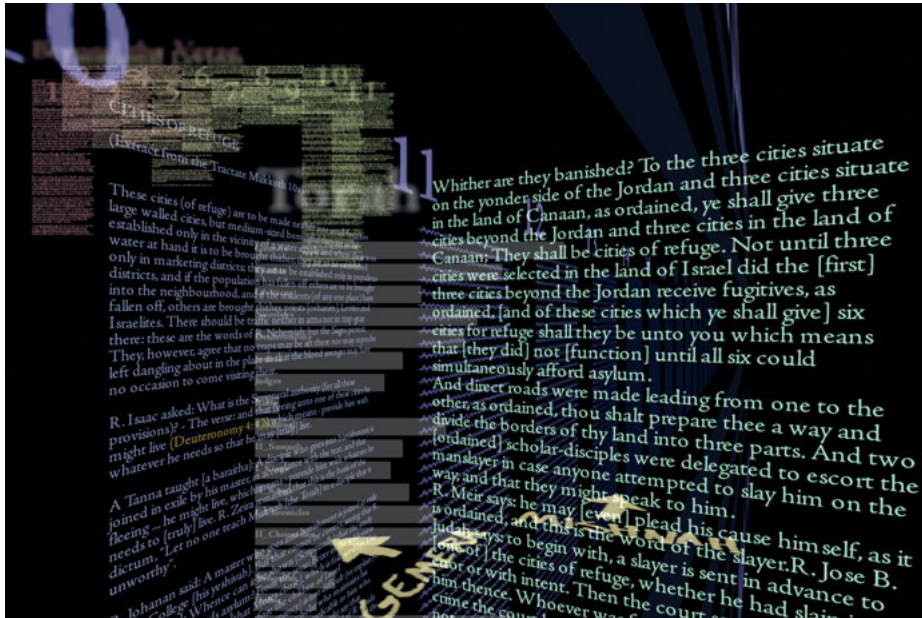


Fig. 2: David Small, *Talmud Project*, Exhibition at the Cooper-Hewitt Museum's first National Design Triennial. © David Small.

of the book—both that of the codex as well as the ‘modern book’—is expanded here to include the representation of an online hypertext and is thus able to be displayed in a 3D layout, with Small’s development allowing one “to position text at any size, position and orientation in an extremely large three-dimensional space.”³³ The work is experimental and brief, numbering only just over a hundred pages, yet it offers a glimpse into the possible future of texts as they break away from the traditional material form of what is written and enter digital space.

Thus far, digital representations have imitated forms for which there are established practices of use (paper, books, sometimes scrolls). With David Small’s programme for reading the Talmud (cf. Fig. 2), author, editor, and reader are combined into a single figure. At the same time, this form of visualisation takes into account the complex textual form of the Talmud, which itself consists of the Mishna and the Gemara, i. e., a text and the multifaceted commentary on this text hailing from many sources. It is safe to assume that it is not by chance that Small came up with the idea of representing the Talmud through this experimental layout and of implying that such digital representations of the page were more ‘suitable’ for study than the traditional design of a bound book.³⁴

³³ Small 1999, 26.

³⁴ Further reading: Hillner 2009, 44–45; Heller 2011; Reas/Fry 2014, 321.

The relationship of people to texts, the written word, and inscribed artefacts is part and parcel of a text culture. This is also true for cases in which we physically handle texts. Even if digitisation understood narrowly does not mean dematerialisation—since data must be physically stored, maintained, and kept available—we can still speak of an increasingly abstract relation of text to the body. Digital books are differentiated not by weight and size, but by the amount of data they contain and the computing capacity required to use them. Even before digitisation, material change was accompanied by a decrease in the use of an individual person's body. If texts had to be copied word by word in scriptoria by hand, each step towards mechanised processes—from the block book and printing with movable type to digital printing—has been accompanied by less physical work.³⁵

Perhaps, then, it could be suggested that the use of the human body is becoming increasingly unnecessary in many phenomena of material change. Even though certain designs, such as the abovementioned 'leafing through' or 'scrolling', each simulate their own physicality or use of the body for different practical activities, all one needs to do to interact with or have an influence on digital products is often nothing more than swipe or press a finger. Designs in which more physical input is required, as is seen in some computer games, are not necessitated by the thing itself, but rather are the result of free design decisions. Even in mixed processes (analogue and digital together), such as the scanning of handwritten bank transfers, the number of physical activities is at least reduced. We can conclude that less material diversity results in less material experience of difference. If Niklas Luhmann once wrote that the human body had lost its significance as a locus for the perception of meaning and culture through its replacement by the book, what would he say about the development of digital writing?³⁶ At the very least, as Irmela Schneider argues, whenever new media emerge, the function and role of the body must be renegotiated.³⁷ The digitisation of text-related practices preserves the old experience of reading books and scrolls via simulation; at the same time, it changes the interaction of text, the written word, and a given person (producer/recipient) in ways that cannot yet be fully surveyed.³⁸

The transition in media from manuscript to print also changes the dynamics of user responses. There is an inherent tension and feedback loop between prescribed uses (which must be more varied and general in the case of a more widespread medium such as print) and idiosyncratic ones made by individual users (which are more characteristic of manuscript cultures). After considering the interaction of persons and

³⁵ At the same time, the copyists were challenged by the in part creative adaptation of written documents to specific situations, i. e., they were more intellectually involved than the typesetters of later times. Cf. Gertz et al. 2015, 585.

³⁶ Cf. Luhmann 1990, 599.

³⁷ Cf. Schneider 2000, 16.

³⁸ For a comparison between 'digital natives' and 'digital immigrants' and their respective metaphors, see Günther 2007.

texts/writing, we shall now look more closely at the ways in which the material properties and social context of texts condition and enable specific reader responses. It can be shown that the form and materiality of texts are intertwined with processes of both standardisation and pluralisation of use when new content is adapted to print editions for new audiences.

To illustrate this, let us consider an example of transcultural adaptation. A group of Japanese physicians and admirers of Western scholarship set out to show that the previously held understanding of anatomy from Chinese sources was wrong by translating a Western work on the subject, namely Johann Adam Kulmus's *Anatomical Tables* (titled in Japanese *Kaitai shinsho* 解体新書 ['New Book of Anatomy']). The lengthy translation process of three and a half years involved several types of material changes.³⁹ This is because Japanese book culture—unlike the text's original Western context—used different book formats, printing techniques, papers, and bindings; frontispieces were not employed; and three different forms of writing (Chinese ideograms and two syllabaries) were used to write down the language. Additionally, Japanese culture described the body in terms of its involvement in the flow of energy in the universe, which meant that there was often no analogous native Japanese terminology for body parts referenced in the original Western text. The accompanying material changes are reflected in the shape of the frontispiece (cf. Fig. 3).⁴⁰ This itself is unusual for East Asian books and proclaims the book's status as a Western tome. The materiality of the page had to be adapted, both in terms of raw material (Western paper versus *washi*), size (the Japanese edition is slightly smaller), and reproduction technique (copperplate engraving versus woodcut).⁴¹ They were selected from another book, indicating that efforts were made to create a visuality that was adapted to the Japanese context and the intended readership there. This is reflected in the visual changes: the coats of arms are taken from another source and are symmetrical, which again is unusual for East Asian design and therefore suggests a Western origin. The man covers his pubic area, most likely the result of a publishing strategy aimed at circumventing censorship by the authorities, which included printing a sample edition with simplified content that was offered as a gift to the latter.⁴²

The transformations in the text are also multi-layered. The title appears in archaic Chinese writing, and in fact, the entire book is written using only Chinese ideograms for either their phonetic or semiotic values in Japanese, the latter usage entailing the development of many new terms to describe the anatomical knowledge conveyed in Kulmus's work. Overall, this was an adaptation to standard Sinosphere format and

³⁹ The following discussion is based on Lukacs 2008, 23–175. See also Proust 2002, 182–192.

⁴⁰ For a detailed discussion of the frontispiece, see Lukacs 2008, 49–56.

⁴¹ The latter was a reversal of an earlier change in reproduction technique: the anatomical images used by Kulmus had already moved on from the woodcuts made by Vesalius to the latter's copperplate engravings. Cf. Lukacs 2008, 41.

⁴² Lukacs 2008, 47, 110.

