



fig. a (Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Code-switching, S. 40)



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fig. b (Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Code-mixing, S. 40)

A Descriptive Framework for Chinese-English Bilingual Typography



fig. a (Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Interaktion zwischen dem Visuellen und Verbalen, S. 39)

fig. a, p. 50: Analyzing a sample of 'Codeswitching': Tao magazine, August 2011 fig. b, p. 50: Analyzing a sample of 'Codemixing': Hong Kong Independent Film Festival programme guide 2010

Chinese
English
Shared
Numbers
Images

Introduction

Typography can be thought of as a 'metalanguage' – a visual language that encodes verbal language itself. The term 'verbal-graphic language' (Twyman, A schema for the study of graphic language, 1979) refers to this conception of typography. One could argue that any instance of typography is already 'bilingual', in the sense that verbal and visual languages are combined to form an integrated whole. When two or more verbal languages are represented in typographic communication, the interaction between the visual and the verbal is amplified [fig. a, p. 39]. A variety of complex issues arise on syntactic, semantic as well as pragmatic levels (Morris, Writings on the general theory of signs, 1971).

My academic endeavours in bilingual typography are focused on Chinese-English bilingualism, specifically in the Hong Kong context. However, the framework presented here might be applicable to other languages as well, although specific graphic and spatial attributes would vary.

The Hong Kong context

Hong Kong is a Special Administrative Region of China, located at the south coast of the country. After the signing of the Treaty of Nanking between Great Britain and the Qing Dynasty government in 1842, Hong Kong was ceded to the British as a colony. English has been an official language of Hong Kong since then. However, it was not until 1974, after a series of anti-colonial riots, that Chinese was elevated to the status of a co-official language along with English.

The nature of bilingualism has evolved throughout the history of Hong Kong's development, from diglossia with minimal bilingualism to bilingualism being widely incorporated into vernacular usage amongst the general population in recent decades.

After the handover of Hong Kong's sovereignty to the People's Republic of China in 1997, English and Chinese remain official languages, although Chinese has gained increased importance in official as well as informal domains.

Traditional Chinese is the written form commonly used in Hong Kong, and Cantonese is spoken by the majority of the population. Simplified characters and spoken Putonghua (Mandarin) used in mainland China, have become more common in Hong Kong after the handover. 39

Types of bilingualism

The following three types of bilingualism are commonly found in Hong Kong [fig. a – c, p. 40]. *Parallel:* where two languages are presented as equivalents to each other. *Code-mixing:* where one language is embedded into another below the clause level (words and short fragments). *Code-switching:* where one language is interweaved into another at clause level or above.

Parallel

Parallel bilingualism is the most common of the three. In Hong Kong parallel bilingualism is sometimes a legal requirement, an attempt to assign equal status to the languages in question, or to provide precise crossreferencing between the languages. While on a textual level both languages may assume equal status, this may or may not be apparent when it is visually designed [fig. a, p. 40; fig. a, p. 41].

Code-mixing

Code-mixing is where single words or short fragments of a second language are interspersed into the dominant language [fig. b, p. 38; fig. b, p. 40; fig. b, p. 41]. Code-mixing happens when partial translation is required, when providing clarification or translation for certain words such as specialised terms, or when phonetic transliteration is needed in a different script. In Hong Kong, code-mixing is also found in informal speech and popular print media, especially in recent years, where English words are interspersed within a primarily Chinese text, while still observing Chinese syntax. Motivations for code-mixing of this kind vary. Code-mixing may be used when it is difficult to find Chinese equivalents for certain English words. It may also serve to indicate status and cultural background, or act as emotional buffers (Li, *Issues in bilingualism and biculturalism: a Hong Kong case study*, 1996).

Code-switching

Code-switching refers to the insertion of entire clauses, sentences or paragraphs of a second language into the dominant language [fig. a, p. 38; fig. c, p. 40; fig. c, p. 41]. One has to be well-versed in both languages in order to understand the full meaning of the text, since vis-à-vis translation is not the intention. This type of bilingualism has been gaining in popularity in recent years. Some linguists do not differentiate between code-mixing and code-switching, as the two are functionally similar. However, I believe that this differentiation is needed, especially in the context of Hong Kong.

The context of use of a piece of typographic communication would dictate which type of bilingualism is the most appropriate. The three types of bilingualism may also occur simultaneously, as is often the case in

Parallel



fig. a [Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Parallel bilingualism: Zwei Sprachen werden gleichwertig präsentiert, S. 40.]

