

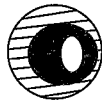
typeface commonly used
display

differentiation in the
treatment of Chinese lead
headlines:
preface, weight, color and
size

Chinese typography often
is enclosed in boxed/rectangular
shape

information presented in
segments

graphic devices to support
navigation



Exploring the relationship between language and design: a study of Hong Kong newspapers

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Abstract

Linguistically and in their visual form, Chinese and English are distinct typographic systems. This paper investigates the relationship between language and typographic design through examining a sample of Chinese and English newspapers published in Hong Kong. The paper outlines key considerations for Chinese typography and approaches to newspaper typography and layout and then explores these further in relation to the newspapers in the sample. The findings indicate that the Chinese newspapers tend to differentiate information through color and graphic devices more extensively and overtly than the English newspapers. The Chinese layouts also show a greater tendency towards symmetrical design and use an atomization approach to layout. These differences highlight the importance of considering the interplay between language and design and adapting descriptive frameworks for particular cultural contexts.

Keywords

Chinese, Hong Kong, layout, newspapers, typography

1 Introduction

Printed newspapers are still a popular way to acquire news in Hong Kong. There are 54 daily newspapers available in a city that has a modest population of just over seven million (Information Services Department, 2015). Newspapers are published in both of Hong Kong's official languages: Traditional Chinese (27) and English (12), as well as bilingual publications (10) and a few in Japanese (5).

The study reported here investigates the relationship between language and design practice through comparing the visual design of Hong Kong newspapers published in Traditional Chinese and English. The aim is to investigate whether changes in typographic systems influence how information is presented within an established genre, such as newspapers. The study begins with an overview of typographic differences between Traditional Chinese and English, and then outlines considerations for analyzing typographic presentation and layout in newspaper design. Following this discussion, the study uses a sample of Hong Kong newspapers to explore the relationship between language and typographic presentation.

2 Typography and layout in newspaper design

2.1 Considerations for analyzing Chinese typography

Linguistically and typographically, Traditional Chinese and English are very different. Whereas English uses the Latin alphabet, the Chinese writing system is logographic¹ and contains both phonetic and ideographic elements (Sun et al., 1985). In comparison to the 26 alphabet letters that form the basis of English, Chinese type designers are required to design a vast number of characters². Chow (quoted in Lam et al., 2007) estimates that there are around 60,000–80,000 Traditional Chinese characters. However, it has been suggested that familiarity with about 3,500 is sufficient to read 99.9% of newspaper articles, and knowing around 1,000 characters may be enough to understand 90% of newspaper articles (Xing, 2006).

Despite changes in technology, the vast number of characters required is a major challenge for Traditional Chinese typeface designers (Hirasuna, 2009).³ Moreover, Chinese typefaces do not have related variant

1 A logographic writing system is one where the graphemes (the smallest written unit of the language) represent words or morphemes (meaningful unit of a language). An example of a familiar logographic writing system is the mathematic symbol system.

2 In the Traditional Chinese script, a radical is the root of a character, which itself can be a simple character or combined with another radical or a complete character to form another character. By combining different stroke styles, a total of 213 radicals can be constructed (Wong and Hsu, 1995).

3 Over the last two decades, automatic Chinese typeface designing systems have been developed to maximize productivity, save time and human power. These algorithms, such as Language for Chinese Character Design, Chinese Character Design System and METAFONT are capable of producing a typeface based on given artwork and parameters

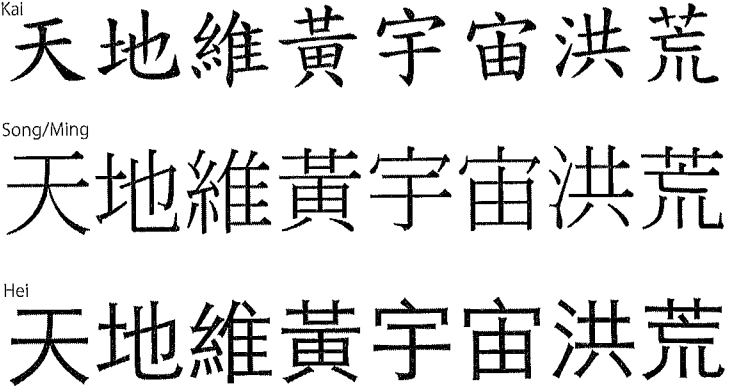
forms equivalent to italics in Latin typefaces because it is time-consuming to design all the characters required for one 'regular' font, let alone an additional 'italic' or other variant (Takagi, 2012; Wong and Hsu, 1995).

Figure 1

Common classifications for Chinese typefaces

Examples of three Chinese typeface classifications: Kai, Song/Ming and Hei. Kai's strokes are fluid and calligraphic, Song's strokes are comparatively more perpendicular with serif terminals, while Hei features low contrasting strokes that do not have serif terminals.

ILLUSTRATION: Ryan Lee



Chinese typefaces are sometimes described in a parallel way to the calligraphic script, serif and sans serif classifications, commonly (albeit somewhat crudely), applied to Latin typefaces (Hofmann, 2014). As shown in Figure 1, three common classifications for Chinese typefaces are:

- Kai – based on the *Kaishu* calligraphic script
- Song (also known as *Ming*)⁴ – originated from Kai but with simplified, geometric strokes and serifs
- Hei – a sans serif equivalent.

In relation to legibility, Chinese readers are said to prefer typefaces from the Song and Hei classes to Kai (Cai et al., 2003; Yang and Sun, 2011; Hofmann, 2014). Tam (2011) explains that Chinese characters often appear darker than Latin letters due to a lack of internal white space. The exaggerated end strokes of Kai can intensify the already dark appearance, resulting in illegible type in small sizes.