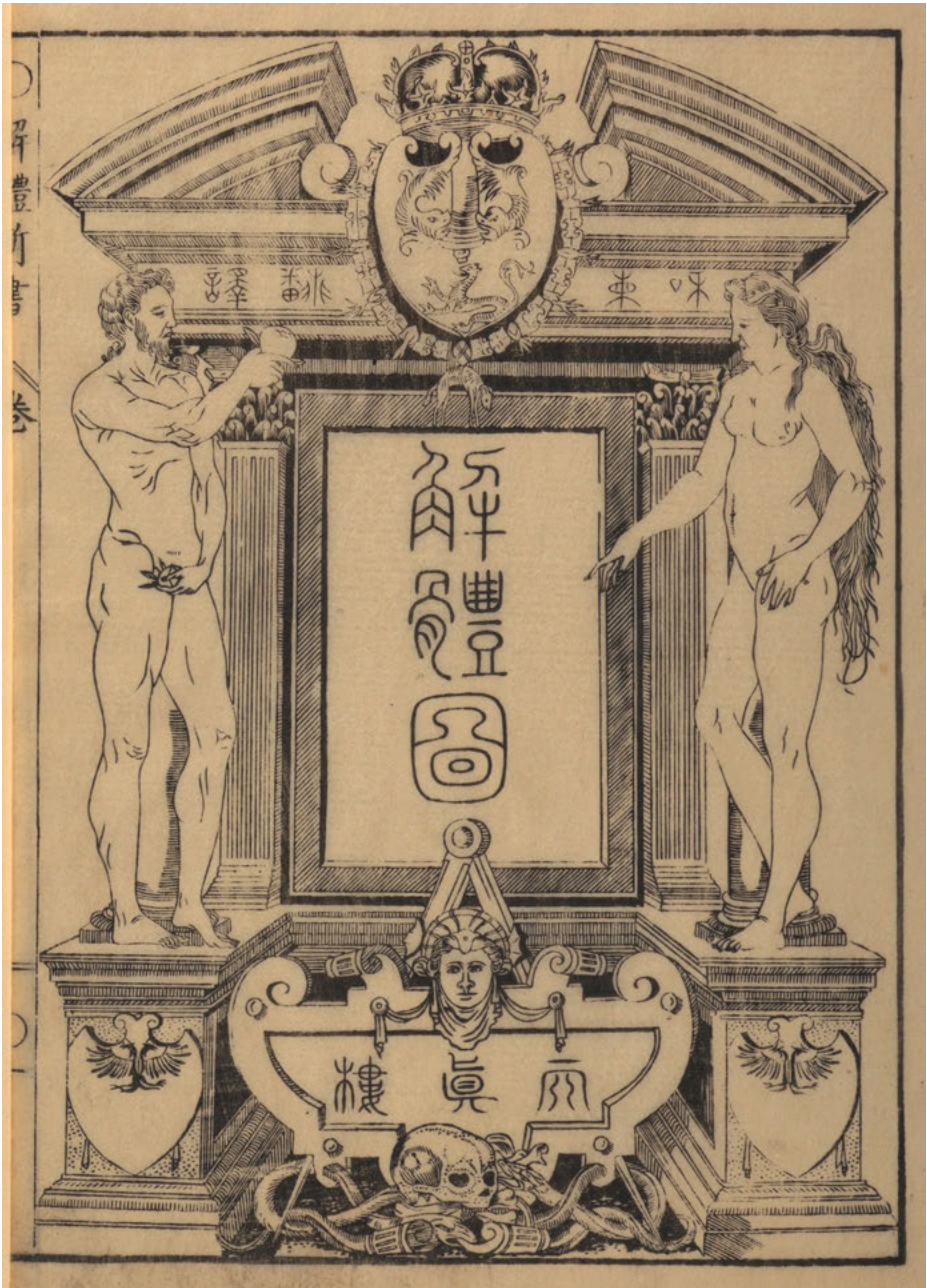


Fig. 3: Odano Naotake, frontispiece of the engravings section of the introductory volume of *Kaitai shinsho* 解体新書 ('New Book of Anatomy'), 1774, woodcut, ink on *washi*, 26.1 × 18.1 cm, National Library of Medicine, Bethesda, MD (USA), <http://resource.nlm.nih.gov/101147255X1> (accessed 27/1/2022), Public Domain.

graphics. One form of reader response was shown by Shiba Kōkan, a close associate of the group of translators. Kōkan pointed out that it was difficult for lay people to understand the ideograms and, what is more, that it was not easy to translate the text as such into maxims and commentaries (as was the case with the Confucian classics). Instead, in one of his own treatises, Kōkan attempted to adapt the content of the anatomy book for a wider Japanese audience by providing an explanation “in ordinary language and phonetic characters”⁴³ that also drew on the East Asian concepts of the five elements and the opposition of *yin* and *yang*.

Returning to the original translation: it should be noted that it contains yet another layer of writing. The characters for the five elements in archaic Chinese script are used as symbols for the Western books from which the illustrations were copied.⁴⁴ This bibliographical technique reflects a pluralisation of usage in the service of the Japanese scholarly community, which was familiar both with the practice of citing Chinese classics as authoritative texts and with the indexical form of knowledge classification common in Europe. By incorporating all these strategies, the book met the expectations and goals of a broad scholarly community among whom it became a ‘textual institution’.⁴⁵ It thus achieved a high degree of adaptation to textual cultural practices and thus of affordance, as evidenced by the fact that three editions were printed in quick succession.⁴⁶ The expanding readership of this translation added yet another layer of text in the form of handwritten annotations, corresponding to a pluralisation of usage in didactic contexts; Koishi Genshun used the book in his Confucian Academy and glossed the printed text for this purpose. These annotations were in turn copied by his students into their own copies of the text. This shows how the culture of writing was used in conjunction with the prints to adapt the text to different uses.

In the foregoing, we can see that the tension or dynamics that arises in the course of the transition to a new written medium often leads to a rethinking of established modes of meaning-making and reading behaviour. New media allow for experimentation with different combinations of existing and emerging textual and paratextual elements. Similar phenomena can also be observed in other cultural contexts. Thus, within the complex history of the layout of early Hebrew prints, one can discern a gradual transition—certainly also due to issues of technical development—from rather simple to very complex typographical forms. One of the most striking examples is probably the printing of a Jewish code of law, written by the famous Jewish philosopher Maimonides, which is organised in an extremely complex way with many typographically interlocking columns (cf. Fig. 4). While it should be obvious that this legal text is addressed to an elite audience, it cannot be denied that consulting this volume is itself a very complex task. It is doubtful whether the editors of this text had actu-

⁴³ *Dokushō hōgen*, in: Shiba Kōkan, *Shiba Kōkan zenshū*, 24–25; discussed in Screech 2002, 89.

⁴⁴ Cf. Lukacs 2008, 40.

⁴⁵ Cf. Marcon 2020, 137–138.

⁴⁶ On the impact of *Kaitai shinsho*, see Lukacs 2008, 165–180 and Jackson 2016, 116–117.

ally intended to compile a ‘readable’ book, i. e., if the volume was truly intended for practical use on the part of readers, or whether they did not also want to demonstrate the nature and organisation of knowledge, which is evident in the complex layout of a page containing several commentaries on the main text.

The analysis of the interaction between artefacts and users thus shows that text-related practices undergo change, but that this does not happen synchronously with material change, and that practices even end up being preserved that refer to forms and materials that have already become outdated. Moreover, it becomes apparent that the affordance of writing was specifically shaped in accordance with social customs.

Thesis 21

Material change sparks ambivalent reactions.

Through changes in production techniques and writing materials, reception techniques and practices also change.⁴⁷ On the one hand, such change is often emphatically welcomed as an achievement of innovation and progress, with people seeing in the material change an opportunity for changed distribution and new contexts of reception and use. On the other hand, innovations can also provoke negative reactions: concerns and reservations about the effects of these innovations might arise, especially related to fears of a loss of control and the anticipated loss of various cultural techniques. Finally, ‘control fantasies’, i. e., ideas of limiting or minimising the effects of material change via technical or legal means, also appear time and again as a reaction to such change.

This can be observed in medieval and early modern Europe, for example, both with regard to paper as a writing material and to printing as an innovation closely linked to this material. Printing was accompanied by enormous social upheavals that manifested themselves in disputes over whose interpretation was correct or authoritative for individual writings as well as in fundamental discussions about the value and function of entire cultural techniques. Printing books was viewed critically because some feared not only that material quality could suffer as a result of mass production, but also that one could lose the overview of printed texts and thus control over their content. As early as Gutenberg’s time, people were critical of the fact that more was being printed in a day than had been previously copied in an entire year.⁴⁸

One of the best-known contemporary reflections on early printing in Latin Europe is the 1492 treatise *De Laude Scriptorum* (‘On the Praise of Scribes’) by the humanist

⁴⁷ Cf. for example Reudenbach 2015.

