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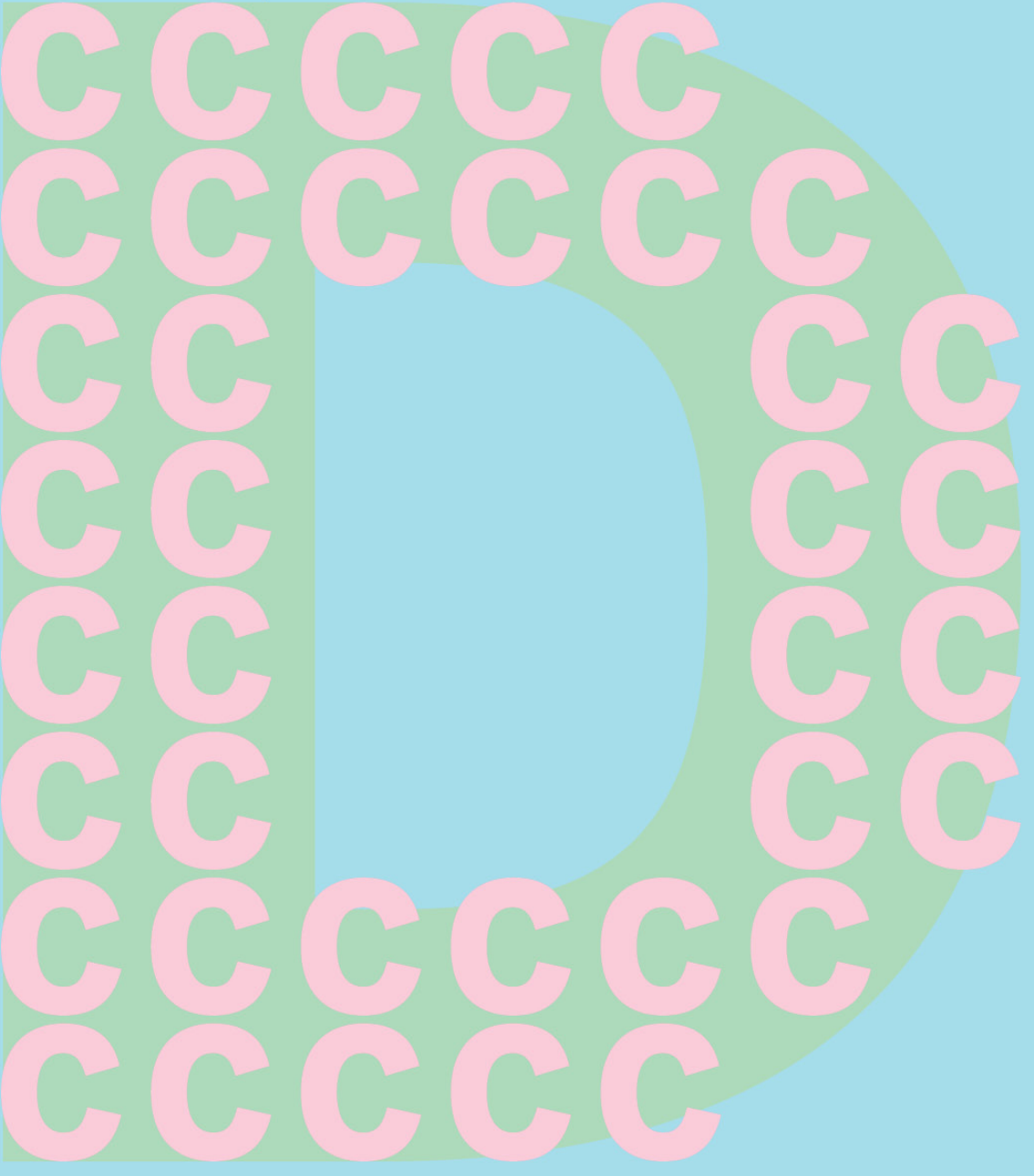

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Transatlantic eccentricities: tuscan typefaces as an example of transnational typographic taste

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ABSTRACT
Based on evidence found in commercial almanacs published in Brazil in the nineteenth century, we propose a reflection on the use and circulation of ornamented letterforms between Northern and Southern hemispheres, most specifically between Europe, North and South America. The focus is on the so-called 'tuscan' typefaces, a popular form characterized by its curled and branching serifs and exuberant ornaments.

KEYWORDS
Typography; design history; nineteenth century; transnational letterforms

Flashy, curly, voluminous, shaded, extravagant, alluring, display or ornamented letterforms play an important role in the history of typographic design. They vibrantly incorporate the *spirit of time*, revealing preferences that mark print culture and taste.[1] In the mid-nineteenth century, commercial almanacs, which evolved from agricultural calendars to compendiums bringing together all kinds of information regarding the people and institutions that moved the society of the time,[2] became a kind of popular publication in many parts of the world, including South American capitals like Rio de Janeiro and São Paulo. Display types helped to create focal points and hierarchical reading in those structurally complex publications, which contained short texts, various kinds of tables, lists of addresses and commercial ads. Within the wide range of ornamented letters used for titles and subtitles in these publications, the typefaces in a style that came to be known as tuscan stand out for their distinctive forms.

This study seeks to contribute to a better understanding of graphic memory[3] in transnational context. Through the identification of recurrences of tuscan letterforms in the typographic repertoires of relevant printers and type founders, we provide evidence of shared aspects of nineteenth-century print culture, design and typographic taste in different parts of the world across the Atlantic Ocean.

According to Nicolete Gray, a pioneer in the study of nineteenth-century ornamented types, the Victorians seemed to have lost 'the idea of good type to read, but this does not necessarily mean that they lost the idea of good lettering'.[4] Intricate and eccentric letterforms were used side by side with text types in the elegant, thin and geometric modern style that characterize romantic taste in typography.[5]

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Gray remarks that nineteenth-century ornamented typefaces:

> … were designed by the anonymous employees of commercial firms of founders, supplying commercial printers. The aim of both the founders and printers was continuously to supply the public with novelties which would attract and please; to succeed in this they had to keep in exact touch with the mood of the moment. Their business being purely commercial, considerations of scholarship, individual personality or typographical principle do not blur the contact. The result is a communal art as pure as that of any primitive society.[6]

Such designs would therefore have roots in British typographic culture, as it evolved during the Industrial Revolution. Crossing the Atlantic Ocean and the equator, arriving in Brazilian printing offices, their appeal for commercial use was recognized, as one can observe by their use in the pages of the almanacs examined in this article.

Despite the expressive presence of typefaces like these in nineteenth-century print culture, little has been investigated or said about its use in South American or Brazilian context. The research presented here departed from the identification of instances of tuscan typefaces in commercial almanacs published in Brazil, to come up with some thoughts on their purpose, their rise and decline in popularity, concluding with some remarks on their persistence in vernacular lettering traditions.

Two series of Brazilian commercial almanacs were examined: *Almanak Laemmert*, published from 1847 to 1889 in Rio de Janeiro,[7] which was then Brazil's capital city; and the series of almanacs published by Jorge Seckler and his successors, between 1878 and 1896, in São Paulo – a town that, at the turn of the nineteenth to the twentieth century, went from an obscure village to a rising metropolis. In their last pages, both publications carried commercial ads sections, entitled *Notabilidades*. While most of the pages of the almanacs were composed using only two or three typefaces – usually a serif text face, accompanied by bold or italics for emphasis, and letters in larger body size for titles – the *Notabilidades* pages would employ a great variety of them, in different sizes and styles, to call attention, create hierarchy and differentiate products and services. This is, therefore, where tuscan typefaces are usually found. In *Almanak Laemmert*, this section started to be published in 1857 and in Seckler's almanacs it first appears in the 1883 issue.

Tuscan typefaces

Tuscan typefaces are a variant of the ornamental nineteenth-century fonts, and can be identified by the presence of bi- or trifurcated and curved serifs, reminiscent of fish tails or flower buds. The style name was popularized due to its use in type specimens, and is most probably a reference to the giglio or fleur-de-lis that decorate the crown of the Grand Duke of Tuscany – the tree-petal representation of a lilium is currently used as a symbol for the city of Florence. These novel letterforms did not seek to be neutral, legible or elegant, but to meet a new demand: capture the attention of the passer by or the reader, eventually turning them into consumers of the products announced through their exuberant forms.

According to Gray,[8] the first examples of Latin letters with these features date back to 50BC, but the classical form would be defined later, in the fourth century, in a lapidary inscription commissioned by Pope Damasus I to Philocalus. The letters in question have no adornments and show trifurcated and curved serifs. Throughout the nineteenth century, variations that include bumps on the stems appear, and that becomes another characteristic feature (Figure 1). In her essay on tuscan letters, Gray[9] shows that they can be further decorated, including shadows and other embellishments.

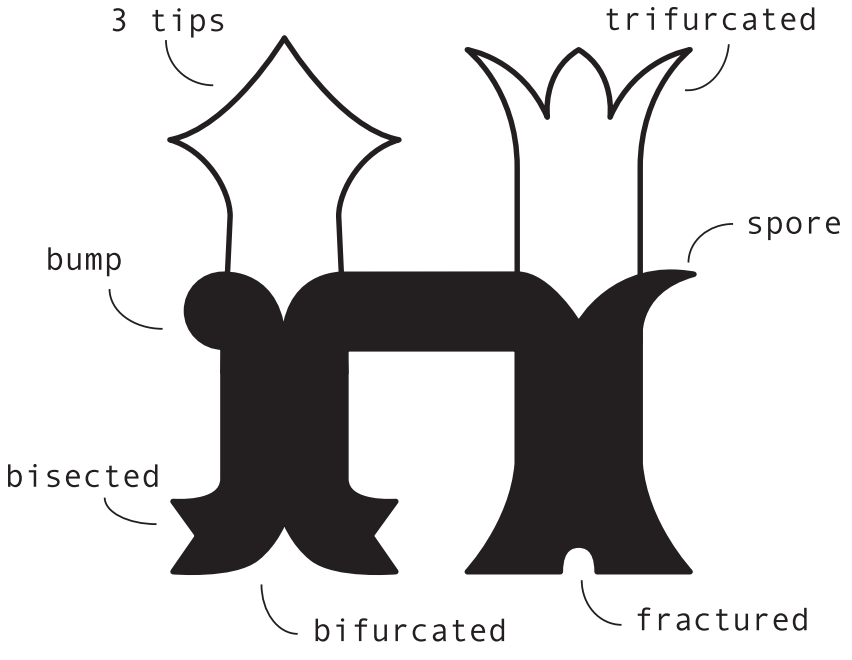


Figure 1. Variations on the structure of a tuscan letter: trifurcated, bifurcated, fractured and bisected serifs, serifs with three tips, bumps and spores.

Gray attributes the launching the first version of tuscan type for letterpress to the English punch cutter and type founder Vincent Figgins in 1817.[10] Dixon describes the rise of the 'tuscan pattern' in the nineteenth century because of 'experiments with terminal construction' which are suggested by the 'quintessential sturdiness of the English vernacular letter'. [11] Lighter ornamented typefaces with trifurcated terminals, however, can be found in the repertoire of eighteenth-century French type founders, like Fournier – as noted by Dixon – but also in Dutch and Spanish specimens.[12]

The Rob Roy Kelly wood type collection online catalogue,[13] organized by David Shields at the University of Texas, also highlights bumps on the stems, along with bifurcated or trifurcated serifs as main characteristics of tuscan typefaces. Letters in this style are shown in the catalogue both as a sub-division of Antiques, which includes examples of letters with serifs bisected not at the base, but at the end of their heavy serifs; and as a sub-division of the category Gothic, which includes examples of letters with sharp terminals and very discrete bifurcations, and of sans serif typefaces with tips or bumps on the stems.

Brazilian commercial almanacs: Laemmert and Seckler

Almanak Laemmert, a short name for the *administrative, commercial and industrial almanac of the Empire of Brazil*, was an important periodical in nineteenth-century Rio de Janeiro. Published once a year by Eduard and Henrich Laemmert, brothers and owners of a bookstore that eventually became a printing shop, it came to be distributed in 15 cities in Brazil and abroad, including Paris, London and New York. From 1847, until the 1950s, their presses produced this yearbook, in which the major companies, traders, industrialists, civil servants

– both civilian and military – and their addresses were listed, along with members of the Royal family and their court, including details such as their dates of birth. The Laemmert brothers' almanac was, in short, a microcosm of Rio de Janeiro's life and its participants, assembling a collection of information that provided a very detailed portrait of nineteenth-century Rio de Janeiro.

The Laemmerts' almanac series had a long life, and was printed in their *Typographia Universal* printing shop. This was a quite large company that offered, in addition to printing, type founding and electroplating services, as well as clichés (letterpress pinting blocks) and metal type for other printers. This might explain the wide variety of typefaces in their publications. This variety, as well as the presence of new and striking typefaces in the almanac, certainly helped to publicize the fonts distributed by *Typographia Universal*. In this sense, the almanac functioned also as a type specimen, providing a vivid sense of the magnitude of the Laemmert's typographic repertoire, and of their potential influence on local typographic taste and print culture.

Until the last decades of the nineteenth century, São Paulo was a rather small and sleepy town, far from the cosmopolitan character of Rio de Janeiro. In this context, the output of printer and publisher Jorge Seckler, responsible for the longer-lived series of São Paulo commercial almanacs, stands out. The first publication of this genre produced by Seckler presses was an *indicator* for the year 1878. In 1882 Seckler published a *new almanac* (the title choice seems to implicate that he considered the *indicator* as his *old almanac*) for the year 1883, followed by an issue entitled *Administrative Almanac, Commercial and Industrial, of the Province of São Paulo, second year*, launched the following year, and completing 10 editions until 1895.

Jorge Seckler, a printer of German descent, started his professional career as an apprentice in São Paulo city based *Typographia Allemã* letterpress printing shop in 1855, becoming the owner of the business in 1862. In 1883, Seckler announced his company as *Typographia a Vapor de Jorge Seckler & C.* (Jorge Seckler steam letterpress printing shop & Co), and even published an ad in that year's *Almanak Laemmert*.[14] In 1887, he proclaimed to be the owner of the 'first and best assembled establishment for letterpress, binding, ruled paper and blank book manufacture in the province … house founded in 1862',[15] and, in 1889, announced that the company was awarded 'in various national and foreign exhibitions'.[16] In the *State of São Paulo Almanac for 1891*, the printing company *Companhia Industrial de S. Paulo*, which was to publish the ninth and tenth volumes of Seckler's almanacs series, was described as 'the successor to Jorge Seckler & C.'[17]

Research methodology

Two research teams, one in Rio de Janeiro and the other in São Paulo, coordinated by the authors of this article, conducted the research described here. Although for most part conducted in parallel,[18] the efforts of both teams shared the methods presented by the authors in earlier work,[19] and are described below.

A preliminary phase of the investigation, for both teams, involved gathering and treating data about printing offices and type founders found in nineteenth-century commercial almanacs, using bibliographical and documental research techniques. Textual data was transcribed and organized in tables and spreadsheets. Data obtained in almanacs was verified, compared and supplemented using additional secondary and primary sources, like newspapers and commercial contracts. Data analysis allowed for the establishment of

chronologies of printing shops and type founders active in Rio de Janeiro and São Paulo, the identification of the oldest printers and founders,[20] and also of the ones active for the longest period.

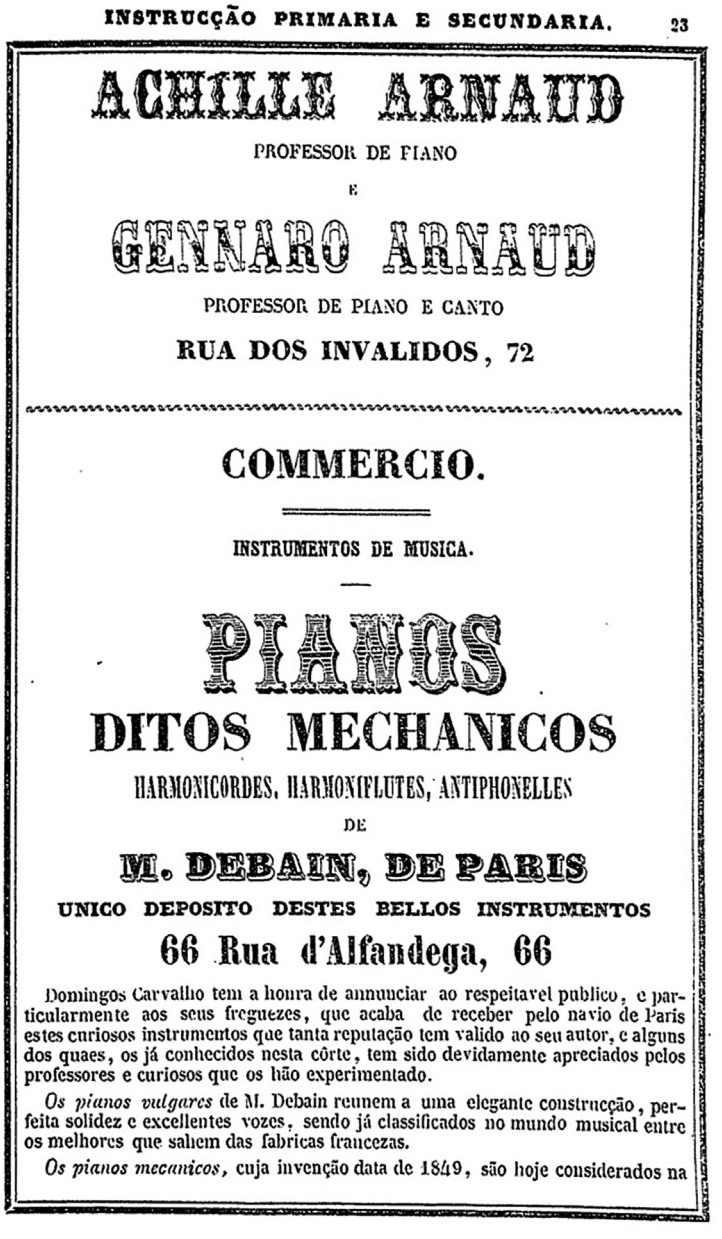
The general method adopted by the two teams for the identification of tuscan typefaces in Brazilian nineteenth-century commercial almanacs consisted of: (1) determination of the main publishers of almanacs in each city; (2) location of the libraries and archives that collected them; (3) examination of original copies of the almanacs; (4) collection or production of digital images of selected pages of the almanacs; (5) production of digital samples of relevant typefaces; (6) counting of the number of times each typeface was used in each volume; (7) comparison of samples produced with type samples found in literature[21] and in Brazilian nineteenth- and early-twentieth-century type founders specimens (*Fundição Franceza de E. Bouchaud & Sobrinho*, c. 1880 and *Specimen da Fundição de Typos Henrique Rosa*, c. 1910); and (8) comparison of samples and data produced by the two teams.

Almanak Laemmert is a well-known and often adopted source for historians interested in the nineteenth-century Brazil. The National Library of Rio de Janeiro makes available in their website[22] the complete collection of this publication. From the digital versions of those volumes,[23] published between 1847 and 1899, samples of two consecutive years, in a sequence of 10 years, were taken. Within those samples, the issues containing special sections with ads identified as *Notabilidades* (Figure 2) were selected. Since this section started to appear in 1857, the corpus examined includes 10 editions: 1857, 1858, 1867, 1868, 1877, 1878, 1887, 1888, 1897, and 1898.