Tam's (2012) comparative descriptive framework for bilingual texts compares equivalent graphic and spatial cues in Chinese and/or English typography. His framework identifies that 30 attributes, semantically, are directly transferable in the two languages, while 25 cues have no absolute equivalents and a further 21 have similar semantic values but are not identical.

An important difference in relation to editorial typography is that the Chinese script does not have a case system. Accordingly, typographic variants such as all-capitals, small capitals, or capitalization at the start of an English sentence or for proper nouns are not applicable to Chinese. For analysis, however, it is more appropriate to draw comparisons with uppercase rather than lowercase English characters, as Chinese characters do not

4 This style originated during the Song Dynasty and matured in the Ming Dynasty. The Japanese call it 'Mincho'.

have ascenders and descenders (Tam, 2011).

In relation to spatial cues, Tam's framework suggests that these tend to be more transferable between the two languages, or at least have similar semantic values. The most notable difference lies in reading directions. Since the 1990s, in Hong Kong newspapers, Chinese text that reads right-to-left in the horizontal direction is rarely used and is considered old-fashioned. It is now more common to display text for horizontal reading from left to right. However, Chinese text displayed in the traditional vertical direction and read right-to-left is still used.

Wong and Hsu (1995) describe how each Chinese character sits within a notional square of fixed dimensions, resulting in a rigid appearance as text is arranged in clear rows and columns. Tam also points out that this 'mono-spaced' nature of Chinese characters favors justified typesetting⁵. Use of word spacing as a separator does not apply in Chinese. Instead, punctuation marks are used to create a visual break in sentences. Notionally punctuation is also mono-spaced like the other characters, although spacing adjustments around punctuation may occur.

Punctuation is also used in Chinese texts as a way of replacing some of the typographic variants (e.g. italics) that are not available in Chinese. For example, 「...」 – which is the equivalent of quotation marks in English – is frequently used to emphasize words that sit within the brackets instead of using perhaps a bolder weight to differentiate. Similarly, «...» is used grammatically for the marking of titles of books, films, and so on, which is similar to conventional uses of italic for the marked form in English.

2.2 Newspaper design

In many Western countries, broadsheet and tabloid newspaper formats are conventionally associated with, respectively, serious and sensational styles of journalism (Luna, 1992; Kostelnick and Hassett, 2003; García, 2005; Lamberg, 2015). For example, Luna (1992) notes that broadsheet layouts are more regular in their visual organization and tend to feature lengthier texts, whereas tabloids are more dynamic and irregular in their layouts and either have shorter articles or articles that are more fragmented with multiple subsections or components. However, many argue that contemporary newspapers show an increasing trend towards tabloidization (Lamberg, 2015).

García (2005) and Harrower (2007) assert that today's readers prefer small, concise story packages that enable them to scan pages and read selectively. Accordingly, newspapers are multimodal documents that combine images, text and other graphic elements in increasingly 'non-linear' (Twyman, 1979, 129) ways.

⁵ The modularity in Chinese text potentially raises a question of readability, because it introduces 'rivers' of white that would be considered poor practice in English typography. However, an experiment by Sun et al. (1985) indicates that the reading rate, fixation duration and span are similar between horizontal Chinese and English in equivalent meaningful words. Other studies (e.g. Inhoff and Liu, 1998 and Sun and Feng, 1999) have also measured reasonably equivalent reading rates and eye movements between Chinese and English, despite the differences in language and script.

Moreover, newspaper formats and reporting styles are related to both cultural attributes (Esterson, 2002; Harrower, 2007) and economic differences in cost and distribution. In Hong Kong, tabloids are freely distributed whereas the major broadsheets involve a cost. The kinds of typographic presentation commonly associated with broadsheet and tabloid formats and their associated styles of journalism may not be generalizable to Hong Kong newspapers. These contextual considerations indicate that newspaper design should be explored beyond a possibly arbitrary analysis of the visual conventions associated with broadsheet and tabloid formats in the West.

Kong (2013) describes two approaches to newspaper layout: atomization and graphic-composite. Atomization uses side elements to the main event, such as reactions of participants and effects/consequences of the event, often in the form of pull-outs and photographs, to provide readers with multiple entry points to an article. Graphic-composite also involves multiple images and entry points but these are fused on to a background image to form a single graphic – 'boiling down a news story to its visual essence' (Cooke, 2003, 170). These approaches create different kinds of visual hierarchies for reading.

Kong (2013) argues that the fragmented nature of the atomization approach favors quicker reading, where readers can jump between different segments easily and confidently. However, it may lack a sense of integrity compared to the graphic-composite approach, where a large overarching graphic provides a framework to aid the interpretation of the rest of the news.

Drawing on these two approaches to layout, Kong compares the multimodality of a Hong Kong Chinese newspaper with a British example. He concludes that the Chinese newspaper makes greater use of headlines, pictorial and diagrammatic resources, resulting in reports being more fragmented. Contrastingly, the British newspaper relies more on text-typographic resources and the graphic-composite approach. Building on his research, our analysis shall consider whether similar layout differences can be observed between Chinese and English newspapers published in Hong Kong. This enables us to consider similarities and differences across two typographic systems rather than different geographic contexts.

In design practice, establishing a clear visual hierarchy is intended to aid navigation and support strategic reading. The Poynter Institute's Eye-Track research (2006) supports this premise, revealing how visual elements (e.g. images and diagrams) and salient text (such as headlines which are differentiated from the main text to create hierarchy) attract immediate attention. Harrower (2007) states that boxing a story increases its salience and denotes importance. However, this may be less true of layouts that use multiple boxes and graphic devices to differentiate information.