Code-mixing



fig. b [Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Code-mixing: Eine Sprache ist innerhalb eines Satzes in die andere Sprache eingebettet, S. 40.]

Code-switching



fig. c [Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Code-switching: Eine Sprache ist in die andere Sprache eingebettet. Ganze Sätze wechseln einander ab, S. 40]



fig. a (Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Parallel bilingualism, S. 40)



fig. b (Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Code-mixing, S. 40)

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fig. c (Gestaltung von Relationen \rightarrow Multilinguale Medien \rightarrow Code-switching, S. 40) complex documents. All three types relate to the status relationship between the two languages as well as their semantic structures on a textual level.

A comparative descriptive framework

At the outset of my research, it became apparent that a framework was needed for describing all of the available attributes that can be applied to textual content in the two languages in question. These variables may be applied in typographic designs with the intention of establishing a 'cueing system', in order to optimise readers' access to the information and their ability to understand the semantic structure of content in both languages.

Similar to what translation does to verbal language, my intention was to find equivalents of graphic and spatial attributes that can be applied to both Chinese and English. Mapping these attributes according to their semantic values across the two languages help us understand which graphical and spatial cues are directly transferable, which ones have no direct equivalents and which ones are similar but not exact counterparts of each other.

During my research process I came to a realisation that one should avoid subjective discussions of 'visual harmony', at least without first understanding what needs to be harmonised and how they should be harmonised. The idea of harmonisation – making two elements visual equivalents of each other – applies to the semantic and access structures of the textual information in both languages. Therefore, whether visual harmony is desirable highly depends on context.

The comparative descriptive framework is the result of collecting and analysing examples of Chinese-English bilingual typography from Hong Kong. It can be used to describe all possible situations in which the two languages coexist, breaking down each attribute and putting them into meaningful groupings. Seventy-six attribute comparisons are organized in two main classes (graphic and spatial) and eleven sub-groupings are organized in a matrix [fig. a, p. 42–43].

Of the seventy-six comparisons, thirty are directly transferable between the Chinese and English (highlighted in pale yellow in the matrix). These attributes may be shared between the two languages and are not specific to the typographic conventions of the individual languages. Twenty-five attributes are language-specific and have no equivalence in the other language (coloured light grey in the matrix). If these attributes are used, they will have to be replaced by other attributes in the other language. The remainder of the attributes have counterparts in the other language that are similar in semantic value but are not absolute equivalents.

			Chinese 中文	English 英文	
A	Type style	01	Songti or Mingti 宋体或明体	seriffed 衬线体	
	字体风格	02	Heiti 黑体	sanserif 无衬线体或等线体	
		03	Kaiti 楷体	_	
		04	Fang Song 仿宋体	_	
		05	cursive 草写体*	cursive 草写体*	
		06	display 标题字	display 标题字	
		07	calligraphy 书法	calligraphy 书法	
		08	handlettering 手绘字	handlettering 手绘字	
		09	writing tool & material 🗍	5写工具及材料	
		10	typesetting and productio	ypesetting and production method 排版及制作方法	
В	Scale & measure	01	actual point size 实际点数		
	大小及量度	02	appearing size 视觉大小	appearing size 视觉大小	
		03	character height 字元高度	cap height 大写字母高度	
		04	—	x-height X高度	
		05	-	ascender length 上椽长度	
		06	-	descender length 下椽长度	
		07	-	baseline 基线	
		08	Ideographic Character Face (ICF) size 表意字面(内框)大小	-	
С	Weight & density 粗细及密度	01	actual stroke width 实际	笔画粗细	
		02	weight 重量(粗细)	weight 重量(粗细)	
		03	overall density 整体密度	overall density 整体密度	
D	Typographic variants	01	—	upper- and lowercase 大小写	
	子兀受换	02	—	all-capitals 全大写体	
		03	—	small-capitals 小大写体	
		04	—	italic or oblique 草写斜体或倾斜体	
		05	—	swashed characters 花体字	
		06		superscript 上标	
		07	—	subscript 下标	
		08	circled & framed characters 圆及方框字元	-	
		09	<i>jiazhu</i> (split-column notes) 夹注	-	
		10	oblique effect 倾斜	oblique effect 倾斜	
	-				
E	Typographic adornments 字元裝配	01	underlining 底线		
		02	strikethrough 删除线		
		03	paragraph rules 段落嵌线		
		04	emphasis marks 看重与	—	
		05	zhuyin (phonetic glosses) 注音		
		06	other graphical effects app	plied to the text 其它字元效果	
F	Graphical devices 视觉元素	01			
		01	text colour 子兀颜色		
		02	background colour 背景颜色		
		03	Dorder Wiath 线框相细		
		04	Dorder style 发性风俗		
		06	Dorder colour 线性侧巴		
		00	other graphical devices 具它标识		