Many historians interested in nineteenth-century São Paulo have used the almanacs published by Jorge Seckler as a source, but no complete list of these publications was available – compiling this list was a necessary first task for the São Paulo team. Copies of this series of almanacs are spread over several libraries in São Paulo city, and only one of its editions was available in digital format on the Internet. Thus, except for issue number 6 (1888), already digitized by the Brasiliana Library at USP,[24] the pages of seven other issues, belonging to Mario de Andrade Library collection, as well as those of a facsimile of the very first almanac, published in 1878, were photographed especially for the study.[25] The nine issues considered for analysis include five editions released while São Paulo was still a province of the Empire of Brazil (the *Indicador* for year 1878, and almanacs number, 2 (1884), 3 (1885), 5 (1887), and 6 (1888); and four editions released after the proclamation of the Republic of Brazil, which took place in 1889, when the province became a state (numbers 7–10 for the years 1890, 1891, 1895, and 1896).

The pages of the *Notabilidades* sections of all selected almanacs were examined in search for tuscan typefaces. The images of the pages were digitally processed to improve contrast, correct distortions and remove elements that hindered the visualization of the typefaces. After being processed, the images were cut, isolating the lines composed with tuscan typefaces (Figure 3).

The procedures adopted by each team for identifying typefaces and comparing them with samples found in literature or in type specimens was not the same. Samples of texts with tuscan letters found in *Almanak Laemmert* were printed, and the resulting strips were used to facilitate the verification of recurrences in use in the same edition and over time. Tuscan letters found in the almanacs published by Seckler, instead, were separated, transformed into vector graphics, and then grouped in alphabetical order to generate images that facilitated comparison with other samples and the verification of their recurrence in the various editions. Fonts with the same design were grouped in order to



INSTRUCÇÃO PRIMARIA E SECUNDARIA. 23

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Domingos Carvalho tem a honra de annunciar ao respeitavel publico, e particularmente aos seus freguezes, que acaba de receber pelo navio de Paris estes curiosos instrumentos que tanta reputação tem valido ao seu autor, e alguns dos quaes, os já conhecidos nesta côrte, tem sido devidamente apreciados pelos professores e curiosos que os hão experimentado.

Os pianos vulgares de M. Debain reunem a uma elegante construcção, perfeita solidez e excellentes vozes, sendo já classificados no mundo musical entre os melhores que sahem das fabricas francezas.

Os pianos mecanicos, cuja invenção data de 1849, são hoje considerados na

Figure 2. A sample of *Almanak Laemmert* 'Notabilidades' section page, containing tuscan typefaces. Source: Acervo da Fundação Biblioteca Nacional, Rio de Janeiro – Brasil.

Figure 3. Text composed with tuscan typeface isolated from a page of Jorge Seckler's 1885 almanac. Source: Acervo da Biblioteca Mario de Andrade, São Paulo – Brasil.

identify typefaces – sets of fonts with the same design and different sizes – in the printer's repertoires. Tables were created for better visualizing the use of the different typefaces over time.

The tuscan typefaces identified were compared with type samples found in Rio de Janeiro nineteenth- and early-twentieth-century type foundries specimen books (*Fundição Franceza de E. Bouchaud & Sobrinho*, c. 1880 and *Specimen da Fundição de Typos Henrique Rosa*, c. 1910), as well as those present in books containing samples of nineteenth-century typefaces, [26] searching for information about authorship, date of creation, manufacturers and distributors. Original copies of the *Fundição Francesa* and *Henrique Rosa* specimens (Figures 4 and 5), belonging to the Biblioteca Nacional collection were examined *in loco*, and also photographed for continuous consultation. Due to its comprehensive and systematic approach,

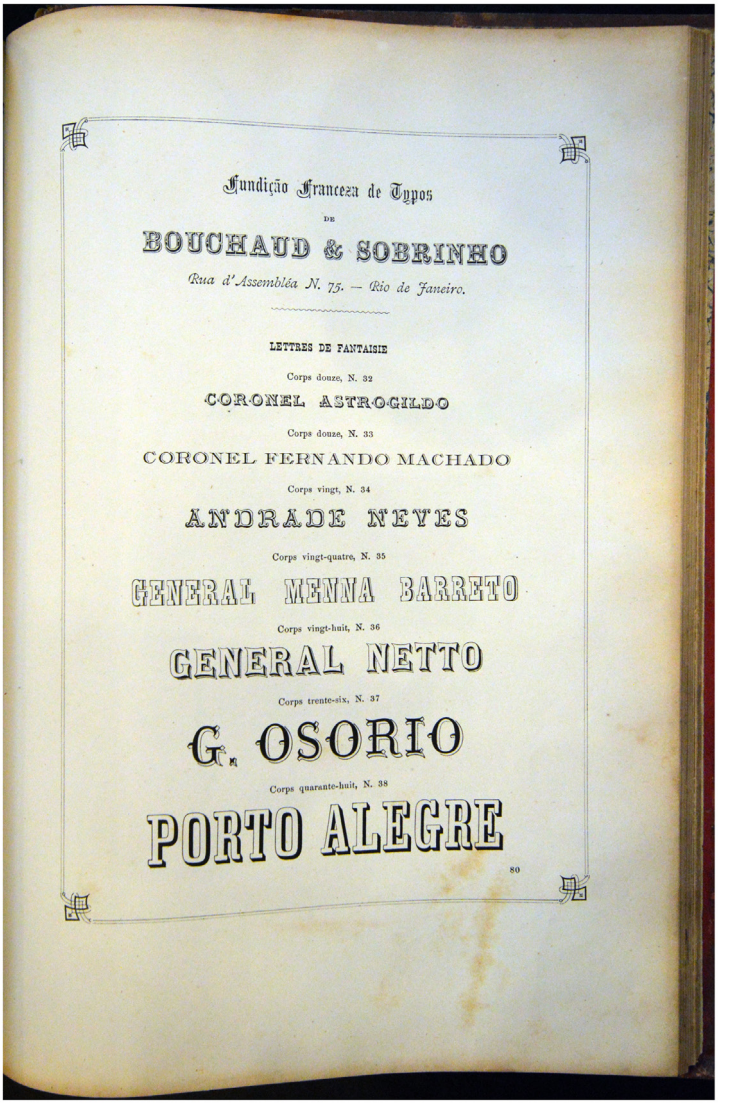

Figure 4. Page from *Fundição Franceza de E. Bouchaud & Sobrinho* specimen book, c. 1880. Source: Acervo da Fundação Biblioteca Nacional, Rio de Janeiro – Brasil.

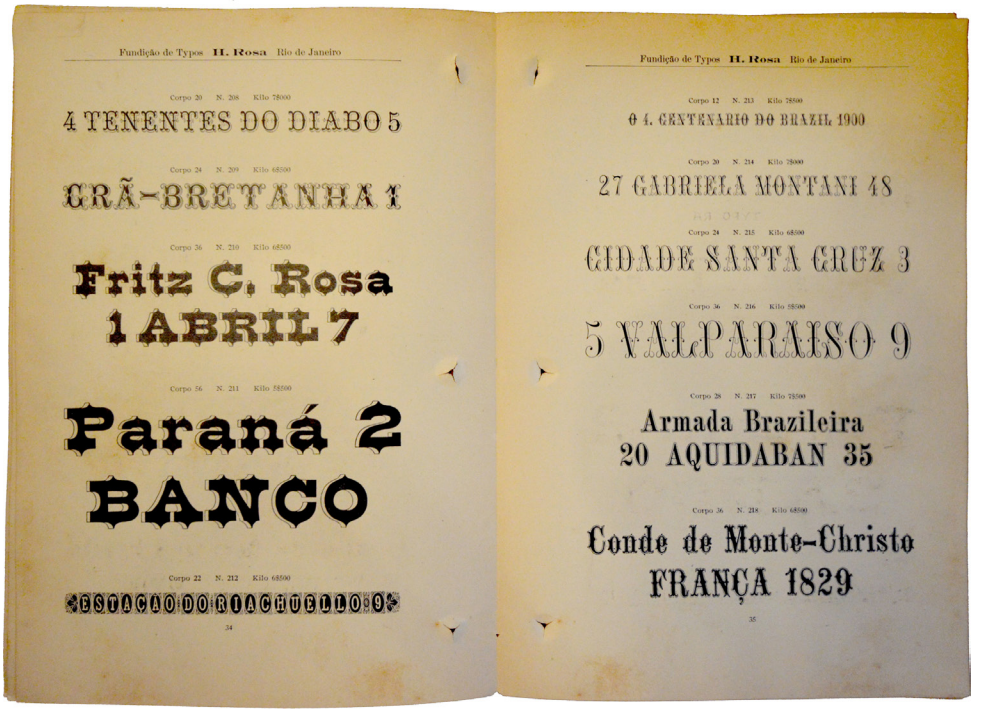

Figure 5. Pages from *Specimen da Fundição de Typos Henrique Rosa* specimen book, c. 1910.

the nineteenth-century ornamented types survey carried out by Nicolete Gray,[27] and in particular, her 'Chart of ornamented typefaces', comprising 452 samples, was the main source of information regarding type founders and earliest appearances of the tuscan typefaces identified. Finally, the typefaces found in the almanacs printed in Rio de Janeiro and in São Paulo were compared.

Results

The examination of the pages of the almanacs resulted in the identification of 40 tuscan typefaces in *Almanak Laemmert*, and 12 in the almanacs published by Jorge Seckler. Identification codes were created for each typeface found in each series of almanacs, using 'T' for 'tuscan'; 'L' for Laemmert or 'S' for Seckler; and a number that corresponds to the typeface position in a list that goes from the more to the least frequently used. Table 1 shows the 12 typefaces found in Seckler's almanacs, and the 12 most commonly used in *Almanak Laemmert*. Tables 2 and 3 show the frequency with which different typefaces have been used over the years in both series of publications.

The typefaces identified differ not only in terms of ornaments but also in relation to the overall structure of the characters. The most distinguishing feature among the typefaces found, however, is the shape of their serifs. The vast majority of the tuscan typefaces found have bifurcated serifs, but some of them show trifurcated serifs (TL02, TL11, Table 1), three tips (TS03, TS08, TS11, Table 1), or bisected serifs (TL07, TS06, Table 1) in their terminals. The way bifurcations occur varies, emphasizing curved (arc or spiral-shaped) or angular branches

Table 1. The 12 tuscan typefaces more frequently found in *Almanak Laemmert* (TS01 to TS12, left), and all tuscans found in Jorge Seckler's almanacs (identified as TL01 to TL12, right).

Almanak Laemmert		Jorge Seckler's almanacs	
TL01	NOTABILIDA	TS01	DIREITA
TL02	GALVANISMO	TS02	GUINNES
TL03	EUGENIO	TS03	ALBERTO
TL04	PAPEL	TS04	BITTER
TL05	SENHORA	TS05	SILVA
TL06	GENNARO	TS06	HEINKE
TL07	FERNANDES	TS07	Moveis
TL08	FRANZISKANER	TS08	Campinas
TL09	DOS REIS	TS09	CIDADES
TL10	FABRICA	TS10	PAPELARIA
TL11	NEVES	TS11	JOAO SCHALCH
TL12	TORRES	TS12	PHOTOGRAPHIA

Sources: Acervo da Fundação Biblioteca Nacional, Rio de Janeiro – Brasil; Acervo da Biblioteca Mario de Andrade, São Paulo – Brasil.

(which fall away from the letter, as in TS05, Table 1) or small fractures at the base of the serifs (TS09 and TS10, Table 1).

Regarding ornamentation, it is possible to notice that some patterns recur. The suggestion of volume and the presence of bumps or spurs on the stems (TL01 and TS02, Table 1, for example) are the most recurrent features. Contours, arabesques and shadows were also found. In the *Almanack Laemmert* repertoire, *broken* forms, with marked horizontal divisions, with or without spores, stand out (TL03, TL11, Table 1). Among the typefaces used by Seckler, the presence of letters with decorated background (TS10, TS11, TS12, Table 1) is noteworthy, as well as a bigger proportion of tuscans without bumps, spurs, or any suggestion of division in their stems (TS01, TS03, TS08).

In Tables 2 and 3, one can observe that tuscan typefaces were used with variable frequency over the years in both almanacs, and that the variety of typefaces used in the same edition tends to decrease towards the end of the nineteenth century. In the case of *Almanak Laemmert*, the issues published in 1867, 1868 and 1877 are the ones with greater variety,

Table 2. Tuscan typefaces found in *Almanak Laemmert*, organized by frequency of use.

	1857	1858	1867	1868	1877	1878	1887	1888	1897	1898	total
TL01			10	5	15	5	2	2	5	4	48
TL02			7	6	8	11	3	1			36
TL03	5	3	4	4	11	4			1		32
TL04			1	1	17	5	2	3	1	1	31
TL05			5	3	12	2		1	3	1	27
TL06	10	3	1	1	2	3					20
TL07	5	3			4	2	1	1			16
TL08			6	8					1	1	16
TL09		4	3	3	5						15
TL10			2	3	6	2		1			14
TL11			1		2	6	2	1	1		13
TL12			3	1	3		1	1	2	1	12
TL13			1	1	3	1		1	3	1	11
TL14	1	3							2	3	9
TL15			1	1	4				1	1	8
TL16	3		1						1	2	7
TL17			1		4	1			1		7
TL18			1	1	2		1		1		6
TL19							3	2	1		6
TL20							1		4		5
TL21		4	1								5
TL22	1	1			1					1	4
TL23					1		2		1		4
TL24			2	1	1						4
TL25			2	1	1						4
TL26			3	1							4
TL27							1	2			3
TL28									1	1	2
TL29									1	1	2
TL30				1						1	2
TL31							1	1			2
TL32			1			1					2
TL33			2								2
TL34		2									2
TL35	1	1									2
TL36	1	1									2
TL37									1		1
TL38						1					1
TL39				1							1

Table 3. Tuscan typefaces found in Jorge Seckler's almanacs, organized by frequency of use.

	1878	1884	1885	1887	1888	1890	1891	1895	1896	total
TS01		9	2	12	9	11	11	1	6	61
TS02		1	3	9	8	9	8	2	3	43
TS03	3	1	1	5	8	4	3	1	1	27
TS04	3			4					2	9
TS05	2	5								7
TS06		2			1	1	1		1	6
TS07		3	1		1					5
TS08		3	2							5
TS09					1	1	1	1		4
TS10				1	1					2
TS11				1						1
TS12			1							1

and, in the case of Seckler, the 1884 and 1888 issues stand out. In the almanacs published in São Paulo, there is one typeface used throughout the whole period and another two used in all almanacs, and these are also much more frequently used than the others. In the case

Figure 6. Tuscan typeface found in Henrique Rosa type foundry specimen.

of the examined issues of *Almanak Laemmert*, there is an important difference between the repertoire used before and after the 1867 issue – two of the four most used typefaces (TL01 and TL04, Table 1) appear in all editions since then.

Among the 51 typefaces found, only one appears in the typographic repertoires of both almanacs: the tuscan typeface with suggestion of volume and double-bifurcated serifs identified as TL07 (*Almanak Laemmert*) and TS06 (Seckler's almanacs) in Table 1. Gray identifies the first occurrence of this design around 1853, in a specimen by British type foundry Austin Letter.[28] Very similar typefaces, however, can be found in pages of New York-based type foundry George Bruce and Co. specimens, reproduced in Johnston's *Alphabets to order* [29] and in Jong, Purvis, and Tholenaar's *Type*,[30] printed as early as 1848. Gray does not provide a name for this typeface, which is identified as 'ornamented' in the George Bruce and Co. specimens. Generic names for typefaces, eventually starting with indication of type size and ending with a given number, such as 'Two-Line Parangon Ornamented' or 'Ten-Line Pica Ornamented, nº 900' are common in nineteenth-century specimens.

The fact that letters with the same design as TL07 and TS06 were available in the UK and the US at least four years before the first recorded use in *Almanak Laemmert*, and more than 30 before its use by Seckler, suggests that Typographia Universal might have imported the sorts used in the publication quite soon after its first release. The same font was found in a specimen by Rio de Janeiro type founder Henrique Rosa (Figure 6), published in the 1910s, suggesting that, at some point in the nineteenth century, the typeface became available through local foundries.

Nicolete Gray attributes the design of most of the tuscan typefaces used in *Almanak Laemmert* to the English foundries Figgins, Caslon, and to the Scottish company Miller & Richard. Figgins, for example, would have first released, between 1846 and 1853, the three tuscan typefaces that appear in Figure 2.[31] The design of a good part of the tuscan typefaces found in the almanacs published by Seckler (TS07, TS08, TS10, Table 1) is attributed by Gray to the English foundry Caslon (Gray 1976, p.),[32] between 1864 and 1878. TS07 has the same design as the two-line English *Ecclesiastic* available by Caslon c. 1870[33]; TS08 has the same design as the unnamed typeface listed as 244, attributed to Caslon c. 1864[34]; and TS10 has the same design as Caslon's 1878 *Filigree*.[35] One of the most frequently used typefaces, however (TS03, Tables 1 and 3), was patented by Bruce in 1867, and manufactured by the North American foundry Marr in 1877.[36] The two tuscan typefaces most often used by Seckler (TS01 and TS02, Tables 1 and 3) do not appear in the survey conducted by Gray, who focused mainly in British type specimens found at the St Bride Library. The first of them, however, appears in Henrique Rosa type specimen, and the second in a catalogue by Leipzig supplier Alexander Waldow, issued in 1878, reproduced in Jong, Purvis, and Tholenaar's, *Type*.[37] Henrique Rosa was the Brazilian name of a German émigré whose original name was Heinrich Rosen, who established a type foundry in Rio de Janeiro in the late-nineteenth or

early-twentieth century. This suggests that the typefaces most frequently used by Seckler may have German origin.

The occurrences of the various tuscan typefaces in the almanacs (Tables 2 and 3) reveals that some of them, such as the curly bifurcated TL01, TS01 and TS02, were used in most or all examined issues. Others, such as variants with decorated background TS11 and TS12 in Seckler's almanacs, were used only once, indicating that they might have been of exclusive use of an advertiser. The degree of incidence of the typefaces in almanacs seems to be directly connected to the variety of sizes available: the number of body sizes of a typeface in a given repertoire is directly proportional to the number of occurrences of this typeface in each almanac, and over the years. This probably happens because type in different sizes could be used for longer or shorter names in columns of limited width. It also indicates what kind of typeface the printer believed to be better suited for different occasions or content, such as headings, titles, or different kinds of products and services.

The circulation of tuscan typefaces between Northern and Southern hemispheres could be established by the coincidences in the design of all sorts used in the Brazilian almanacs and those found in European and North American type foundries and distributors specimen books. Stronger evidences of circulation were found between United Kingdom and Rio de Janeiro, and between Germany and São Paulo. A weaker evidence of circulation could also be established between Rio de Janeiro and São Paulo – only two of the 12 tuscan typefaces identified in Jorge Seckler's repertoire were also used in *Almanak Laemmert* or announced in Rio de Janeiro nineteenth-century type founder's specimens.