Similarly, some approaches to newspaper layout focus on principles of framing and information value (e.g. Kress and Van Leeuwen, 1998). 'Framing' involves the use of attributes such as color and tone, rules and

boxes, and space to visually group or divide elements. 'Information value' refers to the importance assigned to an article or element based on its position on the page. However, this approach assumes a left-to-right reading direction and a top-to-bottom page hierarchy, which may not readily translate to languages like Chinese that can be read in more than one direction and may use multiple reading directions within a layout.

Navigation and reading strategies are also supported by 'typographic differentiation' (Moys 2014a; 2014b). Typographic differentiation refers to the ways in which the different components of a text (e.g. headlines, blurbs, subheadings, body text and captions) are visually articulated from one another. Such differentiation may be achieved through changes in weight, scale, stylistic variations, color, spacing, positioning, and the addition, absence or stylistic variation of graphic devices (e.g. rules and boxes).

Previous research by Moys (2014a; 2014b) identifies how particular clusters of typographic and spatial attributes tend to co-occur in editorial genres forming patterns of high, medium, and low differentiation. For example, magazines that use subtle changes in size, weight, roman/italic variants or capitalization for typographic differentiation are also characterized by generous spatial attributes, highly ordered (and often symmetrical) layouts that use color and graphic objects in an understated fashion and limit the layering of visual elements. Documents using a pattern of low typographic differentiation suggest in-depth, continuous reading strategies and tend to be perceived by readers as serious and credible. In contrast, documents that use exaggerated typographic differentiation typically use more combinations of typefaces exhibit greater contrasts in color, style and weight, apply additional or heavier effects (e.g. drop shadows or outlines), feature narrow columns with tight spatial attributes, incorporate a greater diversity of contrasting graphic elements (color, rules, boxes, etc.), and have layouts characterized by asymmetry, irregularity and layering. For the participants in Moys's studies, documents exemplifying the attributes of high typographic differentiation implied scanning and selective reading strategies and tended to be seen as more sensationalist.

However, these clusters of attributes – and the conventional associations they carry for readers – may not translate as readily to Chinese typography and layout. As noted in section 2.1, Chinese characters, do not commonly have italic variants or capitals. Thus, designers may be more likely to use 'extrinsic'⁶ (Twyman, 1982) means to differentiate text and create visual emphasis (Tam, 2012). It is possible that changes in size and color, spatial attributes, typographic adornments and graphic devices may be used more extensively in Chinese newspapers than they are in the British examples Moys originally studied.

In addition, different kinds of content within a particular publication may be treated differently. For example, Harrower (2007) states

6 Twyman (1982) distinguishes between intrinsic and extrinsic typographic attributes. Intrinsic attributes relate to the character and in particular, the system that produces the characters. Extrinsic attributes refer to what can be done to characters through configuration, spatial attributes and color.

that sports sections provide opportunities for designers to use photographs more boldly and create more dynamic layouts than in news sections.

So far, this review has identified a number of considerations for comparing Chinese and English typography in newspaper design. These include: typeface choices, reading direction, use of images and graphic devices, differentiation and layout. To explore how these translate into real practice, it is useful to examine examples of Chinese and English newspapers.

3 The newspaper sample

This study focuses on an analysis of the typographic presentation of articles taken from Hong Kong newspapers with a circulation of over 100,000 (*StarExpress*, 2013). The examples included were all published between the 14 and 15 July 2014. The selection criteria aimed to ensure the sample was reasonably representative of a combination of attributes relating to cost (free or paid) and target audience (class, age and occupation backgrounds). The resulting sample includes the five Chinese and two English language newspapers identified in Table 1. The English newspapers seemed reasonably typical of the conventions discussed in existing analyses of newspaper design. Given that these conventions are well-supported by published studies, we decided to continue with the sample as it had an appropriate balance of both broadsheet and tabloid formats.

TABLE 1
Overview of the newspapers in the sample.

Publication	Language	Format
<i>Apple Daily</i>	Chinese	Broadsheet
<i>Headline Daily</i>	Chinese	Tabloid
<i>Metropolis Daily</i>	Chinese	Tabloid
<i>Ming Pao</i>	Chinese	Broadsheet
<i>South China Morning Post (SCMP)</i>	English	Broadsheet
<i>The Standard</i>	English	Tabloid
<i>The Sun</i>	Chinese	Broadsheet

In order to establish sufficiently comparable units for analysis without biasing the study by pre-selecting design attributes, the treatment of particular editorial content was studied. Three news items that were most commonly reported⁷ in the Chinese newspapers were selected. These articles reported on: a mansion burglary, unpaid wages for workers constructing a bridge, and a traffic incident. To consider how different kinds of editorial content are treated, sports articles on the final and third place matches for the 2014 FIFA World Cup were also examined.

7 *Ming Pao* did not report the news about the traffic incident.

4 Findings

4.1 Typeface choices

The body text typefaces featured in *Ming Pao*, *Apple Daily* and *Headline Daily* are characterized by simplified, geometric strokes and serifs and, accordingly, belong to the Song classification. However, *Ming Pao's* typeface has larger counters and a thinner stroke weight than the other two newspapers (Figure 2). This results in an optically bigger and more spacious appearance. *The Sun* and *Metropolis Daily* both use a Hei (sans serif) typeface as their main body type. *Headline Daily* is the only newspaper that shows a change of typeface between the main news articles and the World Cup final report. This appears to distinguish the match report as a coherent feature, as does the use of a textured background for the page. The average body type size is around nine point between the Chinese and English samples. All of the Chinese examples use a Hei typeface as their predominant display type (figure 2). The two English newspapers use serif body type and, predominantly, sans serif display type.