			Chinese 中文	English 英文
A	Spatial sequence 空间排序	01	order in vertical sequence 纵向排序	order in vertical sequence 纵向排序
		02	order in horizontal sequence 横向排序	order in horizontal sequence 横向排序
		03	sequence assumed via position 位置引申的次序	sequence assumed via position 位置引申的次序
		04	sequence assumed via graphical attributes 视觉属性引申的次序	sequence assumed via graphical attributes 视觉属性引申的次序
		05	order of appearance in linear sequence 线性流向的出场次序	order of appearance in linear sequence 线性流向的出场次序
		06	reveal or hide after interaction 互动后揭示或隐藏	reveal or hide after interaction 互动后揭示或隐藏
		07	transform after interaction 互动后转化	transform after interaction 互动后转化
В	Configuration 配置方法	01	linear stream 纯线性流动	
		02	prose (linear interrupted) 段落(线性中断)	
		03	verse (lines broken for sense) 诗句(根据字义换行)	
		04	branching (tree) 分支(树形结构)	
		05	list 列表	
		06	matrix 表格	
С	Reading direction 阅读方向	01	left to right 从左至右	
		02	top to bottom, right to left (vertical) 从上而下,从右至左(纵向)	-
		03	right to left (horizontal) 从右至左 (横向)	-
		04	-	stacked letters, top to bottom 纵向叠起字母,从上而下
		05	sideways, top to bottom 转侧,从上而下	
		06	sideways, bottom to top 转侧,从下而上	
D	Alignment 靠齐方法	01	justified 左右对齐	
		02	flush left, ragged right 齐左散右	flush left, ragged right 齐左散右
		03	flush top, ragged bottom 齐上散下	-
		04	flush right, ragged left 齐右散左	flush right, ragged left 齐右散左
		05	centered 分中	centered 分中
Е	Spacing 空间处理	01	column width 栏宽	
		02	line spacing 行间距	
		03	paragraph spacing 段间距	
		04	first line indent 首行缩进	
		05	indent 缩进	
		06	outdent 突出	
		07	character spacing 字元间距	-
		08	-	letterspacing 字母间距
		09	-	word spacing 单词间距

43

fig. a

* Satz- und Layoutsoftware macht es technisch möglich, Schriften schräg zu stellen, doch ist es jedem Typografen klar, dass diese Praxis minderwertig ist – die Verwendung von echten Kursivschnitten gehört zum festen typografischen Repertoire lateinischer Schriften. Chinesische Schriften verfügen jedoch nicht über Kursivschnitte, und wenn man von Kursivität sprechen kann, dann keinesfalls durch eine schräge Vertikalachse. Schräggestellte chinesische Typen stellen also ganz klar eine zu wörtlich genommene Übernahme westlicher Gestaltungsprinzipien in den chinesischen Kontext dar. Auszeichnung funktioniert dort anders (z.B. durch Sperrung, vgl. S. 16).

Graphical attributes

The graphical attributes class includes intrinsic typographic transformations as well as extrinsic graphical devices that could be applied to the text itself. The sub-groupings are: (a) type style, (b) scale and measurement, (c) weight and density, (d) typographic variants, (e) typographic adornments and (f) graphical devices. The most apparant difference between Chinese and English is that one is logographic while the other alphabetic. Their constructions and visual qualities are very distinct. This is reflected in the descriptive framework; many of the graphical attributes have no counterparts in the other language (seventeen in total).

Note that type style, typographic variants and typographic adornments are divided into separate sub-groupings. Although all three of these groups refer to the form of the letters or characters, there are essential semantic differences amongst them. For example, the type style sub-group refers to the classification of typefaces in the two languages. It is apparent that the historical evolution of these major styles of typefaces for the respective languages have taken separate courses. While there may be stylistic similarities between them, the two differ in their use and connotative meanings.