⁴⁸ Cf. Widmann 1973, 8.

and Benedictine abbot Johannes Trithemius (1462–1516), in which the monk asks what difference there is between handwritten and printed material. He claims that whatever is written on parchment can last for a millennium. Yet in his argument, he questions how long printed writing might endure, since it is only something made out of paper (*res papirea*); if a paper volume should end up lasting two hundred years, Trithemius surmises that this would already be a long time, and yet he states that many people believed they had to put their material into print.⁴⁹ In his treatise, however, Trithemius discusses not only the question of the writing material, but also that of the writing technique. In the course of his text, it becomes clear that the cultural technique of writing is important to him as a means of maintaining monastic vitality and combating listlessness or laziness (*acedia*).⁵⁰ He is therefore not concerned with a blanket criticism of the new writing material or a different reproduction technique, but rather formulates his concern in terms of the loss of an existing cultural technique.

The assumption that paper was not of a durable nature dates back to the twelfth century in Latin Europe, the earliest time that paper was used there.⁵¹ Often, these arguments occur in the context of administrative writings, where copies of paper documents were to be made on parchment or where the enclosure or attachment of certain documents on paper was prohibited with reference to their supposed lack of durability.⁵² However, the advantages of paper were also seen, both in the quantity available and in the usually lower price compared to parchment.⁵³ Supply chain shortages in writing material remained a persistent problem, however, and the argument of availability and resources is encountered even in today's digital age. Although the basic raw material changed from old rags in the Middle Ages to wood pulp in the nineteenth century, the issue of the dearth of paper remains relevant up into the modern era.⁵⁴

Trithemius's text can be understood as an ambivalent reaction to the material change that had already been perceived and reflected upon as such by his contemporaries. However, we can observe this not only in texts from Latin Europe, but also from other parts of the world. One such example is the 1684 novel by the Japanese author Ihara Saikaku, entitled *Kōshoku Nidai Otoko Shoen Okagami* 諸艶大鏡 好色二代男 ('The Great Mirror of Beauties: Son of an Amorous Man'). In the novel, which

49 Cf. Johannes Trithemius, *De Laude Scriptorum*, 62–65. This passage is widely cited; to name but a few instances, cf. Embach 2000; Marks 1980; Needham 2015.

50 Cf. Herweg 2010, 411–412.

51 Authoritative on the perception of paper: Meyer-Schlenkrich 2018, 198–200; on the social acceptance and social distinction of the choice between paper and parchment, cf. *ibid.*, 213–216; for further prohibitions on paper use without explicit reference to its lack of durability, cf. *ibid.*, 224–231.

52 Cf. Meyer-Schlenkrich 2018, 224–231.

53 Cf. Herweg 2010, 426.

54 Fulda University of Applied Sciences, for example, ran out of paper in the wake of the COVID-19 pandemic and produced its certificates digitally for a limited time: Malkmus 2020. See also Beckmann Petey 2021. After the Second World War, many newspapers in Germany could only print issues on a limited number of days per week due to the lack of paper, cf. Dussel 2004.

describes how an old man orders a copy of a novel from a chief courtesan and receives a printed copy instead of a beautifully calligraphed scroll, the criticism of the loss of time-honoured cultural techniques plays a central role. The old man's disappointment with the printed copy stands for a re-evaluation of the manuscript format, which must simultaneously be understood against Saikaku's own biographical background. Throughout his life as a poet, the author participated in a manuscript culture, albeit experimenting at times with printing techniques as well. Moreover, this criticism in the novel formulates in almost satirical fashion how a man in this situation cannot keep up with the times and that through the agency of the chief courtesan, the old man of all people receives a less valuable copy of the writing.

In the European context, besides the cultural criticism of printing, the control of the publishing sector played a central role, especially in the context of religious disputes, which could (even if not necessarily) find expression in a fundamental rejection of printing. Thus, we find amongst Jewish intellectuals in Western and Central Europe in the fifteenth and sixteenth centuries a multitude of reflections on printing with movable type.⁵⁵ The critics of printing feared above all that the writing down by hand of commentary and the individual glossing of texts would disappear as part of learning and of the transmission of knowledge from teacher to pupil(s), and that this loss would lead to an inadmissible levelling and standardisation of religious content, as is seen, for instance, in the super-commentaries on the Talmud.⁵⁶ This is because the Ashkenazi scholarly tradition did not seek to establish a closed doctrinal canon via these texts, but rather to preserve individual opinions and local traditions (*minhag ha-maqom*) by means of continuous glossing and updating in the context of learning within the yeshiva (Talmudic academy).⁵⁷

It is therefore no coincidence that among Jewish scholars, the debate about printing was initially sparked by the discussion about the dissemination and canonisation of halakhic knowledge (i.e. legal issues, pertaining to *halakha*). This can be exemplified by the dispute over the printing of the halakhic work *Torat ha-Ḥaṭṭat* ('Teaching on the sin offering', printed in Kraków in 1569) by Rabbi Moshe ben Israel Isserles (acronym: ReMa; 1530–1572).⁵⁸ In the introduction to his work, ReMa not only ques-

⁵⁵ Cf. Reiner 1997.

⁵⁶ The *Talmud* (Heb. 'teaching') is a collection of rabbinical commentaries by scholars from seven generations on 36 of the 63 tractates of the Mishna, i.e., the compilation of traditional religious law made around 200 CE. It has come down in two versions: a Palestinian one with a *terminus post quem* of 400 CE (the Jerusalem Talmud or *Talmud Yerushalmi*/*Talmud Eretz Yisrael*), and a Babylonian one from around 500 CE (the Babylonian Talmud or *Talmud Bavli*). To this day, the *Talmud Bavli* enjoys greater authority than the *Talmud Yerushalmi*.

⁵⁷ Cf. Reiner 1997, 91–93.

⁵⁸ At the same time, ReMa was also caught up in the discussion about Maimonides's main philosophical work *Moreh ha-Nevukhim* ('The Guide for the Perplexed'), which gripped the Talmudic schools between Poland and Germany in the mid-sixteenth century; on the whole, cf. especially Reiner 1997, 93–96.

tioned the authority of the hitherto authoritative text, *Sha'arei Dura*,⁵⁹ but also its value for text criticism, and announced that he would make editorial interventions of his own. Above all, R. Ḥayyim ben Bezalel of Friedberg (ca. 1520–1588), the brother of the famous R. Yehuda Löw ben Bezalel (acronym: the MaHaRaL of Prague), comprehensively attacked the printing of *Torat ha-Ḥaṭṭat* in a retort entitled *Vikkuaḥ Mayyim Ḥayyim* ('The argument over living waters', with a pun on the author's own name): Ḥayyim held that in the Talmudic academies, one should continue to study the relevant halakhic sources⁶⁰ only with the help of a teacher on the basis of a book compiled specifically for the pupil's instruction. In this context, he especially criticised the fact that with the advent of printed halakhic compendia, an individual rabbi could henceforth base his religious practice on books rather than on a halakhic expert and adjudicator (*poseq*). This in turn, in the MaHaRaL's view, would lead to the unnecessary loss of local customs and interpretations, which would fundamentally contradict the essence of halakhic decision-making—because, after all, there had never been a universal halakha. For Ḥayyim von Friedberg, then, it was not simply a matter of contrasting manuscript with print; rather, the book as a medium of teaching and religious/legal discourse was seen as standing against the personal authority of the teacher. Printed editions, however, were able to significantly exacerbate this fundamental dispute over teaching methods in the Talmudic academies. The rejection of learning from (printed) books and thus the rejection of any monopoly over decision-making on the part of a book's author can be interpreted as a new and canonical debate related to religious law.⁶¹

It is undisputed that the printing press permanently changed how knowledge was learnt and transmitted in the yeshivot, and it is precisely this praxeological dimension—i. e., the shattering of supposed certainties in the field of knowledge transmission and documentation—that seems to have provoked correspondingly ambivalent reactions both in the case of Jewish intellectuals in Western and Eastern Europe as well as amongst the humanists, to whom Johannes Trithemius belonged' and who can be located in a similar social field. One such reaction was the argument that printing books contributed to the multiplication of errors in large numbers.⁶² Both intentional and unintentional 'errors' go hand in hand here and play an important role in mass distribution. Unlike in a manuscript culture, where a scribe first noted an (assumed or supposed) error in a marginal gloss and thus did not immediately erase the original, printers no longer made corrections to the original manuscripts in front of them, but

⁵⁹ Meaning 'The Gates of Düren', this is a halakhic compilation of dietary laws made in the second half of the thirteenth century by R. Isaac ben Meïr from Düren, a city in present-day North Rhine-Westphalia.