Figure 2

A Hei typeface is commonly used for display type as seen across the headlines for the mansion burglary reports. Bottom image used by permission of *Headline Daily*.



The English body type size is noticeably smaller and tightly packed in terms of leading and character spacing. While the average body type sizes between the Chinese and English samples are similar at around nine point, because Chinese characters do not have ascenders and descenders the Chinese type appears to be optically bigger.

4.2 Reading direction

Horizontal, left to right reading direction is featured in all of the newspapers in the sample. In addition, in some of the Chinese newspapers, captions and lead headlines may be presented to read vertically – as seen in some of the captions in the World Cup final report in *Apple Daily* and *Metropolis Daily*.

Across the Chinese articles, Arabic numerals and/or English words are found embedded in the body of many reports. This means designers working in Chinese may at times be presenting content in two directions,

as vertical Chinese text is read from right-to-left but Arabic numerals and English are read left-to-right.

4.3 Images and graphic devices

Overall, the Chinese articles use substantially more images than the English examples. For example, each of the Chinese newspapers includes at least four images in the World Cup final reports whereas the English examples only feature two images each.

The Chinese newspapers also frequently use visual signposts and icons that support navigation. For instance, in the main news articles in the tabloid examples, a repeating graphic device is often used to place emphasis on the summary, especially in lead articles. *Headline Daily* consistently uses a megaphone logo (Figure 3), while *Metropolis Daily* uses a changeable-four-character graphic device. Furthermore, dingbats and icons are regularly used in the captions to aid navigation or create emphasis. They are also repeatedly used in crediting a story, either as special brackets near the start of the article, or as an end mark such as in *Metropolis Daily*.

Figure 3

Graphic devices are used at the start of the articles in *Headline Daily* for navigational purposes. Image used by permission of *Headline Daily*.



Similarly, in the World Cup final reports, all Chinese newspapers make use of a series logo that graphically illustrates the 2014 Brazil World Cup. This is also present in the play-off match reports. *The Standard* also displays the logo on its back page. Furthermore, *Apple Daily* uses a logo – recurring throughout the publication – to direct readers to their website for more photographs.

For the World Cup final reports⁸, boxes are used heavily as framing devices. In *Ming Pao* (Figure 4), there are in total eight boxed sections on the page: five in white backgrounds and one each in green, blue and black, while another yellow box frames the whole page. This use of boxes as framing devices also appears in the other newspapers to varying degrees:

⁸ In the main news and the play-off match report from the previous day, boxes are used less frequently. It is possible that more boxes were used in the layouts to re-create the excitement of the final on the page. Nevertheless, most pages in the Chinese newspapers contain at least one framed element and these are often filled with a background color.

Figure 4

Ming Pao World Cup feature uses boxes extensively. Image used by permission of Ming Pao (15/07/2014)



- *The Sun* (Figure 5) separates each side element with a box,
- *Apple Daily* merges a range of graphic and text elements surrounding the main article using an irregular black background,
- *Metropolis Daily* uses a framed side story and article summary besides each other, and
- *Headline Daily* presents the sole article on the page inside a textured box.

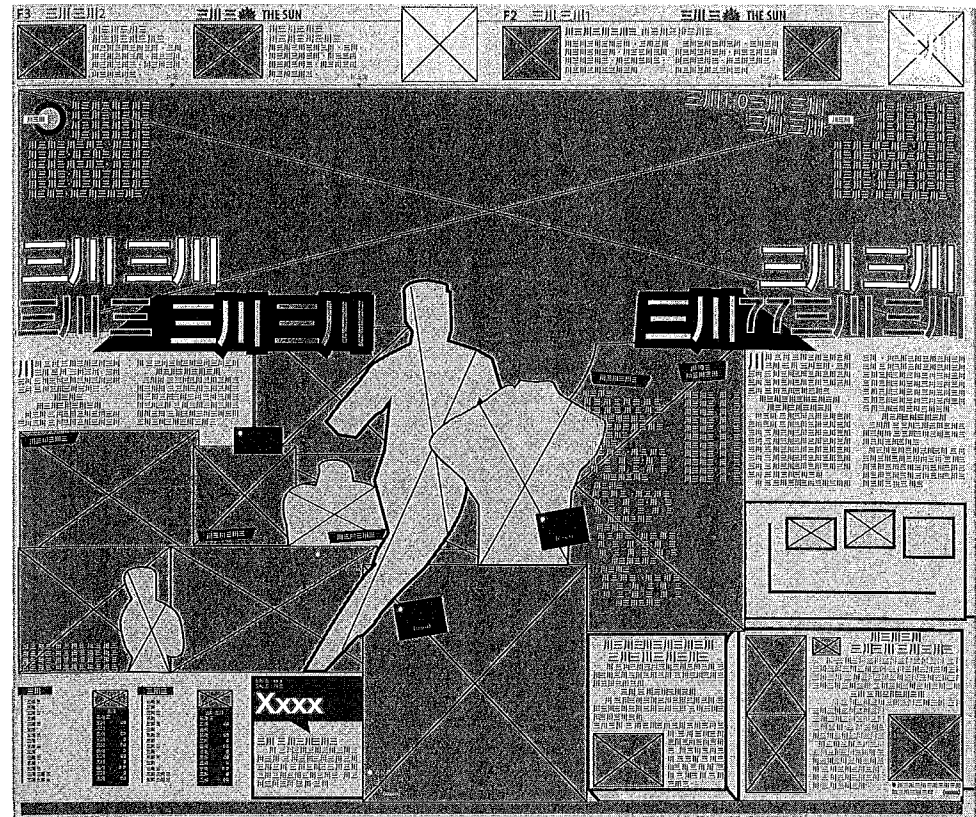


Figure 5

A schematic adaptation of *The Sun* World Cup feature showing the high level of visual differentiation through the use of boxes, exaggerated stylistic typographic differentiation and a graphic-composite layout approach that is also mostly symmetrical across the spread.