Discussion

Tuscan letterforms have come a long way from early Christian inscriptions in Rome to French, British, North and later South American type foundries and letterpress printing shops. Most part of the tuscan typefaces found in the Brazilian almanacs examined seem to have British origin, but were selected and used by German printers working in São Paulo and Rio de Janeiro to announce products and services offered mainly by Portuguese, but also Italian, Spanish, and French immigrants, among others, indicating a shared taste for ornamented typefaces of this kind.

In the first decades analysed, the tuscan typefaces were consistently used for highlights in the *Notabilidades* ads pages. Considering that, at this stage, logotypes were still extremely rare, tuscan letters seem to have fulfilled the role of signalling trading companies, drawing attention to their names in pages full of competing commercial ads. The decline in its use, towards the end of the nineteenth century might be connected with a change in typographic taste, or maybe with a fatigue caused by the continuous use of very exuberant fonts, but is also balanced by a notable rise in the number of illustrations being used in the ads.

The distinctive and peculiar forms of tuscan typefaces, specifically when systematically used for the same announcer, functioned, in the pages of the almanacs examined, as a visual mark of distinction, playing a role that would be later attributed to logotypes and corporate identity systems. The gradual rise in the number of illustrations used in the ads and, in particular, of custom illustrations designed for particular products or services, indicates that the fabrication of clichés and stereotypes was more easily available for printing shops and its clients. Their increased use can be interpreted as a sign of a gradual change in the visual

communication strategy adopted by the printers of Brazilian nineteenth-century commercial almanacs: visual marks of distinction in ads migrated from letters to pictures, as a prelude to the preference for more neutral type forms that characterize twentieth-century modernist typographic taste.

The research conducted evidenced some peculiarities of typeface production in the nineteenth century that affect research methods and results. The noteworthy variety of tuscan typefaces found in the two series of almanacs examined is only a small sample of the great variety of typefaces of this kind produced in Europe and in the Americas the nineteenth century, but were enough to establish the existence of shared aspects of print culture, design and typographic taste in different parts of the world across the Atlantic Ocean. However, as the study on nineteenth-century ornamented typefaces conducted by Nicolete Gray[38] already showed, and other surveys on type specimens published before the twentieth century[39] confirm, only a small number of those typefaces were consistently named by type founders, type distributors and printers. Throughout the nineteenth century and even in early twentieth century, those typefaces would be more commonly identified by type size and serial numbers. It is common to find the same typeface identified by different numbers in catalogues issued by different type founders and printers, and the numbers given by Gray in her 'Chart of Ornamented Typefaces'[40] are also different from those. The identification of nineteenth-century typefaces, therefore, is a task that involves careful observation of design details, as well as the consideration of type size. It also requires the establishment of a naming system that is consistent with the research aims, scope and limits. In the case of the research reported here, it was important to consider the possibility that the repertoire of Jorge Seckler and the Laemmert brothers could be composed of sorts with the same typeface design produced by different type founders.

The tables that present the frequency of use of different tuscan typefaces in each series of almanacs (Tables 2 and 3) were helpful in highlighting not only the tendency of a gradual decline in the frequency of use of tuscan typefaces, but also to establish which typefaces were more often selected – an indication of popularity, appreciation, or a stronger expression taste. They are also helpful in highlighting changes in the repertoire put in use in the almanacs throughout the period studied. A wider variety of typefaces used in one almanac is a strong indication of the acquisition of new sorts by the printer, while the use of a smaller variety indicates that for some reason the printer decided to work with a more restricted repertoire of forms. Sudden increases or decreases may also be motivated by changes in layout that eventually accompany editorial changes. The sudden appearance of TL01 in the

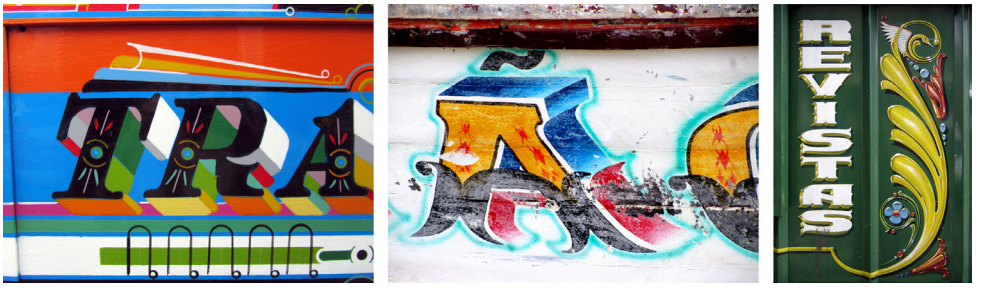

Figure 7. Tuscan letters in Colombian *chivas* (a), Brazilian Amazon boats (b), and Argentinian *filetado porteño* (c).

pages of the *Almanak Laemmert* in 1867, for instance, is coherent with a layout change operated a few years earlier. With the new layout, this typeface started to be used for the title page of the *Notabilidades* section, substituting a serif face, while other tuscan typefaces used in the main title page for the city and printers name (TL14 and TL21), were substituted by serif fonts. The different roles of tuscan typefaces in the almanacs, as well as the relative increase or decrease in use in comparison with other typeface styles are topics that deserve further investigation.

The impact of the branching serifs, divided stems and voluminous shapes of the tuscan letters in South America graphic memory can be verified by the current presence of forms reminiscent of their anatomy in the repertoire of popular sign painters. Some examples of this are the traditional lettering styles still found in Colombian rural transport system known as *chivas*, in Brazilian Amazon boats, and in Argentinean *filetado porteño*, typical of Buenos Aires (Figure 7), reinforcing the notion of a transnational, shared taste.

Are those painted letterforms direct descendants of the nineteenth-century tuscan typefaces used for printing commercial almanacs? Or are they part of another tradition, involving calligraphy, lettering and transportation? Our guess is that the two scenarios are connected, indicating the survival of tuscan letterforms, once part of a wider spread taste popularized through ads and printed ephemera, in vernacular visual cultures not affected by modernist design trends, such as the one associated with the tradition of hand painting letters in boats and cars. We believe that this might be true not only for transatlantic exchanges, but also for wider connections around the globe. But that would be a topic for further research.

Notes

1. Culture and taste should be here understood in the sense proposed by Pierre Bourdieu, in particular, in his *La distinction. Critique sociale du jugement*, published in 1979. It is also coherent with the use of taste in the description or analysis of preferences in type design and typography (see, for instance, Dixon, *A Description Framework for Typeforms*, G45–G49; Baines and Haslam, *Type and Typography*, 58–59; Middendorp, *Dutch Type*, 18).
2. Rickards and Twyman, *The Encyclopedia of Ephemera*, 15.
3. Farias, "On Graphic Memory".
4. Gray, *Nineteenth Century Ornamented Types*, 7.
5. Bringhurst, *The Elements of Typographic Style*, 130–131.
6. Gray, *Nineteenth Century Ornamented Types*, 9.
7. This almanac was published until 1950, but only the nineteenth-century issues were considered in the research reported here.
8. Gray, *Nineteenth Century Ornamented Types*, 157–158.
9. Ibid., 157–162.
10. Ibid., 160.
11. Dixon, *A Description Framework for Typeforms*, G51.
12. See, for instance, Jong, Purvis, and Tholenaar, *Type*, 85–86, 88, and 98.
13. Rob Roy Kelly American Wood Type Collection <http://www.utexas.edu/cofa/rrk/>.
14. Sauer, *Almanak Administrativo, Mercantil e Industrial*.
15. Seckler, *Almanach da Provincia de São Paulo*.
16. Seckler, *Almanach do Estado de São Paulo para 1890*.
17. Seckler, *Almanach do Estado de São Paulo para 1891*.
18. Earlier studies on tuscan typefaces used in *Almanak Laemmert* can be found in Figueiredo and Cunha Lima, "O uso da tipografia toscana", and in Cunha Lima, Figueiredo and Cidrini, "Fontes toscanas no *Almanak Laemmert*"; while studies on tuscan typefaces used in Jorge Seckler's almanacs in Farias and Onoda, "Letras toscanas no repertório tipográfico de Jorge Seckler".

19. Farias, Aragão and Cunha Lima, "Unraveling Aspects of Brazilian Design History".
20. Cunha Lima, *Fundidoras de tipo do Século XIX*.
21. Annenberg, *Type Foundries of America*; Gray, *Nineteenth Century Ornamented Types*; Johnston, *Alphabets to Order*; and Jong, Purvis, and Tholenaar, *Type*.
22. Biblioteca Nacional – Hemeroteca digital brasileira <http://memoria.bn.br>.
23. The pages of *Almanak Laemmert* available in Biblioteca Nacional website are made from the digitalization of microfilms, and are provided as 300 dpi, greyscale, Tagged Image File Format (TIFF) files.
24. Biblioteca Brasiliana Guita e José Mindlin Digital <http://www.brasiliana.usp.br/bbd>.
25. Documents in the Brasiliana library website are available in secured PDF files, with images in medium resolution, but higher resolution TIFF files (300 dpi, greyscale) are available upon request. High-resolution images of selected pages of Seckler's almanac for 1888 were requested and obtained. Selected pages of the other almanacs by Seckler were photographed in raw format with a DSLR camera and a tripod, and later converted to 300 dpi greyscale images.
26. Annenberg, *Type Foundries of America*; Gray, *Nineteenth Century Ornamented Types*; Johnston, *Alphabets to Order*; and Jong, Purvis, and Tholenaar, *Type*.
27. Gray, *Nineteenth Century Ornamented Types*.
28. Ibid., 213.
29. Johnston, *Alphabets to order*, 44.
30. Jong, Purvis, and Tholenaar, *Type*, 138.
31. Gray, *Nineteenth Century Ornamented Types*, 211–213.
32. Ibid., 79, 216, and 219.
33. Ibid., 79.
34. Ibid., 216.
35. Ibid., 219.
36. Ibid., 218.
37. Jong, Purvis, and Tholenaar, *Type*, 177.
38. Gray, *Nineteenth Century Ornamented Types*.
39. Such as Annenberg, *Type Foundries of America*; Johnston, *Alphabets to Order*; and Jong, Purvis, and Tholenaar, *Type*.
40. Gray, *Nineteenth Century Ornamented Types*, 99–226.

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Professional graphic design knowledge in Hong Kong: from graduate to professional

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ABSTRACT

This article investigates the scope of graphic design professional knowledge in practice, and questions whether the knowledge and training provided at university are sufficient for graduates to become design professionals in Hong Kong. Official reports indicate that Hong Kong designers' competence is limited to skills of execution, contributing in general to a low standard of professionalism due to a lack of professional knowledge. Three kinds of respondents were involved in the study: graduate graphic designers, design firm employers, and design academics. The study relied on a mixed method approach, with the qualitative interview method as the core qualitative component and a survey as the supplementary quantitative component. Findings reveal the similarity of views held by the academics, employers and graduate designers interviewed: 'A professional designer is knowledgeable and performs well in both internal and external environment.' However, the graduate designers believe that aesthetic appearance and styling are the most important aspects of professional graphic design practice, which are above other knowledge aspects that help graphic design to function, such as marketing, business strategies and user's psychology. In addition, there is a 'knowledge gap' acknowledged by academics and graduates from academic training to practice. The academics and employers in Hong Kong are not sensitive enough to value the importance of such knowledge and training for graduates. The quantitative findings of this study truly reflect the criticism of Frascara: the historical development of graphic design has long overemphasized the importance of aesthetic appearance, styling and visual structure and neglected the importance of functionality. The results also highlight/draw attention to challenging areas worthy of future research: the content of graphic design professional knowledge and its professionalism in Hong Kong. Such research may unveil survival strategies for the graphic design profession.

KEYWORDS

Graphic design knowledge; graduate training; professional practice; Hong Kong

1. Situation: graphic design in Hong Kong

Hong Kong faces intense competition from the Chinese mainland and from other Asian countries, many of which have enjoyed the results of economic success attributable in part to the values of 'design'. Countries such as Japan, Korea, and Taiwan have been proactively investing vast resources in the design industry and design education. 'Creativity and

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Innovation' in products and services have become the essence of future economic success.[1]

In this economic climate, the Hong Kong Design Centre (HKDC) was established in 2001 by the Government of the Hong Kong Special Administrative Region to promote general awareness of design innovation in the education, business, and government sectors. Significantly, the so-called 'Chief Executive Policy' from 2007 to 2010 repeatedly addressed the importance of accelerating progress in the creative industries to maintain Hong Kong's competitiveness. It states that Hong Kong demands a lot of creative and professional designers who could serve as creative capital for the society to stimulate Hong Kong's economic development.[2]

1.1. Controversies in professional practice

Though design and graphic design, in particular, have been repeatedly emphasized at the level of government policies and actions, the local design community is dealing with major critical issues and critique. For instance, the *Design Task Force of the Hong Kong Polytechnic University*, edited by John Heskett, one of the major design education reports, states that the work of Hong Kong designers is 'often limited to skills of execution used to establish superficial differentiation that 'added value".[3] It is generally perceived that the standard of professionalism of local designers is rather low and needs to be improved. A few possible reasons behind the reported lack of professionalism in the design community are inadequate tertiary education and lack of understanding on *what design is* in the industry.[4]

In addition, there are some historical and social factors that shaped the present situation of design practice: firstly, Hong Kong previously had an Original Equipment Manufacturing-oriented background (OEM), some clients think 'design' is an unnecessary cost and are not willing to pay high fees to design firms. They have not been made aware of the full potential and capability of design innovation for business and society. Secondly, designers with sub-degree qualifications dominate the present design industry. They execute designs competently but may lack design management skills. In general, Hong Kong designers receive low levels of payment, compared to those in other developed countries. If the low payment reflects the level of standard of design services, Hong Kong cannot be said to have a high standard of designers of professional practice.[5]

1.2. Issues in design education: a mismatch?

According to the definitions of graphic design provided by ICOGRADA and by the programmes offered by the major leading government-funded institutions in Hong Kong, graphic design programmes can be classified into three main streams:

1. Visual Communication Design (VC)
2. Advertising Design (AD)
3. Digital and Interactive Design (DI).[6]

Hong Kong Tertiary design education encompasses sub-degree levels, degree levels, and top-up degree levels. 'The Design Task Force' research report and 'The DesignSmart Research Final Report' state that graduates of the Hong Kong Polytechnic University (HKPU) hold the *most competitive degree* in Hong Kong while the Hong Kong Design Institute (HKDI) graduates represent the *largest sub-degree* workforce in the city.[7] Sub-degree programmes generally

refer to two- to three-year Higher Diploma courses, while degree programme refers to a four-year Bachelor Degree course. When Higher Diploma students, who failed to enter the Bachelor Degree course, completed their two- to three-year programme, they are eligible to apply for the two-year top-up degree course run by the self-funded community colleges in collaboration with overseas universities (overseas curriculum). The majority of the graduate workforce in Hong Kong is still educated at the sub-degree level, and degree holders (including top-up degree graduates) represent the minority with a ratio of about 2:1. Since 2006, there has been an increase in the overall supply of design graduates from sub-degree and top-up degree programmes which are provided by the self-funded community colleges collaborating with other overseas universities.[8]

Hong Kong tertiary design education has experienced some critical changes in the last few decades. Technical skills are no longer considered the most important part of design, but instead design thinking, theories and a multidisciplinary approach are encouraged as ways to keep pace with changes in the social and economic environment.[9] However, many employers and designers assert that design institutes have not been pragmatic enough to meet current market demands. Another, possible reason is a lack of consensus on what constitutes design as a practice. The report, *The DesignSmart Research Project*, for example, claims that there is a rather serious 'mismatch' between designers and employers, where '*mismatch*' refers to manpower shortage in a market industry and deficiency of the necessary skills, knowledge, capabilities and attitudes.[10] In this research, which was conducted by HKPU in 2008, 232 designers (covering all design disciplines) and 101 employers participated in the questionnaire survey. It showed that 94.8% of designers and 87.1% of the employers agreed that such a mismatch exists. The majority of employers commented that designers are not meeting the expected level of proficiency in knowledge, skills, attitude and capabilities. Furthermore, the causes that led to the respective viewpoints on the mismatch appeared to be very different. From the designers' point of view, this relates to the lack of appreciation of their creativity and the value of design, and lack of training and promotion in career development in the workplace. From the employers' point of view, the mismatch was due to the design education institutes not providing sufficient training for the graduates to meet the market needs, as well as the insufficient availability of internship programmes. The surveyed designers and employers shared one significant and similar viewpoint: most employers and designers assert that design education institutes should be more pragmatic, in order to meet the current demands of the market. Overall, the issues mentioned indicate an unharmonious relationship. Both employers and employee designers comment that the consequence of this conflict will be 'the reduction in competitiveness of the design industry in Hong Kong, decline in design originality and professionalism'.[11]

University–workplace transitions have been studied extensively around the world,[12] with researchers pointing out that the transition is a 'critical learning stage' for young professionals. The transition is the *critical* learning period to groom graduates to professionals in most professions.[13] At the moment, it is unclear if and how graduate designers become 'professional designers' through the transition.

1.3. What is professional knowledge in graphic design of Hong Kong?

Official reports published in Hong Kong highlight that Hong Kong designers follow a similar aesthetic visual approach, contributing to a low standard of professionalism.[14] These reports

focus mainly on the expectations and requirements of employers, but one point was rather clear in the report: designers and employers both implied that the institutes were not providing sufficient 'professional knowledge and skills' for the designers for the manpower market. If we focus specific on graphic design discipline, what would be the 'professional knowledge and skills' that could have reached the expectations of graphic design employers?

In general, graphic design appears to be short of theoretical thinking when comparing it to other disciplines such as architecture or fine arts.[15] One academic criticism is that graphic design history has overemphasized art history, and that the applied function of graphic design as a communication tool for economic, social, cultural and political development has been overshadowed.[16] Regarding the functionality of graphic design, van der Waarde states that there is lack of literature on 'professional knowledge for practice' for designers to learn from, and he also questions: 'Do the "most influential and revered designers" present us with an image of the professional field that corresponds to the practice? Do these designers really represent the core activities of the professional field?'[17] Kuitenbrouwer and Sierman also express that there is a lack of knowledge on graphic design and scientific studies on the effect of graphic design in the field.[18]

2. Research method: mixed methods

It seems almost no official research has ever been done purely on professional graphic design knowledge expected by employers and possessed by professional designers in Hong Kong. According to Cheung, graphic design as a young discipline has yet to establish its body of professional knowledge, standards for professional training and comprehensive assessment criteria or procedure in Hong Kong.[19] Taking the most representative professional graphic design body – The Hong Kong Designers Association (HKDA) as an example – HKDA covers a wide range of design disciplines, but the majority of members belong to the graphic design discipline. According to the general comments from interviews with the committee members (the judging panel of graphic design) and the HKDA members, the portfolio of works of the applicant is presented to a panel of two or three experienced designers in the same discipline. The portfolio tends to be judged according to its aesthetic treatment and execution technique, technological capabilities, prestigious clients as well as the eminence of design awards, if any. The assessment tends to focus on the execution skills and the aesthetic side of graphic design, not on the *full function* of design activities, or knowledge that underlies the aesthetic appearance in professional practice. As Frascara states that design activities should also include objectives and problem identification, research involvement and knowledge generated from design process, as well as evaluation of performance of the design solution. In other words, the majority of members of HKDA may still embrace the perception of competence of graphic design as *only* the aesthetic appearance and execution.[20]

2.1. Research questions

Little attention has been given to university–workplace transitions in graphic design discipline, i.e. the 'initial stage' in which young graphic designers often need to follow instructions and get acculturated into professional practice. Based on this rationale, two research questions are developed:

1. What is the scope of professional knowledge for graphic design practice in Hong Kong?
2. Is the academic and workplace training sufficient for graphic design graduates to become professionals?