⁶⁰ In addition to the Talmud, these sources were also various halakhic authorities of the eleventh to fifteenth centuries (the so-called *rishonim*).

⁶¹ Cf. Reiner 1997, 86–88; *ibid.*, 91: "Before the coming of print, Ashkenazi culture was not based on a fixed text, and certainly had no authoritative canon."

⁶² Cf. Widmann 1973, 30; Wallenwein 2017, 118–120.

only while typesetting the text. This meant that tracing a reading, a turn of phrase, or even an entire textual recension was virtually no longer possible, especially since the early prints in particular did not specify their handwritten sources for the most part.⁶³ A classification of the manuscripts used, their provenance, and further bibliographical information beyond what was provided in the colophon would only gradually become established in the print era.

Furthermore, there was also concern that heretical content and non-approved translations of biblical texts could become disseminated. For example, the Jewish scholar Eliyyahu ben Asher ha-Levi Ashkenazi (Elia Levita; 1469–1549) wrote in a letter to the Hebraist Sebastian Münster that he was uncomfortable with some of his own works (which by then had become outdated) being reprinted without regulation either at home or abroad.⁶⁴ The protagonists of the Reformation, especially Martin Luther, were also constantly having to deal with the problem of unregulated reprints.⁶⁵ Now, the extent to which efforts at censorship could be enforced in the fifteenth and sixteenth centuries is questionable. Yet the mere attempt at censoring texts and setting normative guidelines is revealing and can be seen as a clear reaction to material change. A well-known source for this is the 1485 censorship edict of the Archbishop of Mainz, Berthold von Henneberg,⁶⁶ which forbade the printing and sale of translations from Greek, Latin, or other languages into the European vernaculars, unless they had been approved by censors. In light of the mass distribution of writing, a supervisory authority was set up in advance that sought to manipulate the printing itself.

Felix Pratensis also had the polemical and anti-Christian passages removed from R. David Qimḥi's (also referred to by the acronym RaDaQ) commentary on the Psalms in 1517 before the latter was printed as part of the first edition of the so-called *Biblia Rabbinica* (Bomberg, Venice 1515–1517) and had the former printed as an independent treatise under the title *The response of Radak to the Christians*.⁶⁷ On the other hand, as late as the end of the sixteenth century, we still find instances of retroactive censorship on the part of church authorities, which affected prints and manuscripts alike. Thus, in 1578, a commission under Cardinal Santoro was assigned with then task of establishing a Hebrew *index expurgatorius*.⁶⁸ As a result, manuscripts as well as works that had been in print up to that time began to be censored. The early prints of RaDaQ's commentary on the Psalms (Bologna 1477, censored 1595; Naples 1487) have censorship notes in the same places as do some of the manuscripts from the thirteenth and fourteenth centu-

⁶³ Cf. already Tychsen 1780.

⁶⁴ Cf. Peritz 1894, 263–265.

⁶⁵ Cf. Kaufmann 2019, 82–83.

⁶⁶ Cf. Schmitz 2018, 197–201; Widmann 1973, 43–46. On pre-censorship, cf. also Kaufmann 2019, 176–208. In Christian liturgical prints, approval notes are often found in the colophons and prefaces. Cf. GW 5464, GW M24127, GW M24229, GW M24241, GW M24388, GW M24582, GW M24660, GW M2470910, GW M24728.

⁶⁷ Cf. Heller 2004, xxxvi.

⁶⁸ Cf. on the whole Raz-Krakotzkin 2007, 84–94, 120–174.



Fig. 5: Psalms with commentary by R. David Qimhi (1477) censored by Domenico Irosolimitano, p. 3r. Cambridge University Library, Inc. 3.B.74.A2[2261] © Reproduced by kind permission of the Syndics of Cambridge University Library.

ries,⁶⁹ since the censor—Domenico Irosolimitano (1555–1621), a Jewish convert⁷⁰—censored both the prints and the manuscripts retroactively (cf. Fig. 5 and Fig. 6).⁷¹ For the censors, then, the change from manuscript to print was not decisive: both fell under their condemnation as equally important vectors of the ideas that were to be censored, since both material forms were still in circulation at the time.

In many cases, introductions, dedications, or colophons provide insight into the different lines of reasoning of the time and paint a contrary picture to the negative reactions.⁷² Various humanists, for example, praised the fact that a multitude of works were brought to light again or anew through the printing of books.⁷³ In many places, the printers also boasted of their philological expertise in the colophon, which some-

⁶⁹ Ms Parma Palatina 1872, fol. 6v (Fig. 6) and Ms Parma Palatina 2881, fol. 6v/7r, censored 1597.

⁷⁰ On Domenico Irosolimitano, cf. Prebor 2007 (in Hebrew); Thomanek 2017, 236–238.

⁷¹ Ms Parma Palatina 1872 (Fig. 6) is available online: [https://www.nli.org.il/en/discover/manuscripts/hebrew-manuscripts/viewerpage?vid=MANUSCRIPTS&docid=PNX_MANUSCRIPTS990000881400205171#1\\$FL13658555](https://www.nli.org.il/en/discover/manuscripts/hebrew-manuscripts/viewerpage?vid=MANUSCRIPTS&docid=PNX_MANUSCRIPTS990000881400205171#1$FL13658555) (accessed 30/6/2023).

⁷² A good compilation of such reactions with an appendix of sources can be found in Widmann 1973.

⁷³ A particularly prominent representative of this position is Polydorus Vergilius, but it can also be found in other writings, including those of Johannes Trithemius. Cf. Schweitzer-Martin 2022a, 134–135.

Thesis 22

Taking recourse to traditional techniques of production leads to a re-evaluation of traditional materials, ways of production, and formats, as well as to changes in the attribution of meaning and practices of use.

Processes of material change are often described as a new material or a new practice replacing and displacing what preceded it, with the new material taking over the functions of the old and the old becoming worthless. Processes of material change, however, are much more complex, as was made clear by the processual character of the changes described above in the first thesis of this chapter (Thesis 19). Here in Thesis 22, however, the practices of production and reception are at the centre of our considerations. Old materials and production methods are not usually discarded, but rather continue to be used, albeit often with a different function or attribution of meaning. It is precisely this re-evaluation and re-functioning of traditional materials that we exemplify in the following via the example of manuscripts and prints.

In research contributions on the early modern period and the beginning of the printing age, manuscripts and printed works—or handwriting and printed writing, as it were—are usually perceived as opponents.⁷⁵ Following this line of thought, the manuscript is said to have been gradually replaced by the invention of printing with movable type. Printing is claimed as being responsible for “the preservation and dissemination of literature per se”, while manuscripts are said to belong primarily to the private sphere.⁷⁶ On closer examination, however, we see that the manuscript was not completely displaced from the field of book production. Even into the sixteenth century, handwritten and printed books competed with each other, while numerous mixed forms emerged that were characterised by the simultaneous presence of handwriting and printing that differed in each individual case (a fact we alluded to above in the introduction to this chapter and in Thesis 19).⁷⁷ If the practice of writing books by hand persists, it must be assigned a certain value or function that cannot be subsumed by printing. Holger Flachmann speaks here of a “functional differentiation”⁷⁸ between handwriting and typography: while printing allows texts to be produced and distributed cheaply, comparatively quickly, uniformly, and in large quantities, handwriting is flexible, i. e., it can be used more individually and applied more directly than printing.

This fundamental difference between the two types of production is the reason for the tendency of the manuscript to be relegated to the private sphere or to the produc-

⁷⁵ Cf. Dover 2021, 24–25.

⁷⁶ Brandis 1997, 55. (Our translation, German text: “die Bewahrung und Verbreitung der Literatur schlechthin”.)

⁷⁷ Cf. also Dicke/Grubmüller 2003.

⁷⁸ Flachmann 2003, 138. (Our translation, German text: “funktionale Differenzierung”.)

tion of autographs. In addition, handwritten methods of book production were also used where certain content was to be handed down as arcane knowledge and made accessible only to certain circles (e. g., some cabalistic traditions). Even in mixed forms—for example, in text types in which handwritten entries are anticipated and space is provided for them through a preprinted framework (e. g., calendrical diaries [*Schreibkalender*], genealogical books, Jewish marriage certificates [*ketubbot*], pre-printed forms such as letters of indulgence or missives, etc.)—handwriting retains this spontaneous and individual character.