In comparison, the English examples use fewer graphic devices. These tend to be text-based. For example, orange quotation marks are used to introduce a pull-out quotation in *SCMP*, and *The Standard* uses orange square characters to highlight additional, related information at the end of the article (Figure 6). Frames and boxes are rare – and used sparingly where they do occur (e.g. Figure 6) – and text is seldom placed against or reversed out of a colored background.

4.4 Differentiation

Extensive visual differentiation is evident in the treatment of the Chinese lead headlines. Across the articles, a text-based summary or introductory blurb is usually differentiated in Chinese lead articles across news and sports sections. Subheadings are also frequently used to structure the body text into clear sections. The frequency of subheadings increases for longer news reports, and particularly in lead articles. On average, broadsheet coverage of the World Cup final uses far more subheadings than tabloid coverage (7:1).

In the Chinese newspapers, headlines are the most salient typographic element.

Figure 8.

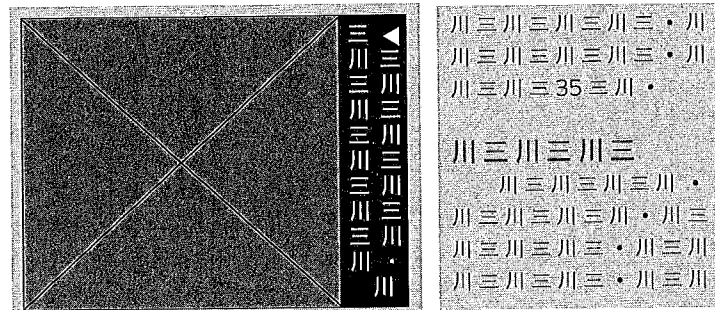
In this example from the *Ming Pao* burglary report, the typeface used in the story credit, mention of a stakeholder, caption and subheading is changed to Hei from the primary Song body typeface. Image used by permission of *Ming Pao* (15/07/2014).

Figure 9

A schematic adaptation of the presentation of the image and caption accompanying the traffic incident report in *Metropolis Daily* to show differentiation through setting the caption in white on a dark background and incorporating a graphic element (the triangle) to create a visual point of entry.

Figure 10

In *Metropolis Daily*, as shown in this schematic adaptation, the subheading is differentiated from the Hei body typeface through a change to another Hei typeface with a bold variant, as well as a change in color and size.



tiate captions from the body text. For subheadings, a change to another Hei typeface is identified, often in a bolder variant and in *Metropolis Daily's* case, change of color as well. Interestingly, *Ming Pao* is the only newspaper in the sample that provides emphasis or differentiation within the body text for a stakeholder reference.

As anticipated, the articles from the two English newspapers seem to exhibit a much more restricted range of variables for visual differentiation than the Chinese newspapers. Body and display text are mostly differentiated through changes between serif and sans serif type, although *SCMP* also uses a serif type for blurbs and pull-out text. Bylines, captions and continuity information are in a bold sans serif and sometimes also in caps, as seen in the sports feature from *The Standard* (Figure 6). Color is used sparingly as a means of differentiation. In *SCMP's* report on the final, for instance, only four small elements are colored differently to the body text: the score line, the deck, the first two words within the deck and the orange quotations in the pull-out. Similarly in *The Standard* (Figure 6), color is used in the outline of the section frame and in the bullets. Where filled boxes are present, they are relatively small in size or use very subtle color.

Figure 11

A schematic approximation of the use of color and boxes to create differentiation and hierarchy in the burglary report from *Apple Daily*.



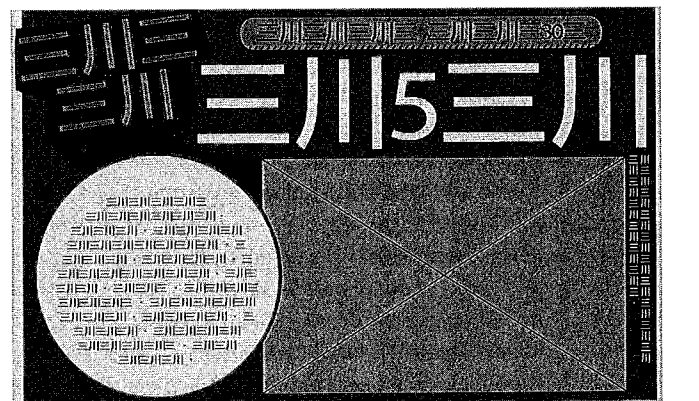
Figure 12

Visual differentiation is achieved through more understated means in *Ming Pao*, often through spatial attributes and subtle color as shown in the unpaid wages report shown here. Image used by permission of *Ming Pao* (15/07/2014).



Figure 13

A schematic adaptation of the unpaid wage article from *The Sun* showing a high degree of typographic differentiation through color, shape and layout.