This research focuses on the time when graduate designers move from an academic environment to a workplace setting. It aims to examine the transition in the graduates' working and learning experiences, and to gain insight into the role of training for graduate designers between three parties: (1) academics; (2) employers; and (3) graduate designers to this transition, referred to below as 'stakeholders'.

2.2. Approach

Qualitatively-driven mixed methods approach was applied in this study: it means that qualitative findings are the core (most important part); the quantitative is supplementary (testing the conjectures).[21] The experimental study consisted of three phases. The first phase was qualitative interview study, consisting of 22 semi-structured interviews (academics, employers, and graduate designers). These qualitative findings were used to develop the second phase. The second phase consisted of a quantitative questionnaire survey with 100 respondents (graduate designers only). The third phase combined the results of the first and second phase to *triangulate* some important conjectures. However, the 100 survey questionnaire could not triangulate *all* findings, but *some* of the most important standalone findings as well as findings which were agreed by most and all stakeholders. It was because those findings belong to the *specific knowledge and perspectives of the academics and employers* that designers (respondents) do not perceive.

2.3. Phase 1: qualitative semi-structured interviews

2.3.1. The criteria for selecting the purposive sample

Several factors were considered when selecting the purposive sample in this study (see Figure 1): *graphic design programmes*, *academic programmes levels, design business firm models* in Hong Kong. In Hong Kong, there are three types of programmes: VC, AD, and DI. These are taught at three academic levels: higher diploma, degree-level, and top-up degree. And there are two types of business models relevant for graphic design: small- and medium-size enterprises (SMEs) and international businesses. All these variations were included in this study.

Regarding the design business firm model, design graduates in Hong Kong are *mostly* employed by SMEs (94%) rather than international firms (Heskett, 2003). 'SME' is defined by the Hong Kong SAR Government as any non-manufacturing business firm which hires fewer than 50 persons in Hong Kong. Thus, the majority of employers and graduate designers were selected from SME firms. Notwithstanding, in order to have diverse views in this study, several designers and employers were selected from international firms. Finally, a decision tree for the selection of purposive samples from the three groups is shown below.

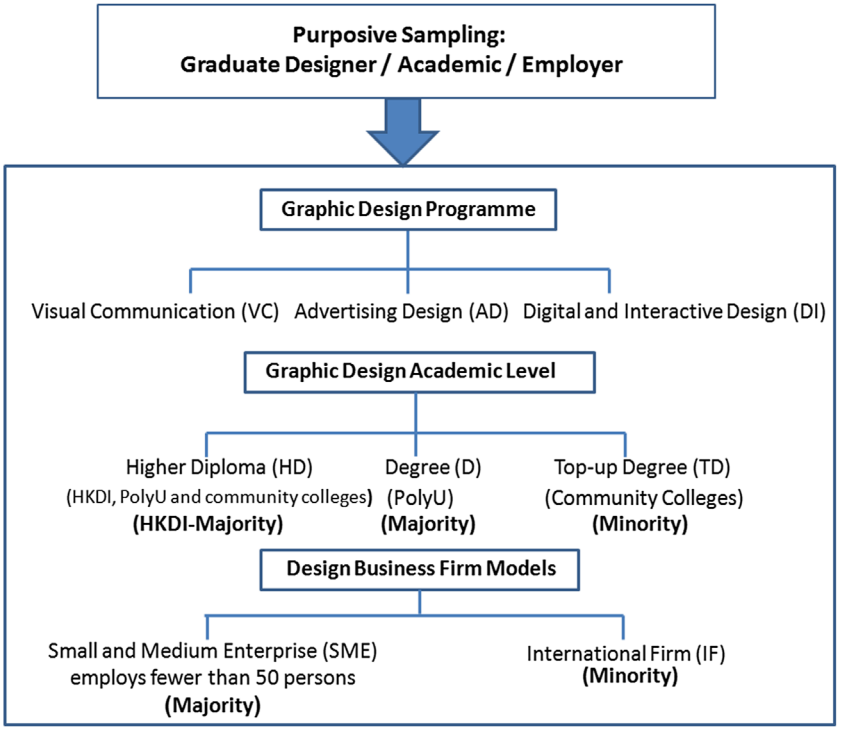

Figure 1. A decision tree for the selection of purposive samples from the three groups.

2.3.2. Phase 1: qualitative data collection and analysis

An appropriate and common techniques for analyzing qualitative data is 'pattern-matching', especially when using interviews as the recording technique.[22]

In this study, all data gathered from interviews were transcribed into a format in which information could be highlighted and notes or comments could be added to track the evidence of patterns. To discover patterns, the constant comparative method was used. This method of data analysis 'consists of categories, properties and hypotheses that are the conceptual links between and among the categories and properties' and category construction is useful for forming patterns in interviews.[23] Basically, many properties are selected on the basis of the researcher's experience and proposition to link the properties to form 'tentative categories' in a set of interview transcripts, while similar procedures are conducted in another set of transcripts of the same incident to form tentative categories, which are then compared constantly within many sets of tentative categories in order to form higher level of categories.

2.3.3. Phase 1: qualitative findings

In this research, there are three levels in the qualitative interview method analysis (see Figure 2). The first level of analysis was 'within-group analysis' and 'tentative categories' were developed for each group. The second level analysis was a higher level within-group analysis, which combined all the tentative categories into one major list of categories for each group. The rationale and identification of selected categories were based on the similarity of the

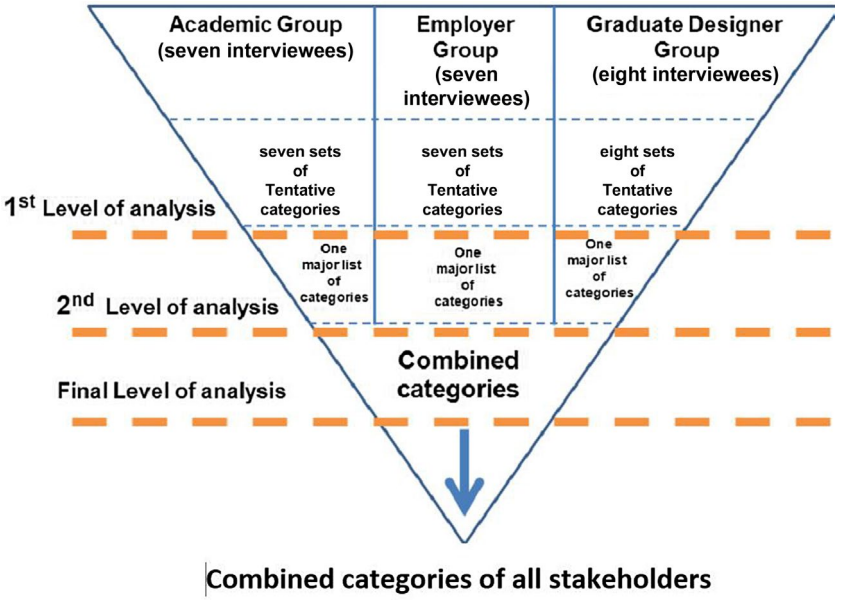

Figure 2. Three levels in the qualitative interview method analysis.

majority of interviewee opinions (i.e. more than 50% agreement on one single proposition). Therefore, three different groups resulted in three major lists of categories. Eventually, the final level of analysis was conducted. One combined list of categories (shown in Table 1) was formed from the three different groups. The sequence of categories in this table was determined in order according to the percentages of agreement (from lowest to highest) and the numbers of stakeholder (from one to three stakeholders).

In the following, each category used for the stakeholders will be explained:

1) **There is useful professional knowledge which is not well taught at institutes, but which could help us to understand the professional world better**

Most designers commented that important aspects of workplace professional knowledge such as business and marketing were not taught sufficiently in the education programme. If they had learned this knowledge earlier, they reckoned they could understand the professional world better.

2) **The design programme only equips designers with basic knowledge and skills, while the workplace demands that designers deal with real world knowledge of professional practice**

Most designers agreed that the knowledge and skills they learned when in academia are useful and general. However, knowledge and skills are limited and remain at an elementary level. The interviewees are fully aware that specific and different kinds of knowledge exist in the workplace and there is a gap of knowledge that needs to be filled, and that this 'professional knowledge' is required for real-world practice by clients.

Table 1. Combined categories of all stakeholders.

Category	Stakeholders Designer = D Academic = A Employer = E	Percentage %
1) There is useful professional knowledge which is not well taught at institutes, but which could help us to understand the professional world better	D	63%
2) The design programme only equips designers with basic knowledge and skills, while the workplace demands that designers deal with real world knowledge of professional practice	D	63%
3) At college, students are to a large extent free to design with personal interests, whereas at work the design is constrained by the clients	D	75%
4) The concepts of art and design being together are ambiguous in design institutes	D	75%
5) Curriculum provides graduates with professional competence at entry level	A	71%
6) Responsibility of an educator is to inspire graduate designers, not to assist professional development in design industry	A	71%
7) The curriculum equips graduates to become competent designer for the long term	A	86%
8) Holistic approach related to professional ,social , cultural, business and personal factors	A	100%
9) No external or internal training programme is offered, mainly on-the-job training	E	100%
10) Most graduates like to develop their own style at work, but employers criticize them for not knowing the business meaning of design	E D	57% 76%
11) Graphic designer has not been respected and recognized as professional in general	E D	71% 75%
12) Competence criteria in academia are different from practice at workplace	A D	71% 69%
13) Hong Kong's famous graphic designers project a mixed image (an artist with style and a professional designer) and have influenced the graduates	A D	71% 88%
14) Employers have the training responsibility but do not fulfill it and mistreat graduates	A D	86% 100%
15) A professional designer is knowledgeable and performs well in both internal and external environment	A E D	57% 100% 75%
16) Continuing professional learning is needed for graduate designers in the workplace	A E D	71% 71% 63%
17) Design graduates have to take self-initiative to expand their professional knowledge	A E D	71% 86% 75%
18) Graduate designers in the first few working years are not considered competent	A E D	86% 86% 88%

3) At college, students are to a large extent free to design with personal interests, whereas at work the design is constrained by the clients

Most designers believed they are given a large degree of freedom and time to do their projects at colleges based on personal interests, to expand their creativity and imagination, doing something 'beautiful'. In the workplace, which is client-driven and sales-oriented, they have to consider many factors from the clients' perspective and face tighter deadlines.

4) The concepts of art and design being together are ambiguous in design institutes

Most designers found that there is some confusion about the concepts of art and design as learned at the design institutes. The confusion is caused by the fact that the boundary between art and design is not clear. Interviewees had also learned that Hong Kong's famous graphic designers have a mixed role as both artist and designer.

5) Curriculum provides graduates with professional competence at entry level

Higher diploma and undergraduate degree programmes have been considered by academics as 'the entry level' in the graphic design industry. However, the ability of graduates at entry level was not considered as meeting the 'competent level' of industry as perceived by most academics

6) Responsibility of an educator is to inspire graduate designers, not to assist professional development in design industry

Most academics believed the curriculum should cover comprehensive knowledge and skills for long-term development. However, the educators could not offer any insight into how they could contribute to young designers' development after graduation.

7) The curriculum equips graduates to become professional designer for the long-term

Almost all academics believed the components of the curriculum should help build graduates up to become future competent professionals. The most essential components were seen to be design thinking, creative and analytical thinking as well as strategic thinking.

8) Holistic approach related to professional, social, cultural, business and personal factors

All academics believed curriculum design had to be holistic to cover essential areas that prepare students' learning for short and long-term professional development. The areas include economic, social, cultural, professional and personal awareness. Interviewees commented that most design projects would comprise all of these.

9) No external or internal training programme is offered, mainly on-the-job training

All employers commented that their companies have not provided any internal or external training programme for graduate designers, only on-the-job training and training is not their responsibility. Most employers reckoned that this is an effective training method for work efficiency.

10) Most graduates like to develop their own style at work, but employers criticize them for not knowing the business meaning of design

Most employers commented that graduates could not differentiate art and design concepts in the business world. Graduates thought having a personal style is useful. The designers echoed the comments of the employers that most graduate designers would like to develop their personal style at work. However, their visual style is often rejected by the clients.

11) Graphic designer has not been respected and recognized as professional in general

Most employers and designers commented that graphic designers are under-credited compared with other professionals. Clients think graphic design is easy to execute. Some clients even took up the design direction and told the designers how to design.

12) Competence criteria in academia are different from practice at workplace

Most academics and designers generally believed that the criteria of competence held by design academia and those held by industry were different. They (academics) were of the opinion that academia has broader and more objective criteria for measuring competence of students, while the industry has narrower and more subjective measures.

13) Hong Kong's famous graphic designers project a mixed image (an artist with style and a professional designer) and have influenced the graduates

Almost all designers agreed that Hong Kong's most well-known graphic designers all possess both a unique personal style like an artist, and a professional designer image which is business-centred. Most interviewees believed that the ways in which these famous designers present themselves have been successful in the design business and popular in the design community. Most academics agreed that design students could be influenced by the famous graphic designers in Hong Kong.

14) Employers have the training responsibility but do not fulfill it and mistreat graduates

Academics and designers commented that employers should have the main responsibility for guiding graduates in professional training, but none of the employers they knew have fulfilled this role. The designers commented further that not only do the employers not fulfill their training responsibility, they also exploited designers.

15) A professional designer is knowledgeable and performs well in both internal and external environments

All groups expressed that competent professional designers are all-rounded and knowledgeable of clients' needs. Designers and employers both believed that competent professional designers are capable of dealing with internal matters (managing team members and projects, with good technical skills and design sense) and external ones (understanding clients' background and needs, good communications and presentation skills, and good contextual knowledge, e.g. marketing).

16) Continuing professional learning is needed for graduate designers in the workplace

It is a common view of all groups that designers are expected to participate in further training in the workplace whether it is short- or long-term. Most designers welcomed the idea of a Continuing Professional Learning programme in the first few years of early career development in order to enhance their competitiveness in the market.

17) Design graduates have to take self-initiative to expand their professional knowledge

All three stakeholders share similar views that graduate designers have to take self-initiative to acquire additional professional knowledge. According to designers and employers' comments, graphic design practice needs other disciplines' knowledge, such as business, marketing, law, consumer psychology and management.

18) Graduate designers in the first few working years are not considered competent

Almost all employers, academics and designers believed that graduates within the first three years after graduation cannot be considered competent. They are not competent in any aspect of design process, from visualization to production. According to academics and designers' comments: they needed to follow strict rules given by senior staff at work, because they did not know the standard of 'good' work.

2.4. Phase 2: quantitative findings

2.4.1. Phase 2: quantitative data collection and analysis

The quantitative research adopted the 5-point Likert scale. Respondents were asked to reply to each statement on the questionnaire by circling an appropriate score from (1) to (5). The percentages for the selections for each score were calculated through an Excel spreadsheet, the elements which help to indicate statistical tendency such as mean and standard deviation were applied. A matrix table was generated to display the percentage of respondents in each score category of all quantitative findings from the 100 respondents.

The purpose of the quantitative research conducted is to test the validity of the *most* qualitative categories developed in phase 1. In order to test the categories, research statements have to be developed from some categories into the format of questionnaire survey (NOT all qualitative categories from three groups of stakeholders can be developed to survey questionnaire for graduate designers to answer, as the research was taken Qualitatively-driven mixed methods approach, and the rationale has already explained in section 2.2). Table 2 shows 19 research statements which were developed on the basis of some major categories mentioned above. The criteria of the selected major categories (standalone and agreed categories by two to three stakeholders) are based on two main aspects: (1) the categories of the stakeholders that the respondents (graduate designers) can give valid response; (2) The important concepts that were agreed by most stakeholders. Eventually, there are *10 out of 18 categories* that were selected to develop 19 research statements: the selected categories from the Table 1 *are 4, 7, 11, 12, 13, 14, 15, 16, 17, 18*.

Table 2. Questionnaire result.

Questionnaire statement	Disagree-ment (%)	Agree-ment (%)	Mean	Standard Deviation
Q.1 A competent graphic designer is knowledgeable to client's need.	14%	**78%**	3.78	0.95
Q.2 A competent graphic designer is capable of project management.	11%	**77%**	3.86	0.93
Q.3 A competent graphic designer is capable of design execution.	1%	**91%**	4.31	0.66
Q.4 A competent graphic designer should understand various marketing strategies.	17%	**57%**	3.53	0.98
Q.5 A competent graphic designer should possess a personal visual style.	13%	**62%**	3.60	0.92
Q.6 Aesthetic appearance is the most important part of graphic design.	20%	**70%**	3.77	1.08
Q.7 A graduate designer with 1 to 3 years' working experience is NOT considered as a competent designer	**59%**	26%	2.59	1.21
Q.8 Design institutes do not judge 'competence' in the same way as employers and clients in the design industry	5%	**84%**	4.19	0.82
Q.9 Employers judge the professional level of graphic designers on the basis of the client's acceptance of the design options.	23%	**49%**	3.31	1.04
Q.10 Employers have the main responsibility for training design graduates in the design industry.	9%	**75%**	3.92	0.91
Q.11 Designers have to rely on their own initiative to find opportunities for further study, no actual help is offered by employers.	23%	**56%**	3.49	1.15
Q.12 Academic design programmes have equipped you with enough knowledge and skills for the first three working years in the industry.	**49%**	33%	2.69	1.11
Q.13 The design course of your institute has equipped you to become a competent designer for a long-term career.	**33%**	**35%**	2.95	0.97
Q.14 Graphic design has NOT gained respectable professional status in Hong Kong.	4%	**81%**	4.25	0.85
Q.15 Professional design training courses in the form of part-time study need be offered to design graduates in the first three years after graduation	12%	**69%**	3.76	1.05
Q.16 Hong Kong's famous graphic designers have a distinctive artistic style and image like an artist	14%	**64%**	3.59	0.97
Q.17 Hong Kong's famous graphic designers have projected a professional designer image.	16%	**51%**	3.38	0.96
Q.18 Hong Kong's famous graphic designers have influenced the design education in Hong Kong	35%	**40%**	3.05	1.13
Q.19 Whether graphic design is an art or a business function tool is confusing.	**37%**	**37%**	2.99	1.03

The 100 respondents invited to take part in the survey questionnaire were graduate designers with one to three years of working experience with higher diploma and degree,and top-up degree qualifications. The criteria of various selected purposive samples are based on the direction of Figure 1. Percentages with 'blue colour' show the statistical tendencies.

2.5. Phase 3: mixed method findings

This is the final sub-section of the 'mixed method findings'. The quantitative data is incorporated into the qualitative findings in order to discuss the hypotheses, either accepting or rejecting each hypothesis, or classifying it as a subject of debate among the respondents in

Table 3. Qualitative category versus quantitative finding.