However, there are also arguments that bolster another interpretation. The difference between manuscript and print has been relativised by more differentiated studies that do not understand mixed forms as anomalies, but rather as a characteristic of premodern book production.⁷⁹ Two typical phenomena prove this. On the one hand, texts that had already been printed were typically partially reworked or finished with handwriting. For example, a missal printed in Cologne in 1512 was afterwards illuminated; in fact, printed matter that was subsequently coloured by hand was a widespread phenomenon. This practice stems from late medieval manuscript production, in which the scribe and the rubricator usually worked separately, with writing and illustrating thus being different activities.⁸⁰ To a certain extent, this procedure is continued in the age of printing. In the case of the abovementioned missal, the illustrations were available as woodcut prints, but were subsequently coloured by hand and the text embellished with borders.⁸¹ Although the missal was already characterised by features of quality (folio format, parchment pages, red and black printing ink), only the intervention of handwriting via the illuminations seems to have made the book a true object of prestige. The significance of the content must be visible via the materiality, and this obviously includes the colouring by hand, as this is what serves to convey a sense of uniqueness and thus exclusivity. The practice of embellishing by hand remains or becomes a distinguishing feature and a marker of prestige in the print era, quite independent of the underlying material, be it parchment or paper.⁸²

On the other hand, however, we find manuscripts in which printed texts have been copied by hand and recompiled (e. g. prayer books, chronicles, etc.).⁸³ In contrast to conventional printed books, handwritten copying allows one to select template texts and compile them as one likes, which leads to an increased individualisation of the artefact.

But the transcription of printed text by hand goes beyond mere copying; through the process of writing by hand, the texts regain their variability and can therefore be

⁷⁹ Cf. the anthology Brockstieger/Hirt 2023, produced within the CRC 933 subproject B13 ‘The Order of Knowledge and Biographical Writing. Calculated Handwriting in Printed Books of the Early Modern Period (16th and 17th Century)’.

⁸⁰ Cf. Schweitzer-Martin 2023.

⁸¹ Cf. Rautenberg 2003, 169–176.

⁸² For more on the increase in value of handwritten writing (with the pen) in the age of printing, see Wernli 2021. For more on the use of parchment in printed missals, see Schweitzer-Martin 2022b.

⁸³ On this, cf. Heinzer 2003; Rautenberg 2003.

compiled, i. e. ‘mixed’, however one likes. The collecting of rare texts and the compiling of text fragments on a specific topic are both practices that were already common before the invention of printing and are also maintained in the printing age.⁸⁴ Writing by hand can break up and relativise what seems fixed and unchangeable in print “by returning what is printed to the fragile individuality of what is handwritten and thus to the status of being provisional and changeable.”⁸⁵ Through this individualisation, the manuscript obtains an exclusive character and thus experiences an increase in value.

These examples show that handwriting performs important functions that typography cannot. While the former was used for text preservation and distribution before the invention of printing, this task has now been taken over by printing. Yet handwriting acquires a new function by taking on the role of something special in book production and becoming a distinguishing feature; “via a retrospective/conservative (or anachronistic) link to the medieval codex, handwritten writing is able to survive in the public sphere in the printing age.”⁸⁶ While the material and the production method do not change, the attributions of meaning, evaluations, and practices of use shift.⁸⁷ The deliberately differentiated use of both production techniques testifies to the fact that the choice between old and new in terms of material, practice, and technique was perceived as an enrichment.⁸⁸

A somewhat different perspective emerges from the history of the book in East Asia. In this cultural area, the predominance of woodblock printing (see also the considerations on block books above in Thesis 19) meant, on the one hand, that printing could faithfully reproduce manuscripts, making the dichotomy between the two media less strict,⁸⁹ and, on the other hand, that printing costs were much lower than with movable type, which led to diverse forms of self-publishing alongside more commercial ventures. A sign of a respectable house was “the perfume of books”⁹⁰, regardless of whether such works be manuscripts or prints. Although woodblock printing had been used in China since the late eighth century, printing did not gain the upper hand over manuscripts until the mid-sixteenth century, and even then, manuscript production did not wane.⁹¹

⁸⁴ Cf. Thorley 2015, 493–494; cf. McDermott 2006, 78.

⁸⁵ Heinzer 2003, 158. (Our translation, German text: “indem [es] das Gedruckte wieder in die fragile Individualität des Handschriftlichen und damit in den Status des Vorläufigen und Veränderbaren zurückversetzt”.)

⁸⁶ Rautenberg 2003, 186, our translation, German text: “über eine retrospektiv-konservative (oder anachronistische) Anknüpfung an den mittelalterlichen Kodex kann handschriftliches Schreiben im öffentlichen Raum im Druckzeitalter überleben”.

⁸⁷ Cf. Mentzel-Reuters 2010, 474.

⁸⁸ Cf. Rautenberg 2003, 183.

⁸⁹ For a discussion of these characteristics with regard to Japan, see Davis/Chance 2006, 112.

⁹⁰ Brokaw 2005, 3.

⁹¹ Cf. McDermott 2006, 43–47. Copying a book by hand remained the preferred form of acquiring its content, cf. *ibid.*, 76–77.

This has to do with the slow change of conventions in the handling and appreciation of textual material. In the treatise *Dushu fa* 讀書法 ('On Reading'), printed in the thirteenth century, the Neo-Confucian scholar Zhu Xi recommends intensive, repeated reading of the classics so as to fully grasp their inner meaning. This reading practice refers to the text in terms of bodily metaphors: "Go down layer by layer, past skin to flesh, past flesh to bones, past bones to marrow. If you read in desultory fashion you'll never attain this."⁹² This seems to be a continuation of the reading practices characteristic of manuscript cultures (see Thesis 20 above). Yet Zhu Xi was criticised by his contemporaries precisely for what was seen as a change in reading practice. Similar concerns about misinterpretation also led Shen Defu, the author of one of the most famous Ming-era works of popular fiction, *Jing Ping Mei* 金瓶梅 ('The Plum in the Golden Vase', first published in 1610), not to print his novel at first and to circulate it in manuscript form instead. His fear was twofold. First, he was worried that people would think he was a profit-hungry publisher, as the ideal of the literati who unselfishly pursued knowledge and self-improvement was incompatible with the practices of commercial publishers. Second, Shen Defu was afraid that printing the novel—especially given its erotic content—would make it accessible to unsophisticated readers whose minds it might corrupt.⁹³

Commercial publishers embraced these concerns and increasingly advertised the ease of reading and learning, and even the moral edification, of print by constructing an "apologetics of the vernacular" through prefaces and altered textual features.⁹⁴ Towards the end of this long process of ebb and flow between manuscript and print production, the value of texts copied by hand changed: they were valued less for their rarity than for the beauty of their calligraphic style. During the same period, literati found ways to continue the authentication practices of manuscript culture in print. This included, above all, the support of professional colleagues; their comments on the manuscript drafts of the text were sought out and subsequently included in a limited edition.⁹⁵ The printed works thus envisaged a complex audience composed of at least two strata: an 'inner circle' of the literati, who were oriented towards the manuscript culture, and an 'outer circle' of readers who emulated the literati's values.

A similar phenomenon occurred in Japan, but in the absence of a firmly defined group of literati, more socially diverse communities engaged in cultural activities such as the production of poetry following the model of the pre-existing elite practices of the local manuscript culture.⁹⁶ Within these communities, printing was used in the seventeenth century to disseminate poetic production and thus maintain social and financial links between geographically dispersed practitioners. Alongside this 'inner circle',

⁹² McLaren 2005, 155.

⁹³ Cf. Son 2018, 18–19.

⁹⁴ McLaren 2005, 153.

⁹⁵ Cf. Son 2018, 6.

⁹⁶ Cf. Ikegami 2005.

emerging commercial publishers printed encyclopaedias, manuals, and other kinds of instructional texts (*ōrai mono* 往来物) that expounded and disseminated knowledge and practices previously confined to oral teaching and elite chains of transmission.⁹⁷ In this process, formats, layouts, and materials particular to manuscript traditions were adapted and imitated. As a result, manuscript formats became more desirable, which led to their increased production.⁹⁸ For example, existing popular fiction (*otogi zōshi* 御伽草子) was printed in an elongated format (*yokobon* 横本) that mimicked the experience of reading in manuscript format.⁹⁹ Furthermore, the covers of the printed editions were often decorated with silver foil and hand-painted idyllic scenes, so that their external appearance was indistinguishable from that of actual manuscripts. Doing so allowed printed editions to fulfil the same function as their handwritten counterparts did: they came to be conspicuously displayed on special occasions such as weddings and at the new year. Another relevant example from Japan are the early modern oaths (*kishōmon* 起請文). These materially hybrid texts were originally temple talismans, stamped on one side and inscribed by hand on the other side in ink (and often even in blood). In the seventeenth century, the use of these oaths diversified when they were integrated into pledges of allegiance between women from prostitution districts and their clients.¹⁰⁰ This phenomenon was a continuation of an older layer of print culture in the form of temple and shrine seals that were used as a form of authentication and developed in parallel with the rise of commercial printing in urban centres.