In the Chinese examples, color seems to play a key role in differentiation and giving salience to display and other text. *Metropolis Daily* uses color for the article graphic positioned near the summary, subheadings, captions and lead headline, while within a headline two colors are used to distinguish the fragments. With *Apple Daily's* mansion burglary report (Figure 11), a blue box is used to group all key information such as the headline, summary, and images of the area and victim, while the deck and a fragment

of the headline are styled in boxes of different color. Such prominence draws the reader's attention to the headline and summary. *Ming Pao* (Figure 12) is less typical in its use of differentiation compared to the other Chinese examples and exhibits more subtle color differentiation in its treatment of news articles. For example, in the report on unpaid wages, a beige box is used to frame a side element and differentiation is created via more understated means such as the space in the headline.

For *The Sun's* article on unpaid wages (Figure 13), part of the headline is tilted and given an exaggerated shadow, additional lead-in text is placed in an elongated lozenge with a shadow over a decorative background and the summary is wrapped inside a circle. The juxtaposition of a range of shapes, colors and visual effects is typical of a pattern of high typographic differentiation. *Headline Daily*, *Metropolis Daily* and *Apple Daily* are much more regular in their use of shapes and positioning of elements, but still very colorful and bold.

Overall, the Chinese examples also make more frequent use of color backgrounds.

4.5 Layout attributes and approaches

A range of recurring layout attributes are observed in the design of Chinese newspapers from Hong Kong.

Firstly, as noted in relation to visual differentiation, the information is often presented in fragments: through the regular usage of a starting summary, subheadings that break up text into snippets, headlines that are constructed in parts, and images (only one article in the Chinese sample is not illustrated with an image). This fragmentation creates multiple entry points to draw and guide readers into an article. It also means that visual cues and color play a substantial role in aiding navigation through organizing and distinguishing information. While accent colors are used to highlight and differentiate headlines, background fills and borders are also featured regularly to distinctively group elements together, showing a high degree of visual differentiation and contrast.

Secondly, the Chinese newspapers exhibit highly ordered and symmetrical layouts. For example, the headline of *Metropolis Daily's* World Cup final report is centered and justified to the rest of the article, while the headline fragments also show symmetry with four characters per segment. Centered alignment and symmetrical sentence construction can also be seen in the lead headlines and some subheadings of *Ming Pao's* World Cup report (Figures 14, 15). In addition, centered lead headlines are also observed across all main news reports, with many of them justified to the article as well. (11 out of the 14). *Metropolis Daily* is the only newspaper where the subheadings are left aligned (Figure 10). In *Apple Daily* and *The Sun*, uniformity is also evident in the overall spread layout, with a high degree of visual symmetry and repetition across the spread. The impression of visual symmetry

Figure 14

Centered headline with symmetrical sentence construction of 4 characters per segment used in *Ming Pao* World Cup feature. Image used by permission of *Ming Pao* (15/07/2014).



Figure 15

An example of centered alignment and symmetrical sentence structure used in a subheading in the *Ming Pao* World Cup report. Image used by permission of *Ming Pao* (15/07/2014).



and order is reinforced by justified typesetting and centered headings. Justified body text is present across all sample articles, even for elements such as captions and vertical text and columns of text are systematically aligned.

In the English examples, symmetry and regularity are less common. While some English text is justified or centered, ragged right setting is used in most headings, captions and even some articles. The English headlines are also surrounded by more white space than the Chinese ones.

Thirdly, following Kong's (2013) analysis, a mixture of layout approaches are used in the sample. Only one of the five Chinese newspapers, *Metropolis Daily*, shows a complete atomization approach, where there are a number entry points (e.g. summary, photographs, side element on the left or the subheading) into the article after the lead headline.

The Sun (Figure 5) uses a graphic-composite style with elements mounted onto an anchoring image that spans across the spread; this creates a powerful initial impression. Furthermore, the large number of smaller, photographic and diagrammatic elements presents the news as a visual montage.

The other three Chinese newspapers, *Apple Daily*, *Headline Daily* and *Ming Pao*, show a mixture of atomization and graphic-composite approaches. This hybrid style offers the reader a defined starting point at the anchoring image that calls for attention, before providing various distinct options of reading path to follow. Taking *Apple Daily* as an example (figure 4), the lead headline, which is overlaid onto the image of the champion, forms a strong point of entry into the layout. The adjacent image and headline on the left hand page visually merges with the right, creating a spread of succinct statement. After this impactful visual starting point, various points of entry into the report content are provided for readers. The fragmented, second layer information is clearly signposted and sectioned through visual means such as icons, background fills and (sub-)headings, to guide readers into the article.

For the main news articles, an atomization approach seems typical. An article is often broken up into clear fragments, usually involving a summary, sub-headed sections and images with captions. It appears

that Kong's (2013) finding of Chinese newspapers favoring fragmentation is primarily applicable to the main news section, while the layout of sports pages tends to be treated with a greater level of integration and overlapping of elements, which include larger 'anchoring' images. Reports on the play-off match from the previous day also show similar layout attributes.

The two English newspapers examined also exhibit an atomized layout approach. However, the level of atomization is less fragmented than in the Chinese newspapers. For instance, the English headlines are not split up into segments, subheadings are not used in either newspaper and summary paragraphs are not featured. However, other entry point elements are present in the English newspapers that are not used in the Chinese articles, such as the pull-out quotations used in *SCMP* and the bulleted information at the end of some sport page articles in *The Standard* (Figure 6).