Category (Refer to Table 1 for the order of categories)	Questionnaire proposition	Percentage% Disagreement = D Agreement = A
4)The concepts of art and design being together are ambiguous in design institutes	Q.19 Whether graphic design is an art or a business function tool is confusing	D: 37% A: 37%
7)The curriculum equpis graduates to become professional designer for the long term	Q.12 Academic design programmes have equipped you with enough knowledge and skills for the first three working years in the industry	D: 49% A: 33%
	Q.13 Design course of your institute has equipped you to become a competent designer for a long term career	D: 33% A: 35%
11)Graphic design has not been respected and recognized as professional in general	Q.14 Graphic design not gained respectable professional status in Hong Kong	D: 4% A: 81%
12)Competence criteria in academia are different from practice at workplace	Q.8 Design institutes do not judge 'competence' in the same way as employers and clients in the design industry	D: 5% A: 84%
	Q.9 Employers judge the competence level of graphic designer on the basis of the client's acceptance of design options	D: 23% A: 49%
13)Hong Kong's famous graphic designers project a mixed image (an artist with style and a professional designer) and have influence the graduates	Q.16 Hong Kong famous graphic designers have a distinctive artistic style and image like an artists	D: 14% A: 64%
	Q.17 Hong Kong famous graphic designers have projected a professional designer image	D: 16% A: 51%
	Q.18 Hong Kong famous graphic designers have influenced the design education in Hong Kong	D: 35% A: 40%
14)Employers have the training responsibility but do not fulfill it and mistreat graduates	Q.10 Employers have the main responsibility to train up design graduate in the design industry	D: 9% A: 75%
15)A professional designer is knowledge and performs well in both internal and external environment	Q.1A Competent graphic designer is knowledgable about the client's need	D: 14% A: 78%
	Q.2A Competent graphic designer is capable of project management	D: 11% A: 77%
	Q.3A Competent designer is capable of design execution	D: 1% A: 91%
	Q.4A Competent graphic designers should understand various marketing strategies	D: 17% A: 57%
	Q.5A Competent graphic designer should possess a personal visual style	D: 13% A: 62%
	Q.6Aesthetic appearance is the most important part of graphic design	D: 20% A: 70%
16)Continuing professional learning is needed for graduate designers in the workplace	Q.15 Professional design training courses in form of part-time study need be offered to design graduates in the first three years after graduation	D: 12% A: 69%
17)Design graduates have to take self-initiative to expand their professional knowledge	Q.11 Designers have to rely on their own initiative to seek further study opportunities, with no actual help offered by employer	D: 23% A: 56%
18)Graduate designers in the first few working years are not considered competent	Q.7 Graduate designers with 1 to 3 years' working experiences are not considered as competent designer	D: 59% A: 26%

the coming Discussion section. In order to summarize the display and interpretation of the mixed methods design findings, the categories were integrated with quantitative statistical data in table formats with the bar charts of Agreement (green bars) and Disagreement (red bars) (shown in Table 3).

3. Discussion

This section summarizes the main findings related to both research questions.

1. What is the scope of professional knowledge for graphic design practice in Hong Kong?

The academics, employers and graduate designers interviewed had similar views: 'A professional designer is knowledgeable and performs well in both internal and external environment' (Category 15).

It means that professional designers should have knowledge of the design process in the business environment and to be able to interact effectively with clients and co-workers. Apart from that, the academics reckoned that in order to count as competent, professional designers must have a good command of design thinking, and be good communicators and problem solvers. Employers asserted that competent designers must be able to provide creative solutions and demonstrate good time management. They should have a good understanding of marketing, business development and user behaviour. According to designers and employers' further comments, graphic design practice needs other disciplines' knowledge, such as business law, consumer psychology. The opinions of the graduate designers were similar to those of the academics and employers. However most graduate designers viewed aesthetic development as the most important part of graphic design competence: good designers should possess a personal style. Thus, their perceptions of the primary focus of professional competence are rather *different* from either the employers or the academic.

2. Is the academic and workplace training sufficient for design graduates to become professionals?

Most academic interviewees admitted that the criteria for judging knowledge and training are 'different' between the academy and the workplace. Most were of the opinion that academic knowledge for students is broader than industry's criteria for what it expects from designers. Curriculum design had to cover a range of areas they regarded as essential for students' professional development, including professional, economic, social, cultural and personal awareness. However, most designers commented that important aspects of workplace professional knowledge such as business and marketing were not taught sufficiently in the education programme, and the designers are fully aware that there is a gap of knowledge that needs to be filled, because the employers' criteria for professional knowledge are business-oriented and client-driven; these perspectives consist of different kinds of knowledge and skills which are new to the graduates. Thus, most interviewees agreed that graduate entrants into the profession could be considered as novice and need further training. All stakeholders share a common view that designers are expected to participate in further training in the workplace, especially in the first few years of early career development. And both academics and designers agreed that employers should have the main responsibility for guiding graduates in professional training, but most of the employers deny their responsibilities and have not fulfilled this role. As a result, graduates have to take self-initiative to acquire additional professional knowledge in their spare time after work.

Some findings are related to this research question: most employers commented that graduates could not differentiate art and design concepts in the business world. The designers echoed the comments of the employers that most graduate designers would like to develop their personal style at work. However, their visual style is often rejected by the clients.

Almost all designers agreed that Hong Kong's most well-known graphic designers all possess both a unique personal style like an artist, and also a professional designer image. And most academics agreed that design students could be influenced by the famous graphic designers for having a visual style. However, most designers found that there is already some confusion of the concepts of art and design as learned at the design institutes. The confusion is caused by the fact that the boundary between art and design is not clear; this debate also reflects in the statistical findings (Q.19 Whether graphic design is an art or a business function tool is confusing – Disagreement: 37%, Agreement: 37%).

There is an opinion from employers and designers with very strong statistical support that graphic design has not been respected as professional in general (Category 11): They commented that graphic designers are under-credited compared with other professionals. Clients think graphic design is easy to execute without much knowledge and skills behind the profession. Some clients even took up the design direction and told the designers how to design.

There are some discrepancies between qualitative and quantitative findings in Category 18. Most of the interviewees agreed that graduate entrants into the profession could not be considered as competent. Surprisingly, the perceptions of the designer respondents of the survey differed from that of the others. Fifty-nine per cent of them rejected the proposition that graduate designers with less than three years' working experience are *not* to be considered competent in Q.7. This might suggest either that the various stakeholders have somewhat different perceptions of competence (for example, the aesthetic appearance and visual style of designers considered as the *most* important competence of design professional shown in statistical findings shown in Q.5 and Q.6), or that the meaning of the word 'competence' was explored in more depth by the respondents during face-to-face interaction with the interviewer in the interviews than in the survey.

Significances and consequences

The findings have triggered at least two points that concern graphic design practice and discipline as a whole, and their future development:

1. The graphic designer has not been respected as a professional due to the lack of knowledge and training in its professionalism in Hong Kong

According to scholars in the professional field, the development of a body of knowledge is vital: professions are careers with a special status and authority, which are granted by society 'because professions have special competence in *esoteric bodies of knowledge* linked to central needs and values of the social system'.[24] Moreover, professional practice is based on core values and rules on how to apply these values, and a *body of knowledge* to provide expertise to the society and clients.[25]

In these findings, a learning gap was identified between academia and professional practice; and some of the professional knowledge of graphic design have been revealed explicitly, such as business, marketing, user behaviour and psychology, etc. but the lack of workplace training and responsibility for training of graduates will always be a major obstacle for the development of competent graphic professionals. Consequently, due to the lack of professional knowledge of graduate designers that can be easily observed by employers and clients, the designers could only be given work requiring a low-level of execution.

2. Aesthetic and stylistic aspects seem to be the only/main aspects of Hong Kong graphic designers' competence

This statement has triggered one much-debated question in the academic literature: whether graphic design is part of fine art or a functional social tool.[26] One academic criticism is that graphic design history has overemphasized art history, and that the applied function of graphic design as a communication tool for economic, social, cultural and political development has been overshadowed.[27] Contributions to the literature by design scholars have generally not gone beyond the concept that graphic design is about visual artefacts, styling and paradigms established by famous designers.[28] In recent decades, there has been a significant growth of publications about graphic design theory, criticism and history. However, comments that the literature by design scholars predominantly focuses on the concept that graphic design is about visual artefacts, styling, and paradigms created by famous designers, are still valid. This phenomenon seems to exist in the Hong Kong design community; as reflected in category 13, most designers asserted that the way the leading designers present themselves as artists has been successful in the design business as well as in the design community, and that 'personal style' could be a successful brand identity. On the other hand, most of the academics explained that because art and design functional concepts co-exist in the design curriculum, students could be influenced by both concepts as well as by the aesthetic style of leading designers. However, this is not a problem in and of itself, unless graduate designers focus merely on the 'aesthetic style of the artefact', without regard to what their clients want from their designs and the context behind the design works. The critical question is therefore whether graduate designers could see the 'full meaning' of graphic design (the achievement of aesthetic appearance as well as communication function for the users in the graphic artefact). The results of this experiment confirmed this problem: in category 10, most employers commented that graduates could not *differentiate* art and design concepts in the business world. Graduates thought developing a personal style is useful in design practice, but the visual style is often rejected by clients. One of the factors can also be the cause of insufficient professional knowledge and training as mentioned in Point 1; since graduate designers have insufficient professional knowledge to understand the context of the design brief, artistic execution seems to be the *only* ability they can do in practice.

4. Conclusion

In this conclusion section, the research results from two research questions derived at various stages of the study will be briefly summarized.

1. What is the scope of professional knowledge for graphic design practice in Hong Kong?

In the qualitative interview (Stage 1), employers, academics and designers all agree that a professional graphic designer should be an all-rounder: one who is knowledgeable and performs effectively in both internal and external environments. It means that the designer should have the knowledge of the design process in the business environment and be able to interact effectively with clients and co-workers. The knowledge should include business, business strategies and positioning, marketing, user behaviour, design thinking and

production process. In addition to these aspects, ***only*** *the graduate designers* among other stakeholders viewed aesthetic development as the most important part of graphic design competence (knowledge and skills), and believed that good designers should possess a personal style (employers and academics never viewed this point strongly). All the above views of the interview findings that were generated to survey questionnaire (Stage 2) reflected high agreement percentages from the 100 designers (range between 57–91%; most of them are above 70%). Consequently, the triangulation in mixed findings (Stage 3) shows positive results as the interview findings are validated by the quantitative statistical findings.

2. Is the academic and workplace training sufficient for design graduates to become professionals in Hong Kong?

In the qualitative interview (Stage 1), most academics and designers generally believed that the criteria of competence held by design academia and those held by industry were different: the differences between broader objective and narrower subjective business measures. However, the employers mainly thought the criteria were the same and did not realize that there is **a *learning gap***. Almost all employers, academics and designers believed that in the first three years after graduation, graduates can only be considered as novices, and not competent designers. Due to this reason, it is a common view of all stakeholders that designers are expected to participate in further training/education in the workplace during their first years in practice. All three stakeholders share similar views that graduate designers have to take the initiative to acquire additional professional knowledge. Furthermore, all employers commented that they have not provided any additional training programmes for graduate designers, only on-the-job training is provided and training is not their responsibility. Academics and designers, on the other hand, argued that employers should have the main responsibility for guiding graduates in professional training. In the quantitative findings of the survey questionnaire (Stage 2), most of the interview findings that generated from questionnaires show positive agreement percentage (between 56–84%). But one of the most agreed upon categories in the interview stage was that graduate designers in the first few working years are *not* considered competent was not supported by most designer respondents (59% Disagreement and 26% Agreement). In general, the designer respondents show rather negative responses (between 33–35% of Agreement) to the questionnaires for the sufficiency of professional training in academic for practice. Consequently, the triangulation in mixed findings (Stage 3) shows valid interview findings that are confirmed by the statistical results, except in category 18: designers in the first few workings years are not considered competent.

This study provides quantitative data about the graphic design profession in Hong Kong. These data can be used as a point of reference to compare the situation in some other places, or for future studies to examine changes. Several issues can perhaps generate a greater context: Firstly, aesthetics and styling have become the *main* graphic design focus of graduate designers in Hong Kong, but lack of emphasis of the body knowledge of graphic design prevails. Secondly, there is a lack of sensitivities for the body of knowledge of the stakeholders, and the accountabilities of responsibilities for training the graduate designers: Due to the lack of academics' awareness of professional knowledge, the graduates are not well prepared to handle the demands of professional practice; also, employers are not sensitive enough to the existence of the learning gap and unwilling to take up the training

responsibilities. Eventually, there are double blind spots of training responsibilities for bridging the learning gap for practice.

If we look at graphic design from a longer term and broader context, these issues have an impact on the graphic design profession in Hong Kong and some other places. Compared with other professions such as architecture and engineering which have already developed their body of knowledge, core values and expertise for serving society. The accountability of teaching and training between the academia and employers are linked by the professional bodies. However, we could either argue that graphic design is a young profession, Hong Kong and other design professional bodies in the world are too young to be sensitive enough to the development of body of knowledge for the professionalism, or that they just perhaps have other *main* foci: aesthetic appearance, styling and awards winnings. However, these bodies also claim they are design 'professional bodies' and the graphic design members are 'professionals'. In this study, one category (Category 11) with very high agreement percentage (81%) states that, *in general,* the *graphic designer has not been respected and recognized as a professional*. This is the professional issue that the concerned graphic designers should reflect on in depth.

Notes

1. Heskett, Design Task Force Report.
2. Hong Kong Design Institute, *Prospectus 2011–12.*
3. Heskett, *Design Task Force Report*, 29.
4. See note 1.
5. See note 3.
6. ICOGRADA, "Definition of Communication Design".
7. See note 1.
8. Hong Kong Design Centre. *A Study on the Framework.*
9. Siu, "Redeveloping Design Education"; Lam, *Design for Sustainable Curriculum*.
10. The Hong Kong Polytechnic University, *The DesignSmart Research.*
11. The Hong Kong Polytechnic University, *The DesignSmart Research*, 20.
12. Schein, *Professional Education*; Argyris & Schön, *Theory in Practice*; Eraut, *Developing Professional Knowledge* and "Concepts of Competence"; Boshuizen, *Expertise Development*; Tuomi-Grohn et al., *Between School and Work*; Smeby, "Connecting to Professional Knowledge"; Asian Development Bank, *Improving Transitions from School.*
13. Eraut, *Developing Professional Knowledge* and "Concepts of Competence"; Boshuizen, *Expertise Development*; Tuomi-Grohn et al., *Between School and Work*; Smeby, "Connecting to Professional Knowledge."
14. See note 1 above.
15. See note 2 above.
16. Triggs,"Graphic Design History"; Eskilson, *Graphic Design a History.*
17. van der Waarde, *On Graphic Design,* 11.
18. van der Waarde, *On Graphic Design.*
19. Cheung, *Competent Graphic Designer*.
20. Frascara, *Communication Design.*
21. Morse and Niehaus, *Mixed Method Design*; Tashakkori and Teddlie, *Foundations of Mixed Methods.*
22. Merriam, *Qualitative Research.*
23. Merriam, *Qualitative Research,* 59.
24. Larson, *The Rise of Professionalism,* x.
25. Grunig, "Collectivism, Collaboration".
26. Aynsley, J. *Graphic Design in Germany*; McCoy, "Education and Professionalism"; Frascara, "Graphic Design"; Drucker and McVarish, *Graphic Design History*.

27. See note 18.
28. McCoy, "Education and Professionalism"; Twemlow, A. "End of History?"; Frascara, "Graphic Design".

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No potential conflict of interest was reported by the author.

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As Dr Cheung is a tri-role design professional, he is able to view graphic design from three perspectives – design industry, design education and government policy on design. Inspired by the encounters through his diverse career, he focuses his research on 'the transitional period of graphic design graduates moving from academia to professional practice in Hong Kong, as well as the development of graphic design professionalism'.

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GIFs that glitch: eyeball aesthetics for the attention economy

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ABSTRACT

The most valuable gift you can give someone is attention. But does this same rule apply to the nonstop demand for attention marshalled through Internet technologies? Driven by an insatiable appetite for profit, scientific research in compression techniques are used to reduce data and economize signals to questionable extremes. Given this awareness, does one comply, paying attention to the point of exhaustion, offering endless hours of eyeball attention re-tweeting, re-blogging, and 'liking' so someone else may reap profit, or does one tweak the circuit and rewire the rules of the game? A number of contemporary artists have gravitated to the latter, reconfiguring otherwise functional Internet tools and interfaces into error-laden 'glitch art' and animated Graphic Interchange Format (GIFs). While these new glitch genres appear to offer nothing but meaningless fragments of polychromatic noise, they do in fact raise valuable questions regarding the material and economic logic of the Internet, normatively concealed from end users. I argue that certain uses of animated GIFs and glitch art offer an emergent visual rhetoric of anti-communication that marks, echoes, and offsets the progressive rationalization of aesthetics in modern culture and media.

KEYWORDS

Glitch art; colour; aesthetics; digital media; compression; animated Graphic Interchange Format (GIFs); attention economy

1. Introduction

> At present, the particular operation and effects of specific new machines or networks are less important than how the rhythms, speeds, and formats of accelerated and intensified consumption are reshaping experience and perception.
>
> – Jonathan Crary, 2013[1]
>
> We believe that technology is at its very best when it is invisible.
>
> – Apple Inc., Official Apple iPad Trailer, 2012

In a comparison between American artist Jackson Pollock's paintings from the late 1940s and the relatively unknown digital paintings, *Pollock GIF Numbers 90–99* (2013), made by Japanese glitch artist Yoshi Sodeoka (Figure 1), an immediate difference arises between online and off-line art. Both artists work with colourful abstraction, and both have a similar number of 'editions' of their work in circulation, but clearly they are not sold at the same market value. In fact, Sodeoka's work may not be sold that all, completely free for anyone to

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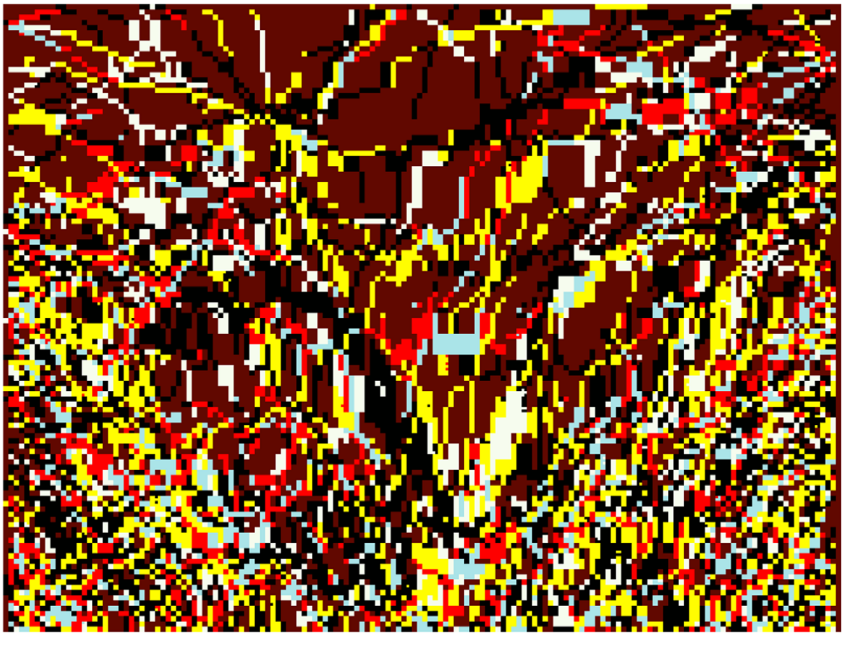

Figure 1. Yoshi Sodeoka "Number 92" (2013). Compared to Jackson Pollock's paintings from the late 1940s, Japanese media artist Yoshi Sodeoka's recent digital paintings, Pollock GIF, Number 90–99 (2013), offers nine relatively small, animated squares ready for travel, copying, and network circulation. Reproduced with the artist's kind permission.

download. A Pollock painting, however, could sell for upwards of $40 million on the international art market. But surplus value aside, a key material and aesthetic distinction in the work turns on the nature of the medium itself. The digital paintings are severely compressed; the data is economized for electronic encoding and transmission. I begin with this comparison because it points to the way in which digital media objects cannot attain value in the same way that traditional commodities and art objects do. In large part this is due to the political and economic imperatives of the digital economy, which in turn, shape aesthetic possibilities of that paradigm. All economies exist to make profit, but the difference is that painting was not in and of itself an economic system whereas digital media, as a derivative of computer science and engineering, is intrinsically quantitative, numeric, and as such, definitive of economic transaction. The link is undoable but it is an opportunity, I propose here, for a critique and analysis of twenty-first century capital, through the lens of contemporary aesthetic production.