In summary, while the recourse to traditional production techniques has comparable effects on the meaning and use of texts across cultures, these changes are not rooted in the technology itself. Rather, they are modulated by cultural and social contexts in a complex scriptorial environment where different forms of manuscript and print production exist side by side.

Thesis 23

Changes in actors in the course of material change coincides with shifts in power relations and social contexts.

Material change should not be understood in a linear way, but rather as something that develops over the course of dynamic processes of change conditioned by several factors. However, the practices of production and those of reception do not necessarily change synchronously. These processes of change can be exemplified by early book printing in Latin Europe. The early prints from Mainz, for instance, were bibles, psal-

⁹⁷ Cf. Berry 2007.

⁹⁸ Cf. Davis/Chance 2006.

⁹⁹ Cf. Ishikawa 2020.

¹⁰⁰ Cf. Leca 2022b.

ters, and letters of indulgence, all of which were written in Latin. These so-called incunabula, some of which had also been printed on parchment, successfully imitated the handwritten versions of these genres. However, they were not reproduced by a process of handwritten copying, but rather by the setting of movable type. Components such as the incipit were often added by hand or—as already mentioned in the preceding thesis—the text was rubricated by hand, with its ornamental design imitating that of manuscripts.¹⁰¹

Even though handwritten artefacts and printed ones bore a strong resemblance to one another, they differed significantly in who produced them. While up to this point in time, it was monastic scriptoria (and in individual cases, urban centres of production, such as that of Diebold Lauber) that reproduced texts on a larger scale, the actors in text production now changed. In the period of the incunabula or first printed works, only about twenty monastic presses are documented,¹⁰² which appears to be quite a marginal phenomenon when compared to the more than two hundred places of printing we know of, some of which had several smaller print workshops.¹⁰³ This meant that the majority of production was being carried out by laymen, but their clientele did not change immediately and clients making print commissions also remained initially stable.

In the Jewish sphere, there were no institutionalised places of book production akin to monastic scriptoria.¹⁰⁴ By contrast, we find workshops run by the same scribes who were also responsible for the production of important ritual objects such as *tefillin* and *mezuzot*.¹⁰⁵ Others were scholars who copied books for themselves and others, but often hired themselves out as itinerant workers.¹⁰⁶ This changed with the advent of early prints. A single scribe was now replaced by several people, each of whom had a different function: the typesetter, the proofreader, a tradesman who maintained the printing press, and sometimes another financier.

101 Cf. Schmitz 2018.

102 Cf. Schmitz 2018, 11–41, 183–186; Duggan 2008; Eisermann 2013; Schmitz 1990.

103 Cf. Rautenberg 2000.

104 Cf. Beit-Arié 1993, 77–108.

105 *Tefillin* are leather straps and leather cases containing small pieces of parchment inscribed with Bible verses (Exod 13:8–10, 11–16; Deut 6:4–9, 11:13–21), which people wear by tying them to their arms and forehead at the time of the so-called *shacharit* (morning prayer) on weekdays (but not on Shabbat and holidays) (the term is related to the Hebrew word for ‘prayer’, *tefilla*). This custom developed from Deut 6:8. A *mezuzah* (Hebrew for ‘doorpost’) is a small tube containing a piece of parchment on which are handwritten the first two sections of the *Shema Yisrael* (Deut 6:4–9, 11:13–21). Even today, a *mezuzah* is placed on every doorpost in a Jewish home, with the exception of the bathroom and toilet, a custom going back to Deut 6:9.

106 It was rare for the main text in a manuscript to be written by more than one hand (*pecia* system); in editions of biblical texts, however, it was quite common for one hand to be responsible for the consonantal text and two or more other hands to be charged with adding in punctuation, accent marks, and masora. Nevertheless, R. Meir ben Baruch of Rothenburg (ca. 1215–1293) wrote in a responsum that a book written by several hands should be classified as less valuable (cf. Beit-Arié 1993, 78).

Many early prints show that the typesetters were not necessarily specialists in the sense of the aforementioned scribal ‘artist’, but rather were print artisans who often lacked the necessary education pertaining to the texts at hand and whose prints therefore had to be subsequently corrected by specific persons charged with this task.¹⁰⁷ For this reason, many of the incunabula, even if they come from Jewish printers, are noticeably faulty and do not meet the high philological standards evident in the manuscripts.¹⁰⁸ Many Jewish scriptural prints contain only the consonant text; vowels, accents, and other reading aids, not to mention commentaries, were simply omitted in the initial days of printing. Some printers were partly to blame here, simply because they did not know enough Hebrew to spot such discrepancies or deficiencies in the prints, but at the same time, it was not yet fully technically possible to incorporate this interpretive apparatus and these reading aids.

At the beginning of the sixteenth century, printing became a “business crossing confessional lines that was structured according to the political rules of the printing privileges that were granted and the economic rules of the profits to be made in printing”.¹⁰⁹ In this process, the protagonists of the Reformation also played an important role.¹¹⁰ In Italy, Christian entrepreneurs hired typesetters who were Jewish and/or converts from Judaism for their printing houses in order to appropriate the latter’s knowledge of Hebrew. The Hebrew manuscript of biblical texts, which should be characterised as a ‘Jewish’ book since it was designed by Jews (only) for Jews, became the Christian printed ‘Old Testament’ for the humanistically educated scholars and Christian Hebraists. Additionally inserted texts, such as papal dedications, were intended to assign the book its distinct confessional status. Related to this, it has been shown that different reading and layout traditions as well as different bindings and ply formats are reflected in the prints and point to different social fields. The binding of the partial prints determined whether the so-called five *megillot*¹¹¹ were bound after the Pentateuch or amongst the historical texts (*ketuvim* or ‘writings’). Here, different affordances and contexts of reception become quite clear: Jewish audiences wanted the megillot for liturgical reading on corresponding holidays in the context of the Torah; whereas Christian Hebraist practice, itself a scholarly context, classified them with the historical texts. Conversely, the Pratensis edition designed for Christian readers in 1517 (printed in 1521) underwent a Jewish ‘remake’ through the omission of the papal dedication and the integration of the so-called Masora.¹¹²

¹⁰⁷ Cf. Grafton 2011, 23.

¹⁰⁸ For the early Bible prints and commentaries, cf. for instance Ginsburg 1897; Zafren 1982.

¹⁰⁹ Petzold 2019, 34, our translation, German text: “konfessionsübergreifendes Geschäft, das sich nach den politischen Regeln der erteilten Druckprivilegien und den ökonomischen Regeln der im Druck zu erlösenden Gewinne gestaltete”.

¹¹⁰ Cf. Kaufmann 2019, 15–52.

¹¹¹ Scrolls read in conjunction with festivals: namely, the books of Ruth, Song of Songs, Qohelet (Ecclesiastes), Lamentations, and Esther.

¹¹² Cf. Petzold 2009, 54–73.

The printing of the Hebrew Bible and of the Jewish (Hebrew) Bible commentaries by Christian parties was driven by the Church's conviction of having sole interpretive authority over the 'Hebrew faith' (*fides de Hebraeis*). In this faith, the Church valued the 'Hebrews' just as much as it bitterly persecuted the 'Jews' and their books, especially the Talmud. Thus the printing of Hebrew books served to Christianise the Hebrew Bible and also cemented the hegemony of the Christian study of Hebrew in academic biblical exegesis (up to the present day, in the case of the German academic tradition). The Jewish minority had to surrender its monopoly over the *veritas hebraica* to the Christian majority.

A similar process of change from handwriting to a rapidly spreading print culture (although diverging in the details from the preceding) took place in Japan from the 1590s to the 1620s. While it is true that the first mass printing dates back to the years from 764 to 770, when Empress Shōtoku's (718–770) colossal programme of printing one million *dhāraṇī-sūtras* was carried out,¹¹³ the cultural technique of printing only found sporadic use, given the prevailing view that it was possible to improve one's karma by copying sutras and other Buddhist writings by hand. Printing was thus primarily reserved for the social elite at the imperial court in Miyako (present-day Kyoto) and for Buddhist clerics.