5 Discussion

Using examples of Hong Kong newspapers, this paper has explored how differences in typographic systems can lead to the practice of different visual conventions within established genres. It has not explored the historical evolution of newspaper publishing in Hong Kong or how different conventions are intended to appeal to particular target markets, although we acknowledge that these are important factors in newspaper design. This is not an oversight. The focus of the investigation is, in part, to reveal how typographic conventions that may hold particular genre associations for readers (as studied in Moys' previous research – see Moys 2014a; 2014b) are not necessarily universal⁹. While studies that compare audience impressions of the different kinds of visual and typographic differentiation discussed in this paper are of importance, our intention with this study was to develop a foundation for such research by showing how differences in language and typographic systems influence how editorial content may be visually articulated. Differences in the typographic presentation of, for example, free and paid newspapers in Hong Kong or regional distribution and audience demographics could provide useful points of departure for future research.

The discussion focuses on a very small sample of routine news and sports articles and there is scope to extend the study to consider the treatment of a wider range of content (such as: 'breaking' news, editorials, features, opinion and politics) or to conduct an in-depth analysis of newspaper front pages. The analysis also focuses solely on editorial content. The interplay between editorial design and advertising in newspapers, and how this relates to both audience and economic considerations, was beyond the

⁹ With this in mind, we have also tried to avoid including explicit design criticism in our analysis. The analysis reveals that visual conventions are related to differences in language and script and, thus, appraisals of assumed design quality may not necessarily reflect the most appropriate decision for a particular context of use. Moys's previous research engaged with readers' impressions of typographic presentation and, drawing on readers' views, described patterns of typographic differentiation using terms like 'busy', 'restrained', 'subtle', 'exaggerated'. However, these terms carry with them the participants' value judgments of typographic presentation and quality. To avoid imposing such bias on our analysis, we have moved away from these descriptors and adopted a, hopefully, more objective description of typographic differentiation.

parameters of the original analysis. In addition, the discussion has focused on printed newspapers and the growth of online newspapers in Hong Kong – both the online counterparts of the newspapers in the sample and publications which are only published online – merits analysis too.

Although a small sample of editorial articles was used, a number of observations can be made that either complement existing studies or merit further investigation. For example, the increased use of images and graphic devices as well as the more frequent visual and typographic differentiation observed in the Chinese newspapers corresponds with Kong's (2013) analysis of Chinese newspapers. Kong (2013) suggests that the increased use of visual elements contributes to building interpersonal relations with the readers. Drawing on Moys's (2014a; 2014b) research into how people judge information presented according to particular patterns of typographic differentiation in different ways, there is scope to explore how the combination of graphic devices and visual differentiation influence readers' perceptions of newspaper design across different cultural contexts.

In particular, the findings highlight how typographic and layout conventions may differ for particular languages and cultures. The English examples tend to use typeface variations and 'intrinsic' (Twyman, 1982) attributes such as changes in case or spacing, whereas the Chinese examples are more likely to use color or graphic devices to differentiate information. The use and range of more graphically contrasting elements for visual differentiation seen in the Chinese news articles, is evident to a greater extent in sports sections. These findings reveal how alternative approaches to visual differentiation may signal similar communicative intentions across cultures – the meanings of which are learned through experience. In this respect, notations – such as Twyman's (1981) 'Typography without words' – that focus on showing how typographic information is articulated without prescribing the use of specific stylistic attributes such as changes in typeface, weight, or color, remain a useful starting point for typographic description. However, the extensive use of 'extrinsic' (Twyman, 1982) attributes such as color and graphic objects in the Chinese newspapers could be difficult to demonstrate through Twyman's notation, which is explained through examples that focus on changes in case, weight, spacing, indentation and alignment.

While the substantial use of color and graphic objects in the Chinese newspapers would seem to accord with the attributes typical of a high pattern of typographic differentiation, the tendency towards symmetry does not. In Western design, symmetry and justification tends to be typical of documents with low visual differentiation and asymmetry with high visual differentiation, as described in Moys (2014a; 2014b). British tabloid journalism is more likely to be associated with the attributes of high differentiation documents. However, it would be problematic to assume any cross-cultural transferability of the kinds of rhetorical and genre judgments, which Moys (2014a; 2014b) found readers associated with particular patterns of typographic differentiation, without first adapting the patterns to

reflect the particular conventions of use in a given context, and then testing these through participant studies.

It has been suggested that Chinese designers adopt centered, symmetrical designs in response to cultural preferences for these attributes (Hedberg and Brown, 2002). Traditional Chinese book layouts tend not to be symmetrical so it is also relevant to consider whether the mono-spaced nature of Chinese typography influences the tendency towards symmetry in multicolumn layouts, as evident in the newspapers discussed here. Alternatively, the increased visual differentiation observed in the Chinese examples could be related to the need to create substantial visual salience of headlines and subheadings. These complex cultural and practical influences merit further investigation across document genres using a range of different typographic systems.

Overall, the raggedness of the typesetting, the more restricted use of color and graphic objects, the optically smaller body text and the more frequent use of space contribute to a lighter-looking page in the English newspapers. Typographically, the increased use of white space around display text in the English newspapers could be related to the fact that English lowercase characters have ascenders and descenders. This makes each line of text less compact than Chinese characters thereby potentially requiring more vertical space ('leading') to ensure legibility. Other factors may have also influenced how the use of space has evolved and historical perspectives could contribute to extending this discussion.

Using a relatively small sample has enabled us to examine a broad range of visual attributes. The findings provide a useful overview of ways in which the respective typographic differences between Chinese and English may influence the way information is visually articulated in newspapers. There is scope to systematically extend this analysis – in full or through focusing on selected combinations of related typographic attributes – to a larger sample. Nevertheless, the findings highlight the importance of considering how theoretical approaches and descriptive frameworks are seldom broadly generalizable but require nuanced adaptation for different contexts of use.