2. Attention

In the attention economy, the most valuable gift you can give someone is attention. The same rule applies to the nonstop demand for attention marshalled through Internet technologies. Driven by an insatiable appetite for profit, scientific research in compression techniques are applied to reduce data and economize signals to questionable extremes. Given this awareness, does one comply, paying attention to the point of exhaustion, offering endless hours of eyeball attention re-tweeting, re-blogging, and 'liking' so someone else may

reap a profit, or does one tweak the circuit and rewire the rules of the game? Despite wider bandwidth, more sophisticated processing speeds, and larger memory and storage capacities in the modern computing, we find an increasing number of contemporary artists gravitating to outdated, more attention-demanding digital media forms. By reconfiguring dead or otherwise currently functional Internet tools, formats, and interfaces into error-laden 'glitch art' and related forms of retro Graphic Interchange Format (GIF) animations, their work provides an interesting framework to investigate the Internet's attention economy.

2.1. Glitch art

Defined as the stylistic reuse, recycling, and appropriation of digital errors and artefacts for artistic ends, glitch art has become a popular sub-genre of Internet art, produced by new media artists and amateur media makers alike. On the one hand, these abstract glitches and infinitely looping animated forms appear as novel, meaningless bits of eye candy emptied of meaning or context. On the other hand, when they are placed in the historical context of digital media and its progressive history of compression, glitch art strategies begin to echo, duplicate, and sometimes offset the quantitative and highly functional infrastructure they emerge from. Upon viewing glitch art for the first time, many propose the question: do these anti-aesthetic strategies merely uphold a veneer of dysfunction, antagonism and opposition, all the while reinforcing dominant codes and models of visual consumption, or do they actually destabilize it? But this is the wrong question. Rather, the essay is concerned with a more nuanced approach, viewing the potential for critique and dominant forms of social control as inextricably bound together. For example, where normative Internet functioning is efficient, streamlined, economic, and ostensibly transparency (as claimed in Apple's previously mentioned epigraph), visual consumption is made easy to use and user-friendly. That is, in contrast to rapidly jittering animated GIFs (explained below) and glitch art which are excessive, dysfunctional, confusing, and void of any logical payoff. Gifs and glitch art seem to require an increase in physiological labour and attention to keep up with them. And what is the payoff? Nothing but meaningless bits of polychromatic noise. But in fact, normally functioning digital media also requires physiological labour and sustained attention, it is just not apparent on the surface. And yet, American software engineer and executive chairman at Google, Eric Schmidt has gone so far as to argue that the twenty-first century is synonymous with the 'attention economy.'[2] Why then is this fact of physiological labour, in the form of attention, obfuscating from media consumption practices? Glitch art and related anti-aesthetic Internet forms answer this in part, by showing us precisely – and perhaps only – this otherwise hidden aspect of the medium.

Anti-communicative techniques have long been a part of the avant-garde and artistic uses of error, failure, and breakdown in general. The cinematic avant-garde in the early- and mid-twentieth century, from Hans Richter and Victor Eggeling to Paul Sharits, Tony Conrad and Hollis Frampton, employed similar techniques in montage, cutting, and juxtapositions of shapes and colours to intentionally engender a visual assault on the viewer (of varying degrees), calling attention to the demands on optical labour in film viewing. However, where the avant-garde of the early twentieth-century used broken mirrors, colour fields, dramatic imagery, or even torn paper, or other tools to critique culture and society, artists today sift through the world computation and digital networking. Highly rational, algorithmic code is the fodder for this generation of twenty-first century artists. If glitch art merely mirrors the

dominant code a visual perception, mimicking its compression techniques and placing higher demands on visual consumption, can it be adequately understood as a critique were even within the same legacy as the avant-garde?

To begin to answer this question, one must first understand the process by which Internet-based errors and glitches can be reconfigured into artworks. After this we will be able to return to the way in which these new genres operate in conjunction with, or in opposition to, the economic logic of the Internet's attention economy.[3] This begins with an exegesis on compression, one of the core attributes of all networked and digital media.

3. Compression

One of the core principles in all digital media is compression. It is the a priori condition of possibility for all Internet forms to function, from art to commerce and personal blogs or server space. The general rule of thumb on the Internet in that the smaller and more compressed a new media object is, the more effectively can it circulate, be downloaded, uploaded, and commented on or 're-blogged.'[4] This is the law of Internet circulation and exchange. As explained by Internet guru Kevin Kelly, 'circulation – in the form of networks – is not just the means for generating value; it is the source of accumulating value. Even noise – junk messages – can acquire value through circulation.' Circulation is key and the smaller, more compressed, streamlined and quick to download and upload something is, the more I can circulate and hence, the more value it can accrue. But compression also amounts to a loss of information, so the question emerges: how could data loss be a sign of success?[5] The question is especially apt for visual artists and the answer is directly tied to the history of compression in communications media.

Compression is so intrinsic to the technical and material logic of digital media, a growing number of media theorists have recently argued for a reconsideration of the history of communications technology through the lens of compression.[6] From cinematic cuts, montage, and video compositing to accelerated digital editing, effects, and Internet graphics, one can identify a history of media that turns on the technological reduction and removal (compression) of information. The goal of such an alternative histories, as communications scholars from Jonathan Sterne to Sean Cubitt, Bernard Stiegler, and Lisa Gittelman have noted, is not to resurrect a new set of dominant methods for doing media history but rather, to gain a different understanding of how technical histories of compression are intimately linked to other registers, such as psychology (ADHD, stress disorders), physiology (ergonomics, general screen health) and, as is the case in this essay: the development of a cultural aesthetic defined by bright, highly saturated, and rapidly animated colour. 'Eyeball Aesthetics' offers an apt nominalization to describe the media style en masse.

But what would it mean to understand media history as a network of forces, versus a single lineage of inventors, engineers, or cliché chronologies of progress? In the history of colour technology, for instance, the development of digital colour spaces is intimately tied to compression mechanisms and algorithms designed to narrow and reduce some aspects of colour information, while they accentuate other aspects. *What* we see in an image is limited in advance by the conditions of possibility of that colour technology. For example, if we look at an Internet graphic from the early 1970s, one immediately becomes aware of its primitive rendering capabilities (resulting in jagged edges or 'aliasing') its restricted 8-bit choices, and inability to streamline and compress data, relative to contemporary standards.

Looking at any given image on the Internet today, we are in many ways blind to the limits of its colour gamut, which is to say, its technological capacity. This is the history of progressively rationalization of visual media, invisible *except* through an analysis of the development of compression standards.

The story is further illustrated, albeit on a more technical level, with the near-ubiquitous YCbCr colour space. Used in much of high-quality video and digital photography systems, the YCbCr colour space uses a Y to stand in for luma or luminance values and the C for two chroma channels (blue = Cb and red = Cr). The operating concept behind the compression scheme is that the 'panchromatic Y channel,' as Sean Cubitt explains, captures the necessary detail while the absence of green can minimize repetition and redundancy (the green channel overlaps with red and blue, especially in the yellow segment of the spectrum). As a result, 'panchromatic Y channel,' can be entirely removed from the core elements of the compression algorithm and the vast majority of viewers fail to notice.[7] The YCbCr scheme is not absolute colour space but a highly efficient way of encoding RGB information for video and still-image compression and transmission. The actual colour displayed depends on the quality of a display terminal and the aesthetic decisions to use the colours in specific ways. In sum, the YCbCr compression scheme is intimately wed to engineering feats and accomplishments in computer science, producing a new look to digital image technology that, am normative conditions is not apparent to the majority of viewers trained to see and consume content, ignoring the frame or the conditions under which it can or cannot appear. Mass media and individual artists working in any given era are confined to the colour technology available to them; this applies across media to painting, film, television, video, and digital imaging. All are restricted to the aesthetic conditions of possibility within that medium's colour space.

In the case of contemporary digital media, compressed formats like the GIF, MP3, MP4, JPG, PDF, PNG, TIFF, or TARGA, etc. have set sound or colour standards. All such formats come with histories of compression that straddle tensions between innovation on the one hand and the need to comply with engineering standards on the other.[8] In order to become an industry standard format, compression schemes must be approved by the International Telecommunications Union (ITU), established in 1865 as the International Telegraph Union. The ITU is the oldest intergovernmental treaty body still functioning today. Its tasks include 'ensuring the interoperability of telecom systems, pricing regimes for international calling, and infrastructures for audiovisual services, including moving image encoding, in this instance for low bit-rate communications.'[9] Second, the International Organisation for Standardisation (ISO) is responsible for ensuring 'that the nomenclature and technical operation of engineering occurs in compatible ways across the world.' This is why, as Cubitt explains, ISO numbers are identifiable on numerous products from household tools to film stock. Partnered with the International Electrotechnical Organization (IEC), who controls electrical and electronic related activities, the two organizations together cover the entire domain of digital media from hardware and software to networks and interfaces.[10] In short, what we see is conditioned by technological capacity, controlled by governing bodies and related policy. Each accepted format must pass each of these institution's criteria for global image or telecommunications standards. And while no one single format's history must be privileged over any other, to a large degree *all* digital formats turn on MIT mathematician and Bell Telephone Laboratories researcher Claude Shannon's pivotal contributions to the study of noise in digital signal processing in the post-war era.

3.1. Shannon's mathematical theory of information

In the 1940s, Shannon acknowledged that all signal processing systems must include noise in their engineering processing *and* solutions. His arguments were radical at the time, leveraged in direct contrast to electronics engineer and information theorist Ralph Hartley, who had been arguing since 1928 that any 'external interference,' such as noise, could 'never be entirely eliminated in practice [and] always reduced the effectiveness of the system.'[11] Shannon turned this thesis on its head first by acknowledging noise as an intrinsic element of the system and second, instead of trying to eliminate the noise, he asked, how could one manage it in the best and most efficient way? His solution involved taking advantage of viewer distraction, to pass more information using less storage space or channel width. 'If the noise of a transmission could be moved to the gaps in the audible spectrum,' he reasoned, it 'could be eliminated as a perceptual phenomenon even though it was still measurably present on the line.'[12]

Using this rationale, several compression techniques were developed to allow an engineer to use one set of frequencies to hide or mask over another.[13] In Shannon's original case study of telephonic communications, certain frequencies of audible content were used to cover over the unwanted, noise-laden frequencies. Similar techniques already existed in media from painting and illustration through silkscreen printing and film, but Shannon's techniques involved engineered a new language of general equivalence in mathematics that could be applied to computational media. This general equivalence is key to digital compression because the common mathematical (abstract) basis of digital media is also what eventually allowed his engineering solution to apply to all digital media and communications beyond the telephone.[14]

Shannon also provided a formula for what is now called 'less compression' (one of the core compression methods used in the animated GIFs). Lossless compression uses an indexed list to cross-reference data in a file to eliminate any redundancies or unnecessary repetitions in its processing, transmission, and circulation, with no measurable change to the output.[15] Lossless compression schemas are comparable to fitting together pieces of a puzzle, versus throwing them all in in a bag at once. If it fits together efficiently, excess bandwidth could be avoided.

Following Shannon, noise was eventually accepted as intrinsic to any communication system and the key to increasing, controlling and economizing data and bandwidth.[16] At first Shannon's discoveries were applied to telephonic communications only, and later to developments in cybernetics, electronic media, and eventually an entire generation of engineers and scientists who came to accept noise as fundamental to all computer operations.

Shannon's research demonstrated in convincing detail how noise is *natural* to digital media and as such, will always be present to some degree. While it is the primary function of most commercial to avoid, delete, or get rid of noise, the opposite is the goal of much glitch art. And herein lies their aesthetic tension. Relative to normative digital media content, glitch art is in one sense more 'authentic' insofar as it reveals the compression algorithms intrinsic to all digital media. With their respective foregrounding of visual noise and in the case of the animated GIF, jittery and jolted graphic animations, glitch art reminds us of this history of compression structuring all digital imaging. In this way, they put on display the invisible conditions of possibility for perception in the Internet age.

Today Shannon's research is not only pivotal in the ongoing standardization of digital media formats and communications channels, but also in the development of social media and network communications, which increasingly adopt models of statistical compression and probability in their analyses (cleaner, more streamlined graphics, and faster, easier to use interfaces – case in point is the recent change of the Instagram logo from a complex photographic-based graphic to a simple vector-based one). Before continuing with this thread, it will first be important to further chart the history of compression that frames engineering standards, which in turn, affect demands on subjective perception.

3.2. Perceptual technics: the bedrock of attention aesthetics

Any history of media, analysed through the lens of compression, turns on the development of 'perceptual technics' or, as Jonathon Sterne defines it, the application of perceptual research for the purposes of economizing signals.[17] On the one hand, the progressive economization of data and signals has a material history in engineering that allows the progressive reduction of data to travel through a channel at an increasingly accelerated rate. The reduction of data in exchange for speed results in narrower frequencies or in images, lower resolution and less detail in the transmitted media.

Before turning to particular developments in computer science and engineering that radicalized this field, it is equally important to point out the political economy works in lockstep with these developments. In the example of the YCbCr colour space noted above, a predictive algorithm is employed at the core of its compression scheme, allowing data to be compressed by extrapolating and predicting information sampled from turning points in the base image. The crux of this example extends back to Claude Shannon's, pioneering example in the 1968 *Encyclopaedia Britannica*. In his entry on 'Information Theory' he wrote:

MST PPL HV LTTL DFFCLTY N RDNG THS SNTNC[18]

The 'compressed' sentence is typical of the way in which redundant or ostensibly superfluous data is eliminated through a format's decompression and compression algorithms. But, as is clear from the compressed sentence above, an extra bit of cognition is required to decode the sentence to 'read' it. The more severely a format is compressed, to the maximal limit where viewers can still 'get the point,' and miss colour, details, or gaps, the more the viewer works, and the less content a media institution needs to provide. As Sean Cubitt notes, this now ubiquitous scenario of audiovisual compression at once undermines the supposed passivity of audiences while it simultaneously increasing the demands for of unpaid labour (in the form of attention) in order to 'passively' consume media content. Viewer labour provides additional material resources to fuel the advertising economy and for the unpaid production of content and social media platforms (i.e. consumer response forms or even individual blogs recirculating new fashion or media content). In sum, compression algorithms are feats of modern science and engineering, affording millions of media citizens access to media content and new means of production, while it does so within the dominant paradigm of global capitalism, where the political management of populations amounts to exploiting all humans' capacity to pay attention, in the service of economic gain for a few.[19]

Any new media provides new possibilities for aesthetic production, creative thought, and expression but in in the Internet age, it also places aggressive demands on optics and human physiology (the endless hours spent with one media device or another) From a critical standpoint, the phenomena can be understood as 'perceptual technics.' Bernard Stiegler suggests

that perceptual technics is 'lodged between mechanics and biology' because it is both a relative of ergonomics, which takes its name from the economization of work – where the 'ergo' in ergonomics implies work, motion, and activity – but, where ergonomics is about capacity, fit, and adaptation to human physiology, perceptual technics is instead about *pushing* the threshold of perception beyond its comfort zones.[20] This is also why perceptual technics in the age of computing is a twenty-first century counterpart to Frederick Winslow Taylor 's analysis and subsequent removal of seemingly unnecessary actions, gestures, or movements in work in the era of industrial production. The goal of both is to push human physiology beyond its boundaries and performance levels, to increase efficiency and productivity in an overall system.[21] The result is often physiological stress, strain, and related forms of tension and anxiety[22] but, as Karl Marx reminds us, the capitalist will always cut back on production costs if an alternative means of increasing profit is available.

All technological media necessarily undergo certain forms of compression (the reduction of bandwidth, data, and detail) in order to travel through any channel and effectively be transmitted to multiple viewers are audiences. And while all digital media suspect to compression algorithms, there is nonetheless a comprehensive range. For example, relative to high definition cinema or even HDTV, Internet media is severely compressed, of a much 'lower resolution.' In part, the high-compression schemes of online media ensure the most efficient (and profitable) mode of disseminating content online necessary for rapid and mass *circulation*. The more content is seen by more people on an ongoing basis, the higher it is valued at (and herein lies one reason why Internet economics are fundamentally distinct from traditional ones, which rely on the *scarcity* of objects to raise their surplus value).[23] But online things are different. Value arises from speed and agility, which paves the way for increased copying and downloading. As Henry Jenkins puts it in regards to popularity in online media, 'if it doesn't spread, it's dead.[24]

3.3. Eyeballs

As noted, alongside digital compression comes an equally compressed method of measuring viewer experience in terms of 'eyeballs.' Tracking eyeballs is de rigueur in Internet corporations. To succeed in the attention economy, Schmidt argues, global corporations must maximize the number of 'eyeballs' they can engage and sustain control over. One only needs to account for localized eyes movement tracked on highly targeted sites or points of interest. Thus, Jonathan Crary argues, eyeballs have become a 'primary site of social and political control' in the twenty-first century. When the eye is dislodged from the body and the realm of optics, it is transformed into an 'intermediary element of a circuit,' susceptible to ongoing 'electronic solicitation.'[25] The progressive economization of data and signals amounts to less cost or bandwidth to allow more data to travel through a channel, which amounts to more opportunity for eyeball attention. Eyeballs have become a reified and radically reductive version what Marx referred to as a human's capacity to work, which, when sold on the mark, becomes labour with a flexible use value, determined by market relations. But, if consumers are offloading a significant amount of the required labour ('voluntarily' performed in the act of consumption), other than the value of a worker's labour sold on the market goes down.

Moreover, the capacity to capture and quantify eyeballs extends beyond the eye and what one sees. Numerous other forms of gathering data, from big data into data mining, are conducted through pervasive processes that often escape a user's attention or awareness.