It was only through a transcultural process of exchange and appropriation, as well as social upheaval between 1590 and the 1620s, that a rapid development in the mass production and distribution of printed texts and illustrations occurred beyond the halls of the imperial court. On the one hand, the *shōgun* Tokugawa Ieyasu produced reprints of Chinese books (and used bronze types for this).¹¹⁴ On the other hand, a printing press and printed Christian texts were brought to Japan by the Italian missionary Alessandro Valignano (1539–1606) in 1590. The technique of movable type first spread in missionary circles and amongst Japanese converts in the south of the country, but soon made its way to the capital of Miyako as well. The latest research also proves that the technology of movable type, in addition to the layout design that had been introduced from Europe, was adapted by the merchants and important supporters of culture who were living in the capital for the reproduction of Japanese literary classics and poetry in the 1610s.¹¹⁵

Thus, instead of the Buddhist clergy, the educated and wealthy class of townspeople living in Miyako emerged as actors in the production of printed writings. In the 1610s, they primarily printed classical and newer works of poetry, such as *Ise monogatari* 伊勢物語 ('The Tales of Ise') with movable type on high-quality coloured paper.¹¹⁶ The editions of these books produced in the 1610s—in a European context, one would rather speak of 'notebooks' on account of their material nature—were limited, as they were aimed at a small circle of intellectuals in the capital.

¹¹³ Cf. Kornicki 2012. The author suspects that the figure of one million could just be a claim on the part of the empress.

¹¹⁴ Cf. Kornicki 1998, 130–131; Pitelka 2013.

¹¹⁵ Cf. Koakimoto 2021.

¹¹⁶ Cf. Kornicki 1998, 131–132.

It was not until the 1620s in Miyako—which remained the centre of the printing industry in Japan until the 1660s—that an increasingly commercially oriented production of printed books developed, and with it the large-scale reproduction of textual content focusing on popular historical hero stories, such as war epics. Central to this was the proliferation of illustrations, which changed with each of the numerous new editions. In order to come closer to the character of illuminated manuscripts and thus also to achieve greater sales, colours applied by untrained hands were added to the illustrations in the mid-1620s, called *tanrokubon* 丹緑本 ('red-green books') due to the limited colour palette.¹¹⁷ These printed and bound books, in turn, served from the 1650s onward as models for extremely opulent handscrolls painted with rich gold leaf and costly pigments. These were commissioned not so much by the urban population as by wealthy feudal lords from across the Japanese island chain, who sought them out, among other reasons, as dowry gifts for their daughters.¹¹⁸

In particular, the colophons common in the early prints of medieval Europe are an interesting example of how certain practices of book design, whether in terms of colours or paratexts, changed only slowly, yet their impact and the influence of their creators were by contrast all the greater since printing managed to penetrate social fields that had previously been less frequently addressed or not addressed at all, including the crafts and other trades. Although a colophon in a manuscript today provides information on purchasing and production practices, its most important feature is its explicit reference to individual and private circumstances: information that usually remained private because a manuscript was often intended for private use and its sphere of influence was consequently limited.

Liturgical manuscripts are of course an exception here, but they did not contain colophons precisely because they left the private for the public sphere of the synagogue or church. The scribes of such works often inserted themselves into the text in a rather hidden way.¹¹⁹ At the dawn of the printing era, the colophon in a printed book was not very different from that of a manuscript; but it had a completely different function, since it could inform an entire reading community—even in the early prints, we are talking already of several hundred persons¹²⁰—with basic information, not only about the text and its author, but above all about the production process, its costs, or the number of books per edition. They also partially took on a function of approval. What was emphasised here, then, was trade and various craftsmanship skills, which also already makes clear what the ultimate goal of book production was: namely, the financial profits of the printing industry. This is shown, for example, in the early prints of the Hebrew Bible and Bible commentary texts, in which the printers

¹¹⁷ Cf. Yoshida 1984.

¹¹⁸ Cf. Trinh/Bauer/Trede 2021, 246–249.

¹¹⁹ Cf. Beit-Arié 2015, 16–18. According to *ibid.*, 17, the Worms Maḥzor is an exceptional case, as it was not made for personal use.

¹²⁰ On circulation levels: Eisermann 2017; Green/McIntyre 2016.

explain in detail within the colophon that printing was not only a philological enterprise, but above all a technical task, and a costly one at that.¹²¹

For the Jewish sphere, especially in Italy from 1469 onwards, it can be assumed that the early Hebrew prints were cheaper to produce than it was to copy a single manuscript. However, the question of who was meant to be reading from these first prints is not easy to answer. At the same time as Jewish recipients of the texts, Christian Hebraists were also increasingly demanding Hebrew books, so the prints would have been able to satisfy a growing market there. At the beginning of the fifteenth century, this double reception also led to a marked improvement in the philological quality of the prints, since Christian printing houses availed themselves of educated Jewish printers and proofreaders. In the case of the Hebrew Bibles, different denominational editions were printed from the same printing block, which were distinguished merely by different bindings.¹²² This shows that printing was also shaped by financial considerations from the outset.

The incunabula as well as prints from the early modern period were sometimes traded over long distances, as can be seen from their bindings and ownership marks, among other things. With printing, a differentiated book trade developed with bookkeepers and, at the end of the fifteenth century, the emergence of fixed shops for books. In addition to their production, the sale and distribution of books had changed, too.¹²³ Such changes were also reflected in the development of title pages for Latin and vernacular incunabula. Although there had also been specially designed title pages, opening initials, and highlighted headings in manuscripts, the conventions for title pages became standardised at the end of the fifteenth century. These now contained more information about authors and titles, and later also about publishers, printers, and the printing date, or were decorated with woodcuts in a bid to attract the eye of potential readers.¹²⁴ This development was a process that can also be seen in Hebrew prints. The first Hebrew prints of Bibles and Bible commentaries before 1500 had no title page; by contrast, the cover page of the first Bomberg Bible from 1517 is elaborately designed.¹²⁵

The change in the actors involved in the material transformation from manuscript to book also brought other changes in its wake. Not only do we find that production processes changed and other groups were the main protagonists in production than was previously the case; we also find the formation of new communities of readers and users. This also resulted in shifts in the use and interpretation of what was written.

¹²¹ Cf. for example the colophon in the printed *Pentateuch with commentary by Rashi and the Targum* (Bologna 1482; cf. Tychsen 1780, esp. 83–84). Colophons of Christian and secular works also often refer to the supposed text quality, correction efforts, and production process. On scribal notes, cf. Wallenwein 2017.

¹²² For a good overview, see Petzold 2019, 26–77.

¹²³ Foundational here is Duntze 2013. Even in antiquity, there had already been professional booksellers.

¹²⁴ Cf. Rautenberg 2008; Smith 2000.

¹²⁵ Figure: https://commons.wikimedia.org/wiki/File:Titelseite_der_ersten_Mikraot_Gedolot_-_Felix_Pratensis_-_Daniel_Bomberg_-_1517.pdf (accessed 16/5/2023).

The assignment of a book's materiality and its cultural context—something which had been clear until this point in time—breaks down in processes that sometimes spanned decades. Research into the history of the first prints, however, has not been limited to examining various changes, but has also offered the possibility of assessing the influence of these changes on the construction of both individual and communal identity.

If, for example, it was assumed that the printing of a Jewish book also changed the attitude towards the book's 'Jewishness', this was intended to mean that printing enabled a wider circulation of the book not only as a specific product but also as a 'bearer' of ethnic, religious, and cultural content. Such content then came into contact with the broader circulation and transformation of ideas and thus necessarily became involved in a highly relevant transcultural process. From a methodological point of view, it is important to bear in mind that these cultural relations are never unambiguous, but always require reciprocity. This is the case even when they collide with unilaterally expressed cultural rigidity, as in the case of censorship more generally, or in the case of the ecclesiastical censorship of Jewish books, to be more specific here. In any case, what we have here is a transcultural process that strongly impacts how each party involved defines its own identity.