References

- Cai, D., Chi, C. and You, M. 2003. 'A study on applying image descriptors to the legibility assessment in Chinese characters.' *Ergonomics*, 46.8, 825–841.
- Cooke, L. 2003. 'Information acceleration and visual trends in print, television and web news sources.' *Technical Communication Quarterly*, 12.2, 155–181.
- Esterson, S. 2002. 'Kits of parts.' In Berry, J.D (ed.) *Contemporary newspaper design: shaping the news in the digital age: typography & image on modern newsprint*. West New York, N.J.: Mark Batty Publisher, 3–23.
- García, M. 2005. *The impact of the compact*. Published online at: downloads.tolerans.com/information/garcia_media_studie.pdf. (Accessed 8 April 2016).
- Harrower, T. 2007. *The newspaper designer's handbook*. Boston: McGraw-Hill.
- Hirasuna, D. 2009. 'Typography in China.' *At Issue*. Published online at: atissuejournal.com/2009/05/28/typography-in-china. (Accessed 14 April 2016).
- Hofmann. 2014. *Chinese typefaces (and fonts) and how to use them*. Published online at: chinese-forums.com/index.php?blog/25/entry-564-chinese-typefaces-and-fonts-and-how-to-use-them. (Accessed 8 April 2016).
- Inhoff, A. W., & Liu, W. 1998. 'The perceptual span and oculomotor activity during the reading of Chinese sentences.' *Journal of Experimental Psychology: Human Perception and Performance*, 24(1), 20–34.
- Information Services Department. 2015. *Hong Kong: the facts*. Published online at: www.gov.hk/en/about/abouthk/factsheets/docs/media.pdf. (Accessed 26 February 2016).
- Kong, K. C. C. 2013. 'A corpus-based study in comparing the multimodality of Chinese- and English- language newspapers.' *Visual Communications*, 12.2, 173–196.
- Kostelnick, C. and Hassett, M. 2003. *Shaping information: the rhetoric of visual conventions*. Carbondale, Ill.: Southern Illinois University Press
- Kress, G. and van Leeuwen, T. 1998. 'Front pages: (the critical) analysis of newspaper layout.' In Bell, A. and Garrett, P. (eds.) *Approaches to media discourse*. Oxford: Blackwell, 186–219.
- Lam, Y., Tsang, M. and Pang, P. S. 2007. 'Online poll: most difficult kanji – 21 characters shortlisted.'¹⁰ *Ming Pao*. 22 October. Published online at: life.mingpao.com/cfm/reports3.cfm?File=20071022/rptaa03b/gza1.txt. (Accessed 8 April 2016).
- Lamberg, J. 2015. *Clothing the paper On the state of newspaper design, redesigns, and art directors' perspectives in contemporary quality and popular newspapers*. PhD thesis: University of Reading.
- Luna, P. 1992. *Understanding type for desktop publishing*. London: Blueprint

- Moys, J.L. 2014a. 'Investigating readers' impressions of typographic differentiation using repertory grids.' *Visible language*, 47.3, 96–123.
- Moys, J.L. 2014b. 'Typographic layout and first impressions – testing how changes in text layout influence readers' judgments of documents.' *Visible Language* 48.1: 40–67.
- Poynter Institute. 2006. *Key findings*. Published online at: poynter.org/extra/Eyetrack/keys_03.html. (Accessed 7 April 2015).
- Star Express. 2013. *Print circulation update 2013*. Published online at: www.starexpress.hk/index.php/2013/09/print-circulation-update-2013/. (Accessed 8 April 2016).
- Sun, F. and Feng, D. 1999. 'Eye movements in reading Chinese and English text.' *Reading Chinese script: A cognitive analysis*, 189–206.
- Sun, F., Morita, M. and Stark, L.W. 1985. 'Comparative patterns of reading eye movement in Chinese and English.' *Perception & Psychophysics*, 37.6, 502–506.
- Takagi, M. 2012. 'Typographic culture of Hong Kong.' *Proceedings of Typography Day*, 1–3 March, 2012, Powai, Mumbai. Published online at: typoday.in/2012/spk_papers/mariko-takagi-typographyday2012.pdf. (Accessed 8 April 2016).
- Tam, K. 2011. 'Bilingual typography: Hong Kong case studies.' *Proceedings of Same/difference: multilingual typography symposium*, 18 August, Hong Kong. Video online at youtube.com/watch?v=WWo6YUjOtP4. (Accessed 8 April 2016).
- 2012. 'A descriptive framework for Chinese–English bilingual typography.' *Typographische Monatsblätter*, 4.5, 37–46.
- Twyman, M. 1979. 'A schema for the study of graphic language.' In Kolers, P.A., Wrolstad M. E. and Bouma, H. (eds.) *Processing of visible language (vol. 1)*. New York: Plenum Press, 117–150.
- 1981. 'Typography without words.' *Visible Language* XV(I): 5–12.
- 1982. The graphic presentation of language. *Information Design Journal*, 2.1, 2–22.
- Wong, P.Y.C., and Hsu, S.C. 1995. 'Designing Chinese typeface using components.' *Proceedings of Computer software and applications conference*, 9–11 August, 1995, Dallas, 416–421. IEEE.
- Xing, J. Z. 2006. *Teaching and Learning Chinese as a Foreign Language: A Pedagogical Grammar*. Hong Kong: Hong Kong University Press.

- Yang, C.L. and Sun, J.T. 2011. 'Preference investigation on the readability of Chinese character font, font size and graphics layout.' *The Online Journal on Computer Science and Information Technology*, 1.2, 34–37.

A c k n o w l e d g m e n t s

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