The typographic variants sub-group specify the inherent transformations that can be applied to the text. Most of these attributes have specific semantic values associated with them by convention. Here, italic is differentiated from oblique effect. While italic type is not used in conventional Chinese typography, one could artificially skew the characters to achieve a similar effect, but it would not have the same semantic value as conventional italic type in the English language, unless expressly specified. English has a number of such typographic variants that are not available in Chinese, which means that other attributes must be 'borrowed' in order to mimic the visual effect.

Typographic adornments are graphical marks and elements that can be 'anchored' into the text, for example paragraph rules, underlining and emphasis marks. These are distinct from graphical devices, which are extrinsic to the text itself. Because graphical devices are extrinsic to the text, they are not rule-bound and are therefore more fluidly transferable between the two languages.

Spatial attributes

The spatial attributes class includes spatial organization, sequence, direction and grouping. The sub-groupings are: (a) spatial sequence, (b) configuration, (c) reading direction, (d) alignment and (e) spacing. This class mainly concerns spatial attributes, but time is also implied by nature.

The spatial attributes are applicable to both the macro and the micro, whereas the graphical attributes are only relevant to the micro. Compared with the graphical attributes, spatial attributes tend to be more transferable between the two languages. These spatial attributes can be used to describe global properties that shape the overall status relationship and semantic structure, as well as information that is shared between the two languages and groupings of information.

The spatial sequence sub-group is concerned with the spatial arrangement of textual information and how it implies temporal sequencing in various situations. Vertical and horizontal sequences denote priority in the reading process. Sequences implied in positioning work in a similar manner. The application of graphical attributes such as scale, may also suggest the reading sequence. Linear sequences impose a controlled release of information, for example in a video or motion graphic sequence. Interaction may also reveal, hide or transform the textual information via direct manipulation of textual content from one language to another.

The configuration sub-group adopted and paraphrased from Michael Twyman's 'Schema for the study of graphic language' (1979) refers to the ways in which text is organized graphically. These are potentially transferable between the two languages.

With regards to reading direction, several of the attributes are bound by language-specific conventions. While Chinese can be read vertically, horizontally from left to right as well as right to left, English cannot.

In terms of text block alignment, although both Chinese and English text can be set justified or flush left, justified setting is the most natural for Chinese as the characters are monospaced, while flush left is most natural for English.

Global and local properties

A certain amount of sensitivity and discipline is desirable for any crosscultural typographic designers when designing complex multilingual documents. Judicious application of these attributes would ensure coherent and accessible designs. The terms 'global properties' and 'local properties' are used here to group these attributes and allude to the encoding of textual content. 'Global properties' refers to a class of attributes that articulate the overall status relationship between the two languages. 'Local properties' refers to the attributes that articulate the semantic structure of each individual language. Figure a, p. 45, illustrates the interaction between these properties on the verbal and visual levels.

Conclusion and future directions

Typography is the only means through which verbal language is visually manifested; the typographer is endowed with the capacity to mediate and transform textual content. In multilingual typography this mediation or transformation process is ever more crucial. The partnership between the originators of the textual content and typographic designers become highly critical.



fig. a

Further investigation in multilingual typography that may emerge from this comparative descriptive framework presented here may include issues of performance or usability in various contexts of use, such as language education; aesthetic concerns; cultural conventions and cross-cultural hybridity; or semantic markup of multilingual dynamic textual content, amongst others. The comparative descriptive framework also has the potential to be expanded to include other kinds of attributes and comparisons, for example temporal and interactive attributes. This framework may also be adapted for comparing other languages or for more than two languages.

To graphic designers working in one language, typography might not involve much more than the shaping the visual appearance of text for the proverbial 'clarity' and aesthetic enjoyment. Consequently, discussions on typographic matters often centre on syntactical aspects. When working with two or more languages, however, additional factors have to be taken into consideration. In my research, I endeavour to examine typography through the lens of information design. The perspective that I have presented here is not intended to be didactic nor prescriptive, but to provide a common language that will transpire further discussion on multilingual typography of a more critical nature.

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Further Reading

Lu, D. 卢丹怀 (2005). Xianggang shuangyu xianxiang tansuo 香港双语现象探索. Hong Kong: Sanlian.

Pennington, M. C. (Ed.) (1998). Language in Hong Kong at century's end. Hong Kong: Hong Kong University Press.

Walker, S. (2001). *Typography and language in everyday life: prescriptions and practices.* Harlow: Longman.

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