It is important to make another methodological remark at this point. The change in the nature of the Hebrew book in its transition from being produced by hand to being printed typographically does not only lie in the nature of the material or the technical means that made this development possible. This change also concerns the altered conditions of use that resulted from the spread of printing, and especially the fact that Jewish printing in Renaissance Italy never constituted a distinct cultural and technological sphere. Jewish printed works became very popular mainly through the activities of Christian printing houses. These set up shop in Venice and, thanks to their good contacts with the Christian authorities, obtained permission to print Jewish books, even if such tomes might be considered by the same ecclesiastical bodies as containing 'compromising' material.¹²⁶ The example of a Hebrew Bible print with a rich ornamental border (cf. Fig. 7) is particularly revealing.¹²⁷

126 This is exemplified by the Jewish prints of Daniel Bomberg. He hired converted Jews and still printed Jewish books without necessarily subjecting himself to self-censorship. From this point of view, it becomes clear that the Jewish press in Venice developed within a cultural sphere that was dependent on the surrounding Christian world, and indeed it owed much of its happiness and success to this connection. By contrast, the Jewish press run by (non-converted) Jewish printers often had to adhere to forms of preventive self-censorship in order not to get into trouble with the Christian authorities, who often suppressed Jews socially and fiscally in ways inspired by the Inquisition (cf. Roth 1972, 45). However, the case of the Jewish press also offers quite revealing examples of cross-cultural transmissions. This is the case with the first Hebrew prints of the Bible, printed by Joshua Solomon Soncino, but decorated with plates that had already been used for prints by Greek and Latin authors.

127 An iconographically similar border was used in 1488 by Soncino for the *editio princeps* of the Bible (*Torah, Nevi'im, Ketuvim* [Pentateuch, Prophets, Writings]), printed by Abraham ben Hayyim for Joshua Solomon Soncino. This border, however, had first been used by the Italian printer Francesco Del Tuppo in his 1485 edition of Aesop's Fables. Cf. Roth 1972, 45.



Fig. 7: Frontispiece of a printed Hebrew Bible (*Torah, Nevi'im, Ketuvim* ['Pentateuch, Prophets, Writings']), Naples ca. 1492, printed by Joshua Solomon Soncino, parchment, GW 4199. Oxford, Bodleian Library Holk. c. 1. Photo: © Bodleian Libraries, University of Oxford (CC BY-NC 4.0).

The exchange, loan, or sale of typographical material — typefaces, frames, plates, and illustrations — was not uncommon, especially at the beginning of the printing age when the technical and economic capacities for producing typographical material were still relatively limited. It is interesting to note, however, that there was a willingness on the part of Jews to compromise with the surrounding Christian environment in order to satisfy the ambitions of producing Jewish prints of a certain typographical quality and aesthetic.

The text of the Soncino Bible (Fig. 7) is framed by an ornamental border. The small naked figures depicted here are striking and may be erotica based on ancient models; nonetheless, such depictions are forbidden according to Jewish law. These borders were used without any explicit warning to Jewish readers because the decorations were clearly ‘non-Jewish’. This shows the contrast or tension between the text and its aesthetic form. On the other hand, this border also shows the technical and cultural dependence of early Jewish prints on the complex world of non-Jewish printing houses or those subject to Christian authorities. The fact that a Jewish printer used these border decorations can probably also be explained by the fact that they were very elaborately designed and therefore expensive, so that it could be economically more advantageous to reuse such decorative elements that had already been crafted for other purposes. It is important to note, however, that these borders, which profoundly violated the biblical prohibition against making a human image, were readily accepted not only by the printer but also by the readers themselves, who apparently did not complain and even bought these new Bibles. This suggests that the limited agency of Jewish actors led to a cultural and transcultural flexibility that arose perhaps primarily due to technical concerns. Apart from a certain tolerance of the customs of the Renaissance world, it can be assumed that printing as a technical innovation led Jewish printers and readers to accept aesthetically what they might not have accepted under other circumstances.

The example of the Soncino Bible illustrates the complexity of the material change that went hand in hand with a pragmatism on the part of those actors involved in the context of Jewish and Christian prints in Europe. Depending on the perspective, the processes can be described as both standardisation and pluralisation.

The transition to print of all kinds also enables processes of standardisation and the pluralisation of audiences, meanings, and uses of texts to take place simultaneously in early modern Japan, although these processes can have a lengthy and circuitous development. Almost a century after the development of commercial printing, the Kyoto illustrator Nishikawa Sukenobu turned what had become a standard format for organising knowledge into a vehicle for his covert political agenda.¹²⁸ At first glance, his 1743 work *Jokyō Ogura shikishi* 助教小倉色紙 (‘Poem Cards for the Instruction of Women’) looks like a standard textbook for the female audience named in the

¹²⁸ Cf. Preston 2013. On the development of commercial printing in early modern Japan, see Kornicki 1998, 169–179.

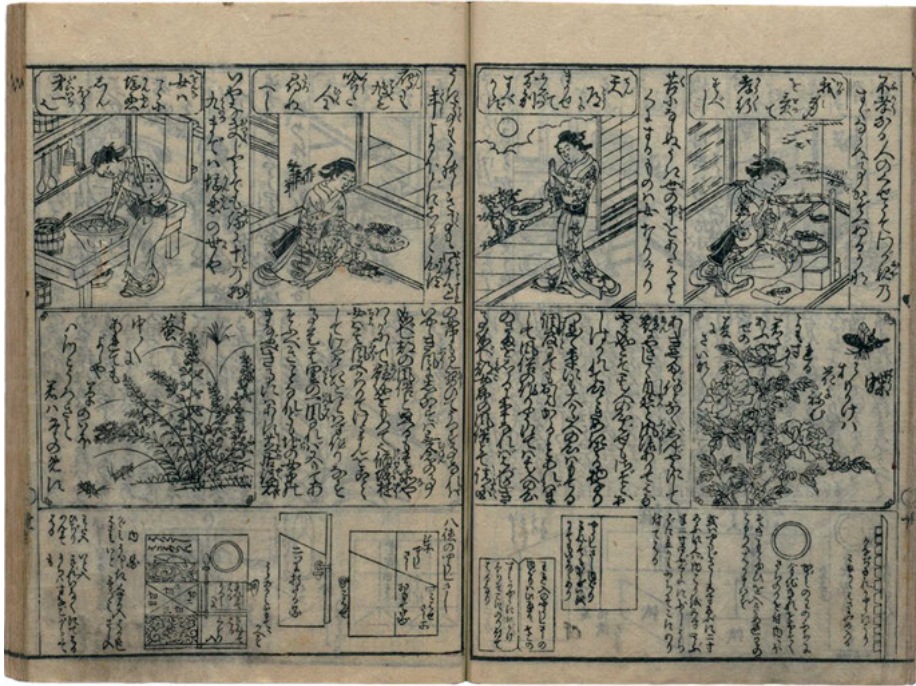


Fig. 8: Nishikawa Sukenobu, *Jokyō Ogura shikishi* 助教小倉色紙 (‘Poem Cards for the Instruction of Women’), pp. 10v–11r, 1743, woodcut, ink on *washi*, 24.3 × 17.8 cm. © Atomi University Library, Tokyo, Japan, <https://adeac.jp/adeac-arch/viewer/001-mp002619-200010/001-1001920501/> (accessed 27/01/2022).

title (cf. Fig. 8). Its complex layout testifies to the “accumulative tendency” of Japanese culture, as is also evident in the increasing density of information in textbooks over time.¹²⁹ On a single page, Sukenobu accommodates five separate cartouches with varying numbers of cross-references around the main theme of proper behaviour in society. Visual elements are also cleverly integrated into a moral dialectic: one of the women in the upper register is a housewife whose servant ties her sash from behind, while the other is a courtesan who ties her own sash. However, a close reading of the text reveals the use of political metaphors. For example, the combination of butterfly and peony imagery with the word *kimi* 君, which can mean both “courtesan/prostitute” and “ruler/emperor”, in the cartouche in the centre of the right-hand page, almost certainly suggests a pro-imperial message.¹³⁰ These would only have been deciphered by a certain community of those supporting the restoration of de facto imperial

¹²⁹ Cf. Goree 2020, 114.

¹³⁰ The combination of butterfly and peony was a symbol for the proponents of the restoration of the Ming dynasty after its defeat and transition to the Qing dynasty; see Chiem 2020, 86.

rule over the military regime—a community which otherwise communicated predominantly via handwritten formats.

Often, letterpress printing is seen as a means of standardising and unifying access to textual material. However, the materiality of print was part of a complex media environment in which it negotiated its relationship to handwritten texts as well as the oft-competing interests of publishers, authors, financiers, authorities, and readers. As can be seen from the case studies presented here, printed texts—as components of textual ecosystems—contained textual and paratextual features that allowed for multiple simultaneous uses. The pluralisation of audiences, uses, and meanings thus depended on the standardisation made possible by print, which to a large extent determined how texts were used. Often they opened texts to new social fields and in this way also shifted power relations beyond the texts and their production.

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Abbreviations and Sigla

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