One may argue that such forms of data collection and quantification are passive, but keep in mind, in order for this data to be generated at all, a user has to interact, click, and pay attention to screens, forms, buttons, etc.[26] If a telecommunications institution can engineer these under the radar external stimuli to successfully direct and control eyeballs, then it is also these same corporate bodies that exercise political and social control over our bodies, behaviours, and desires.

Eyeballs and clicking have become so integral to the attention economy, it comes as no surprise to find a growing number of 'click farms' or 'Chinese gold farms' where hundreds of workers obtain jobs in which their only task is to use eyeballs and fingertips to perform repetitive gestures that yield someone, somewhere else, increased profit margins. It is even more amazing to then consider that 'we' (Westerners, those living in developed countries) offer such eyeball and fingertip labour for free.[27] This takes the form of inputting data or completing forms on websites, posting reviews on one's blog or Amazon.com, moderating Internet forums, 'liking' products or services on Facebook, Pinterest, or simply streaming content on Netflix.com. Our Internet practices generate valuable bits of information sold to advertising companies and related data analysis corporations. And while such activities are largely viewed as leisure activities or new forms of 'sociality' (dare one critique social media as a valid form of social interaction), they are ultimately forms of 'free labour.' (An especially apt example is drawn from the days of the early Internet in the 1990s, when much design, construction, and maintenance of the web was undertaken through the voluntary, 'free labour' of early users and programmers.[28]) In sum, the trademark low-res audiovisual content of Internet media – defined by less information given to viewers to complete the contours of an image or sound – is a method of offloading labour and cost by placing the onus on the user-consumer.

As visual consumption transforms alongside new modes of capitalist production, a new model of critique must also emerge. In sum, attention aesthetics are structured by the ubiquity and conditions of possibility of compression algorithms, which politically and ideological step up the demands on human labour, in order to make media content consumable at all, let alone circulate.

4. Glitch aesthetics

The centrality of compression to glitch art aesthetics and certain uses of the animated GIF is the key to linking the history of computational to contemporary aesthetics. In this section, I extend my analysis of animated GIFs to specific examples of Internet-based glitch art, which many but not all animated GIFs are a subset of.[29] Glitch art and animated GIFs, when used in tandem with a fourfold aesthetic strategy rooted in technics, abstraction, accelerated frame rate, and the historical and technical analysis offered in parts I and II, raises questions and insights into the progressive rationalization of media culture and contemporary aesthetics.

4.1. The animated GIF

The animated GIF is an efficient moving image file that is easy to create, quick to upload and download, and widely accessible to a range of browsers and system speeds. The GIF is also a low-resolution graphics format, originally released in 1987 to encourage use across

platforms and hardware systems. Unlike other early Internet forms and formats (framesets, tiling, or 'homepages'), the GIF has not disappeared, but has instead become *more* ubiquitous. How does one account for this counterintuitive trajectory?

For one, there are the origins of the file format. The animated GIF emerged from computer science and, as a native web format, has overcome numerous de facto complications with patenting. And examination of this history helps to identify four key attributes: its employment of the Lempel-Ziv-Welch (LZW) algorithm; its optional frame delay feature and flexible use of frame rate compression (or more recently, expansion).[30] (Figure 2); its highly compressed colour palette (Figure 3); and fourth, its interlaced compression scheme.[31] I expand on these attributes in the below discussion.

In the mid-1980s and 1990s, first-generation, pioneering Internet artists took a liking to the animated GIF. These pioneers included net-art duo Jodi (Joan Heemskerk and Dirk Paesmans), Vuk Ćosić, and New Media professor, and 'Digital Folklore' co-author Olia Lialina. Lialina's 1999 'Dancing Girl' or 'hulagirl.gif,' for instance, is a minimally coloured (red, black, turquoise and 'flesh' tone), 10-frame, low-res, animated GIF, typifying the kind of work being made during this time.

Curiously, Lialina has remained committed to this early-animated GIF format, and thus its early Internet aesthetic, long after technical limitations lifted (Figure 4). Likewise, in the 2000s, rudimentary and self-consciously lo-fi animated GIFs began appearing in art institutions, like the 2000 Whitney Biennial and SFMOMA's "010,101: Art in Technological Times," or Rhizome's 2006 "The Gif Show."[32] Surf clubs of the mid-2000s also furthered an acceptance of the jittery structure and style of early animated GIF technology.[33] Much of this second wave of retro-GIF-makers in the early 2000s may indeed subscribe to a nostalgia for grassroots, Internet culture (with its distorted 'democratizing' mythology of 'power to the power'), but their retro aesthetic nonetheless helps bring into resolution the history of progressive speed and compression intrinsic to the format. (So while newer animated GIFs may appear less compressed – 20 second animations with up to 500 frames – this length and increase

Figure 2. 256 Colors in the GIF. At the heart of the GIF is a compressed color palette. The format can hold a maximum of 256 colors, fewer than the majority of other computer graphics commonly used today.

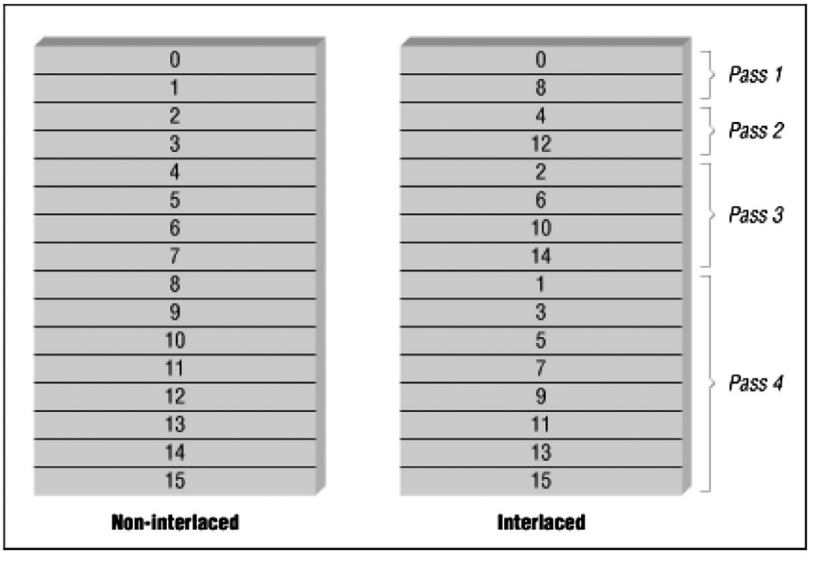

Figure 3. Another relatively unique aspect of GIF compression is its interlaced compression scheme.

Figure 4. Olia Lialina, "Dancing Girl" or "hulagirl.gif," animate GIF, 3-frame still selection, 1999. Reproduced with the artist's kind permission.

in content is possible *because of* more sophisticated compression algorithms.) A similar technique is adopted in glitch art.

5. Contemporary glitch art

Circa 2015, with wider bandwidth, more sophisticated processing speeds, and larger memory and storage capacities, we find a set of conditions with little need for the highly compressed files created out of necessity in the early days of the Internet. Longer animations and broader colour gamuts also indicate that the newer GIF animations would logically be 'softer on the eyes' – easier to watch for longer periods of the time, because animations would be longer,

contain more nuance and detail and therefore require the eyeball and brain to do less work filling in the gaps. The capacity for more colour and higher resolution has been adopted in various media industries as a standard, or on the consumer end with HDTV. This shift would also ostensibly reinforce a *regression* of perceptual technics or 'enframing' (as Heidegger referred to it) in the pursuit of extracting and sustaining 'eyeball' attention, *not* its progressive intensification. And yet, this is not the case in glitch art and the majority of Internet media produced for cell phones or small screens (watches, iPads, etc.).

Today one finds numerous low-resolution (low-res) jittery images in the form of animated GIFs and related forms of glitch art. These online forms of creative expression are marked by an aesthetic of brazen colour juxtapositions, a minimalist frame rate, the use of what I term crowd-collage, and the deployment of 24/7 data feeds. In terms of perceptual technics and its critique of the progressive rationalization of media technology, this artwork also plays and pushes the mind and body's capacity to consume stimulation and corresponding need to produce meaning and sense of it. But how could a genre that equally intensifies the 'perceptual technics' of labour required to consume Internet graphics and time-based media provide meaningful critical or aesthetic experiences, if all it offers is a blind reproduction of the dominant system of physiological control that emerges from? After expounding on this apparent contradiction in the below analysis of artist-made animated GIFs through other forms of Internet-based glitch art, I conclude with a discussion of glitch abstraction, and the ways in which it further precludes yet nonetheless raises the question of the progressive rationalization of aesthetics in modern culture and media.

5.1. Brazen colour juxtapositions

Animated GIFs are almost always colourful (Figure 5). Because contemporary digital artists have the capacity to utilize much larger colour pallets, harsh juxtapositions between hues or jittery and jolted movements would not seem to be an ongoing issue. And yet, in certain artistic circles, animated GIFs are getting bolder, more saturated, and making harsher colour contrasts which, in turn, place higher demands on the eyes. Dutch-based glitch artist Rosa Menkman, for example, uses bold colours in her animated GIFs, keeping them crisp and saturated throughout. Dark purples are set against rich greens, lined with jarring red, yellow or black. Or, light pinks alternate with rich blacks, further juxtaposed against saturated moving spectral colour bars behind it. Her colour combinations may not be 'tasteful,' in the classical aesthetic sense, but they are physiologically 'successful' insofar as they are intentionally choreographed and coded to be jarring and abrasive. Yoshi Sodeoka's *Pollock GIF* (2013)

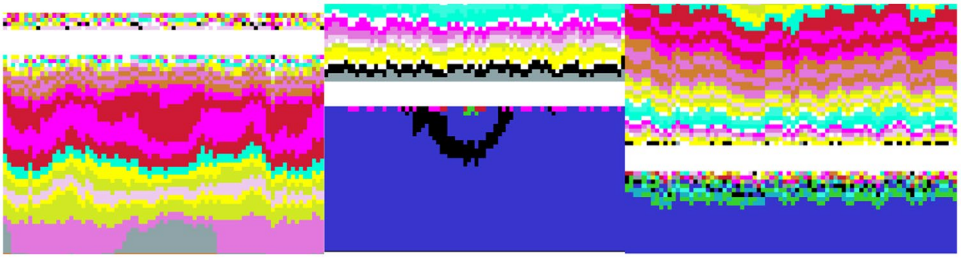

Figure 5. Yoshi Sodeoka's GIF Psychedelica (2011). Animated GIF, 3-still sample. Reproduced with the artist's kind permission.

series also offers a similarly abrasive mixture of abstract spectral hues. Even more so, however, is his *GIF Psychedelica* (2011) series, where brilliant colours are not used to blend or mix in the eye, as with Impressionism for instance, but instead, to retain harsh juxtapositions of hue, with little softening, or subtly in between.

Bold colour contrasts are especially apt in the work of Dutch-Brazilian artist Rafaël Rozendaal (born 1980) (Figure 6).[34] His primary medium tends to be the browser, using HTML or JavaScript code to create glitches but he has also made approximately 10 animated GIFs. His 2012, 'circlecircle' and 'growing,' for instance, are animated GIFs featuring no representational imagery and almost no figuration. They employ a highly compressed colour palette of two to eight colours, and an equally limited 39 and 27 frame animation. His choice to use flat patches of primary synthetic hues at their most saturated intensifies the jolt and jitter of the animated sequences, taken a step further when the transitions between coloured frames (as with Menkman and Sodeoka) do not offer any gradation or transition but only abrupt cuts between them. Even Rozendaal's monochromatic, black-and-white animated GIFs are set to animate through radical alternations of value (light and dark). He then takes this yet another step further by increasing the size of his colour patches used in the animations, making the ongoing visual consumption of the work to an absurd and unbearable level.

Absurdity is a consistent, self-reflexive strategy used throughout Rozendaal's work. His uniquely titled works, for example, reflect the artist's tongue-in-cheek stance towards the network economy he works within, a self-conscious and deliberate strategy in the tradition of the avant-garde and, given his bold juxtaposition of shape and colour in the imagery itself, almost a direct allusion to the work of Hans Richter, Victor Eggeling, Paul Sharits, and Hollis Frampton (to name only for figures from the twentieth century's experimental cinema). Rozendaal's above noted 'circlecircle' presents a series of infinitely looping colour animations without trajectory, narrative, or resolution. The circle goes nowhere save to undermine any goal-oriented, teleological process at work in the normative consumption of Internet content. Similarly, his animated GIF titled 'growing,' presents a series of flat patches of opaque and highly saturated colour that are quite obviously not growing or going anywhere, save for a repetition of the same automated, preprogrammed loop. And while many animated GIFs today (especially those situated beyond artistic circles) use multicoloured content like digital photography, my concern here lies with glitch artwork that tends towards abstraction. The reason for this, as I will argue below, is due the way in which abstraction moves the viewing experience at least one or two steps beyond (photographic) realism, paving the

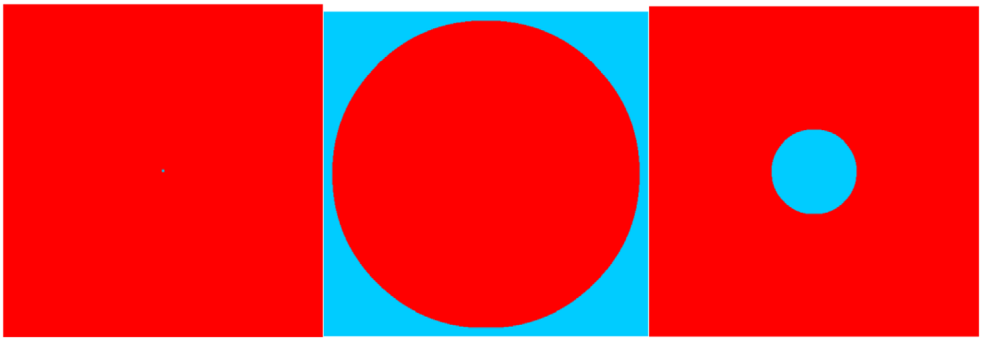

Figure 6. **Rafaël Rozendaal, "circlecircle" animated GIF, 2013. sample stills. Reproduced with the artist's kind permission.

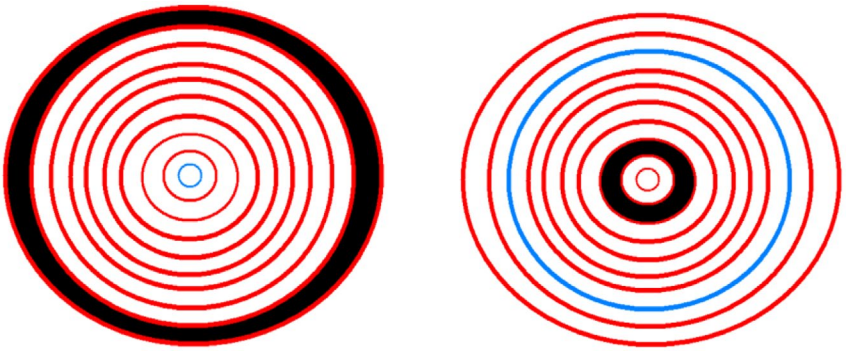

Figure 7. Tom Moody, Optidisc, 2005 (frames from animated GIF). Reproduced with the artist's kind permission.

way for material reflections on the medium itself. Moreover, as the avant-gardes have returned to time and again, by calling attention to the materiality of the medium, one introduces a space for critique, or at least for questions regarding its possibility.

5.2. Self-selected minimal frames

Also useful in foregrounding materiality of compression is the popular technique to choose only a minimal number of frames in a GIF animation, despite that many more – up to 500 now – are now available (Figure 7).[35] The above noted animated GIFs, and Rozendaal's in particular, illustrate this extremely well. Additionally, consider Tom Moody's 2009 *OptiDisc*,[36] an 18-framed, simple animation featuring a bright red disk on a white background with alternating blue and black circles. His choice to use an extremely limited colour palette, a limited number of frames, and equally minimal animation all lend themselves to a sense of surprise when one learns the work was made in in 2009 and not 1999. As such, *OptiDisc* epitomizes GIF compression *as* an aesthetic, like the examples discussed above, because it chooses restrictive parameters for itself long after they are required.

A similarly unnecessary but nonetheless jittering glitch aesthetic is found in the work made by practicing glitch artists today, including Jon Cates, Alex Peverett, John Satrom, Andrew Benson, Hellocatfood, Ant Scott (Belfix), Rosa Menkman, and Rafaël Rozendaal (to name only a few). Many of these artists create their glitches using HTML or JavaScript code, digital video compression codecs, and various other digital image formats like animated GIFs. Rozendaal's 2012 "Violent Power," alongside most of his other works, again provides a perfect example.[37] Here, one encounters a series of pure, saturated, and flat colour fields on a URL entitled "www.violentpower.com." One's eyeballs are immediately taxed, but the piece has not yet started! After one click, the rectangles of colour begin to alternate hue and flip back and forth. If one clicks again, the animation stops. On a third click, the colour fields begin their animation again. On a fourth click: it stops, and so on. It becomes clear that the artwork is void of representational or semiotic content, save for the fact that as one clicks on the colour field, one can start or stop the movement on screen.

Deprived of content, one clicks in hopes of retrieving more data or at least more information to make sense of what is going on but what is returned is merely more or less empty fields of colour. As noted, Rozendaal uses titles to critique the social and economic

applications of the medium he works in. Here, the violent power is the literal power of colour, and colour animation, in particular, with its aggressive assault on eyeballs, most likely in close proximity to the screen. But the violence is also in the clicking. A viewer-user is in fact the one to create the work, each click generates the pace for the rhythmic oscillation between colour animation and its pause. Violent power is then a matter of self-inflicted violence, performed towards the eyeballs by the fingertips. *Violent Power* was shown in a solo exhibition of the artist's entitled, *Everything Dies*, held at Kunstverein Arnsberg in Arnsberg, Germany in 2012. Other pieces in the exhibition employed similar colourful screen-based glitchy-animations, reflected onto shattered bits of mirror on the floor. While I note above that contemporary glitch artists are turning to computers and networks to generate errors and glitches, it is also worth noting that in these works one also finds important allusions to glitch art precursors.[38]

5.3. Collage-crowding techniques

A third technique used to intensify the perceptual technics in glitch aesthetics is the common practice of placing multiple animated GIFs on a single page, or on a page with other media content. Obvious examples from pop culture and social media include tumblers (surf clubs for instance), or online news sites like *New York Magazine* or *Gawker*, where animated GIFs are used as recapitulation devices to visually summarize events ranging from a newly released television show to the State of the Union address.

The now popular genre of 'Cinemagraphs'[39] also offers visually-compressed summaries of a scene from pop culture or a feature film, exhibited alongside one another online.[40] While this topical genre is of little interest in the context of this analysis, it is nonetheless important to flag, if only to distinguish it from glitch art. Cinemagraphs move *away* from abstraction towards narrative and photographic realism, and second, the overall jitter-effect of the 'classic' animated GIF is subordinated to residual and ornamental effect in a majority of cinemagraphs[41]. There is also a significant degree of nostalgia in the genre, for the reasons noted above. My point is simply that anyone who has ever tried to concentrate on a screen-based computer activity, while an animation on a webpage, or several of them, flicker and scintillate on the side, will understand how challenging this distraction, let alone a situation when there is more than one or multiple. The more animations, the more perceptual labour is challenged and split between data feeds and points of focus.

San Francisco based visual artist, performer and software creator Andrew Benson's highly energetic Internet-based artwork illustrates this collage – crowding effect, as well as the above noted tenets (Figure 8). The highly chromatic digital images in Andrew Benson's animated GIF series *Global Value* (2011), for example, employs the collage-crowding technique by placing multiple animated GIFs within a single composition. Not all animated GIFs appear at the same time. He begins with two or three GIFs, links then to one another in clickable, interchangeable modules (composites) revealed as one engages ('clicks') on the work. One may click on parts of the animated image, at which point that animated GIF will be exchanged for another similar but slightly different animated GIF in his database. The differences rely on variations in colour, pattern, and text (he uses copy resembling advertising slogans like 'Instant cash … Infinite exchange … Global value' – again, a self-conscious allusion to the high-tech world of network finance, here emptied of practical application and therefore telos and end.) Each animated GIF in the piece also falls in the modest range of about 15 to

Figure 8. Andrew Benson, stills from Global Value (2011). Reproduced with the artist's kind permission.

25 frames, making their loops rapid and their stutter more pronounced. By relying on variability and modularity – two of the key five principles of new media[42] – in addition to the fourfold intensification of perceptual techniques outlined here, Benson optimizes demands for eyeball attention in an ongoing play of sensory attraction, brought about through eye-candy distraction. There is no indication within the work itself that Benson is attempting to critique the conditions under which has media art is produced. Rather, its very existence, alongside his creative peers, generates a reflexive set of images and media that introduce a pause through the question of critique is introduced. Far from being answered or performed, it is the possibility of questioning that counts.

A final example of the collage-crowding technique is taken from the work of prolific glitch artist and theorist, Dutch-based Rosa Menkman (born 1983) (Figure 9). Menkman's blog insights an extremely deliberate visual aesthetic of chaos. Titled:

|| | Bitsbits bits_____ ///////////////ЯOSΛ MEИKMΛN~~~@~~~ DIRDIRDIRA:??blogspot?_____| ||

Everything here is a challenge to read or navigate. To 'use' the page, one must engage in a process of figuring out *how* to click on a link, or rather, how to identify where the links are (an arrow replaces the normal 'hand' or linear cursor), let alone comprehending what the text says or links do. Disorientation is the name of the game. The entire page is filled with a mélange of tightly patterned black and white background and mid-ground textures, some of which are animated GIFs that continually oscillate in a loop, as if 'selected' in Photoshop, while other patches shift in the breadth and space of a 'roll over.' Each header box also becomes increasingly difficult to read as one's cursor approaches it, jumping aside a few pixels or flipping upside down.

In the spirit of the avant-garde, Menkman's aesthetic is anti-instrumental and counter-intelligible. Its very existence calls attention to the hi-tech conditions under which the majority of us use, work, socialize, and play. Instead of allowing users to blindly consume content, as

Figure 9. Rosa Menkman, stills from "Sunshine in my Throat" (2014). Reproduced with the artist's kind permission.

on Facebook or Amazon, 'using' Menkman's site is more of a hike than sail. One is never allowed to forget the frame that structures the content. Even a comparison of the ways in which her blog, titled 'sunshine in my throat'[43] has evolved over time, it becomes clear that her style has become more jittery, seemingly out-of-control, and challenging to look at and navigate. In sum, her work requires a seemingly unjustified souped-up level of eyeball labour, clicking and 'interactivity.' And yet, the majority of glitch artists and a select few mass media websites have adopted her style and particular techniques (among hundreds of other related anti-communicative glitch methods).[44]

Glitch art, by definition, is dysfunctional, nonoperational, and anti-communicational. And yet, in order for it to work, glitch art must rely on the very rational, highly functional computational protocols and compression algorithms that form all digital media. That is, a glitch artist requires a high level of command and control over coding, algorithmic manipulation, and an awareness of network operations.[45] In this way, works like Menkman's flirt with the illusion of disorientation, failure, and a loss of control, while also keeping it close at bay, a tension that characterizes the aesthetic experience of glitch art. As Menkman puts it, in one's initial encounter with a glitch, there's an initial moment of disorientation and destruction. She refers to this as the 'glitch momentum.' In this moment 'noise' appears in aesthetic experience and on the screen, the protocols and structures of broken code or incorrectly rendered data prevent interpretative faculties from making 'sense' of what is seen. But as soon as one recognizes the source of an error, or simply that the artist has simulated an error rationality steps back in. The 'glitch momentum' is gone, Menkman argues,[46] and so too any ongoing or sustained intervention into the sophisticated networks and compression protocols that frame the conditions of possibility for creative production today. Nonetheless, the work is meaningful as a critical reflection into the processes and systems of power and control that govern everyday work and life, that is, the dominant cultural imperative for increased efficiency and capital gains for everyone from employers to Internet providers, browsers, advertisers. And by critical reflection, I do not suggest that the work is a critique in and of itself, but simply that its existence as aesthetic phenomena, when coupled with analysis, provided here, renders a space – a pause – for the political, humanitarian, and economic contradictions

of digital media to come into focus, to be questioned, versus simply left unseen and unacknowledged.

5.4. 24/7 feeds

Quite simply, the existence of 24/7 feeds of these animated GIF and glitch forms – and by extension any data – creates another set of factors that further contributes to the overall intensification of perceptual technics. That is, the constant challenging and pushing of the body, by way of eyeballs and fingertips, to do more work in consumption and distribution of network data. As Jonathan Crary has recently noted while drawing on Gilles Deleuze's 1995 theory of the control society, new technologies increasingly demand our attention on a continuous, ongoing basis.[47] The evisceration and encroachment of private space and personal, individual psychic life is reflected in the continuous and ongoing demand for eyeball attention. Such 24/7 environments, he argues, may have the s*emblance* of a social world but they are not. Instead, they are 'non-social models of machinic performance,' a suspension of living that does not disclose the human cost required to sustain its effectiveness.[48] The real physiological costs and demands placed on individual sense perception and optical (eyeball) labour may be concealed as providing a 'service' or 'news update' to users on so-called 'social' media, boasting connection, sharing, or their claims to democratizing power, but they are not in glitch art. Glitch art packs no punches. It is attention grabbing, period.

6. Glitch abstraction: ends and means

One of the primary techniques glitch art uses to draw this attention, as attention (and not under the guise of media content or sociality) is through abstraction. In the majority of examples discussed, there is a large degree of abstraction. That is, the removal of signifying content, representational imagery, or photography. While the abstraction in these examples may appear as recourse to abstraction in modern art – what Rosalind Krauss analysed as a withdrawal from the world, history, sociality, or context into a world non-meaning and dysfunction – this is hardly the case.

In much glitch art, the opposite occurs: abstraction is less of a withdrawal from the world than a rendering of its contours. In this way, glitch techniques could be theorized as 'de-compression aesthetics' because they are anti-transparent in their aims to show the logic of compression otherwise hidden in 'functional' or simply, content-filled media forms. As noted above, such techniques also failure and breakdown, whether simulated or real, are age-old strategies of the avant-garde. Failure-in-material-abstraction is also a popular motif in critical theory: deconstruction's aims to 'show' the frame or, 'parergon' as Derrida theorized it, the 'conditions of possibility,' as Kant and Foucault articulated it, 'Phanero Technics,' as Le Corbusier put it, or what Peter Wollen referred to 1972 as 'Foregrounding' in his analysis of Jean Luc Godard and the French New Wave.

Without content to focus on or interpret, one's attention shifts to the technical and material conditions that structure digital animation, as such.[49] The previously unquestioned or non-visible frame is brought up for review. By emptying a media of its (semantic, semiotic, cultural, or representational) content, abstraction does the work of mirroring, offsetting and highlighting the technical protocols and material logic that 'frames' (such conditions and parameters) on a medium. Awareness turns to how the 'rhythms, speeds, and formats of

accelerated and intensified consumption' that are reshaping experience and perception, rather than to the 'less important' particular operation and effects, as Crary puts it. And, as Sean Cubitt suggests, the interpolation into this system of intensified into and compressed content is pervasive across class and social strata. In this way, glitch art, like certain retro-animated GIFs, mirror contemporary forms of physiological, economic and social control. Put differently, the deliberate adoption of glitch styles and retro animated GIFs with their low-fi, DIY aesthetics – despite having access to create highly polished, clean-cut media art – operates as a reflexive mirror on a culture of ubiquitous speed, acceleration, and pervasive compression. It introduces a pause and brief reflexive moment where we can see in the forms of the past what is still operative, but not visible in the present. Again, this is not true of all cases of glitch art or animated GIFs, nor does their mutual capacity to reflect a history of a medium suggest that the work itself suffices as a social or political critique, in the vein of the avant-garde or as political art as such. Rather, the mirroring capacity outlined here is only to articulate the fact *that* this aesthetic exists and, coupled with history and analysis as provided here, bears an allegorical and mimetic relationship to the progressive history of rationalization in aesthetic, politicized has one leg of global capital and its development of the attention economy.

Scholars have similarly theorized this condition as the 'society of control' (Gilles Deleuze), or an information economy built on the 'free labour' of its 'citizens' (what Jodi Dean refers to this as Communicative Capitalism). It comes as no surprise to witness the statistical and algorithmic analysis and compression of all aspects of life and being from one's 'friends' and intimate desires, to work habits and eyeball aptitude. Why new media artists continue gravitate to these retro and glitch formats makes sense while, as an aesthetic form it may only ever offer us more polychromatic and meaningless noise.

Glitch art articulates the rhythms, speeds, and formats of radical compression, the unreasonable demands placed on bodies and minds, and imperatives for the nonstop, mass circulation of data, born from techno-scientific programs couched in broader capitalist goals for infinite expansion and exploitation. Abstraction allows it to render this process more immediately, speaking to the frame not the content, we see in the frame the political conditions of viewership in global capitalism, otherwise obfuscated in normative 'content-driven' media. Generally speaking glitch art is experienced by most as mere eye candy, special effects in a night club or music video. Moreover, many glitch artists and animated GIF makers do not see their work in this critical or political light (though some clearly do), or even as posing such self-reflexive questions about the politics of digital media and aesthetic forms therein. But this is not a problem because it is not their job to insert critique or analysis. This is the job of critics and aesthetic theorists. When glitch aesthetics, as noted, are accompanied by historical, material, and technical, analysis, as offered here, the surface veneer of visual noise settles into a meaningful but playful set of critical reflections on the life and processes that shape our social and political paradigms of control.

Notes

1. Crary, 24/7, 39.
2. Also, see the work of Richard A. Lanham, *The Economics of Attention*.
3. By invoking the term 'economic' I denote only a casual sense of getting the most 'bang for one's buck,' the most sensible, practical and efficient way of doing something. In other words, I do not mean the political economy of networks or Marxist interpretations of digital media art.

4. The terms digital media and new media are used interchangeably. For more on this see Lev Manovich, *The Language of New Media*.
5. (The flip side of course is that as things get smaller with less information, higher demands are placed on human attention and optical labour, hence my clinging of the phrase, Eyeballed Aesthetics).
6. This fusion between the economic logic of digital media and digital culture is illustrated in the phenomena of Gif-iti's, analysed in a more extended version of this article.
7. Cubitt, "Codecs," 47.
8. The International Organization for Standardization is an international standard-setting body for the Internet.
9. Cubitt, "Codecs," 45–46.
10. Cubitt, "Codecs," 45–46.
11. Sterne, *MP3*.
12. Sterne, *MP3*, 3, 22, 88. Also see the work of Mara Mills.
13. This history is charted in detail in chapter 5 of *Chromatic Algorithms*, some blue screen technology thin-film, to early frame buffers, offer channels, and masking techniques in off-the-shelf software.
14. For more on the technical theories of predictive masking and critical bands see Wegel and Lane, Pohlmann, and Sterne.
15. Shannon and Weaver, *Mathematical Theory*, 9–10, 31; Shannon, "A Symbolic Analysis," 744.
16. Noise may be unwanted additions maybe distortions of sound (in telephony, for example) or static (in radio), or distortions in shape or shading of picture (television), or errors in transmission (telegraphy or facsimile), etc. All these changes in the transmitted signal are called noise. Weaver.
17. Sterne, *MP3*, 19, 51–52.
18. Shannon, "Information Theory," 216.
19. Cubitt, "Codecs," 49.
20. Stiegler, *Technics and Time 1*, 2; Sterne, *MP3*, 53. Similar processes are referred to by Mara Mills as the 'ergonomopolitics of objects,' or by Foucault as 'biopolitics.'
21. One key difference is that users (participants/consumers) today are often *voluntarily* labourers. For more on this see below or the work of Tizianna Terranova.
22. For instance the numerous Repetitive Strain Injuries associated with computer use or, for stress related issues, see Volpi, "Heavy Technology"; Kweon et al.
23. For example the comparison between American artist Jackson Pollock's paintings from the late 1940s and contemporary Japanese glitch artist Yoshi Sodeoka's series of digital paintings, *Pollock GIF Numbers 90–99* (2013) turns on rapid and radical compression of digital media to render the importance of detail and subtle line in the original Pollocks. [http://www.sodeoka.com/Pollock-GIF-Number-90-99].
24. Jenkins, "Convergence," 24.
25. Crary, *24/7*, 76.
26. One may propose counter examples of Snowdon's newly proposed phone cover device that monitors when data is being passively collected or the iPhones 'secret' location tracking function, but these techniques also rely on previous engagement, movement, or settings on the part of the owner/ user. I thank the reviews at *Communication Design* for pointing this out.
27. I wish to thank Lisa Nakamura and Alex Galloway for first pointing this out.
28. Mackenzie, *Cutting Code*, 188.
29. Many animated GIFs also bear a strong communicative function.
30. This frame delay attribute is also why scholars have since remarked on the GIF's phenomenological association with protocinematic technologies from the nineteenth century, including such optical devices and toys as the phenakistoscopes (1832), zoetropes (1834), or praxinoscopes (1877). Eppink, "A Brief History," 300.
31. If using a slow connection, unavoidable in the early years of the Internet, one would encounter additional staggering in downloading these files.

32. Featuring work by relatively well-known and already established net artists including Cory Arcangel, Peter Baldes, Michael Bell-Smith, Jimpunk, Olia Lialina, Abe Linkoln, Guthrie Lonergan, Lovid, Tom Moody, Paper Rad, Paul Slocum, and Matt Smear (aka 893/umeancompetitor).
33. Surf clubs are group blogs that focused on decontextualizing found digital objects. In a surf club, anonymous users (or artists like Internet artist Petra Cortright, who notoriously championed the 'Computers Club' surf club One user would post an animated GIF of a politician doing something funny, to which another user with first on one's with a related graphic, or alternatively, take the discussion in another direction altogether. http://www.computersclub.org/club/
34. His official website that recorded more than 15 million visitors in 2011. www.newrafael.com
35. One may find hundreds of counter-examples, namely cinemagraph GIFs where a slow frame rate and number of selected frames used begins to resemble mini narrative films (Twitter's Vine would be affiliated with this genre).
36. Moody, *OptiDisc*; Sodeoka "Art & Music."
37. The Kunstverein Arnsberg-commissioned "Violent Power," can be found at www.violentpower.com
38. Reference redacted for purposes of blind review. See Kane, "Glitch Art: Failure from The Avant-Garde to Kanye West."
39. See http://cinemagraphs.com/
40. As Shari Wolk notes, the tendency to focus on moments of batting eyelashes, or small gestures his revealing insofar as the format allows users and viewers and creators to remain within a perpetually deferred presence of non-time time and non-space space.
41. For example, many cinemagraphs consist of such mundane events as animations of a swinging microphone, a head turning, or an eyelash batting, while the rest of the high-gloss fashion image remains intact
42. See Manovich, *Language*. These principles have received such pervasive coverage and attention in new media scholarship over the last 15 years, there is no need to rehearse them here.
43. The title, Menkman explains, is a reference to Donna Haraway's *Cyborg Manifesto*, in which Haraway writes, 'Our best machines are made of sunshine; they are all light and clean because they are nothing but signals, electromagnetic waves, a section of a spectrum …' Haraway, 153.
44. For example Jon Cates now closely emulates this look on his 'home page.'
45. I wish to thank Jonathan Sterne for discussing this with me.
46. Menkman, *The moment(um)*, 4.
47. Deleuze, 'Postscript'.
48. Crary, *24/7*, 8, 44 and Boltanski and Chiapello: 'to always be doing something, to move to change – this is what enjoys prestige, as against stability, which is often synonymous with inaction.' *The New Spirit*, 155.
49. In the case of traditional television, this is the endless stop-and-flow rhythm of artifice and superfluous data, in the case of the animated GIF, and by extension a majority of glitch art, it is the perpetual deferment of an unlived present. Vivian Sobchack has argued similarly, albeit in regards to the QuickTime format in 1999, that its then-slow frame rate left spaces and gaps that never resolved into finite action or cathartic 'emotion.' Sobchack, 'Nostalgia,' 12.

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Notes on contributor

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IN THE ARCHIVE

The value of archives

Sue Perks

School of Communication Design, University for the Creative Arts Epsom, Partner Perks Willis Design, Surrey, UK

I write from three perspectives: those of a designer with a thirst for truth and authenticity; a researcher with a zeal for the type of brown box files found in archives and an educator who wants to facilitate good practice among design students and instil the importance of primary research into practice. In each of these areas of my professional and pedagogic life, the value of archives cannot be underestimated and underpins and validates all that I do.

In our postgraduate design programmes at University for the Creative Arts (UCA) in Epsom, Surrey, we use archival research as an important introduction to exploratory practice, part of the initial Research and Methods units. Archival research is essential in reinforcing the relevance of primary and secondary research techniques to students, encouraging integrity and understanding to facilitate good practice. Having first-hand experience of archival collections can also act as a trigger for further investigation and lead on to richer and more informed creative impetuses for design projects. Nothing can replicate the experience of being able to actually handle unique items of historical significance; and there are few better inspirational starting points for design students than the opportunity to contextualize, discover and construct personal viewpoints and narratives.

At UCA we are fortunate in having many significant archives spread throughout our campuses in Farnham, Epsom, Rochester and Canterbury and we are currently in the process of acquiring more. Our resources and images cover areas such as animation, animals and art, architecture, art education, crafts, disability, fashion and textiles, gender studies, graphic explanation, photography, politics, protests, race, typography and wartime art (Figures 1–5). Our archives are well used by students and maintained by specialist archival and special collections staff. UCA archives are accessed through an online archive catalogue that contains descriptions of all our collections. Collection descriptions are available to search on the Archives Hub, but they are also available to visit.

UCA's archival aim is to catalogue, preserve and promote our collections for learning and teaching in the creative arts. Archival collections include the work of Oscar winning animator Bob Godfrey (who taught at UCA), Tandem Studios director Daniel Greaves, the digital image collections of animators Halas and Batchelor, Foundry Types (one of the original independent type foundries started in 1989–90, by David Quay and Freda Sack), the Typographic Circle (posters), Diagram Visual Information Limited (containing methods of graphic explanation and book artwork showing the design process), David Birch illustrations, Textile sketchbooks (showing work in progress and textile samples from City and Guilds Embroidery

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Figure 1. Range of prospectuses for Epsom School of Art.

Figure 2. Photograph of members of the Fashion Department, Epsom School of Art, on an outing to Ascot (1962).

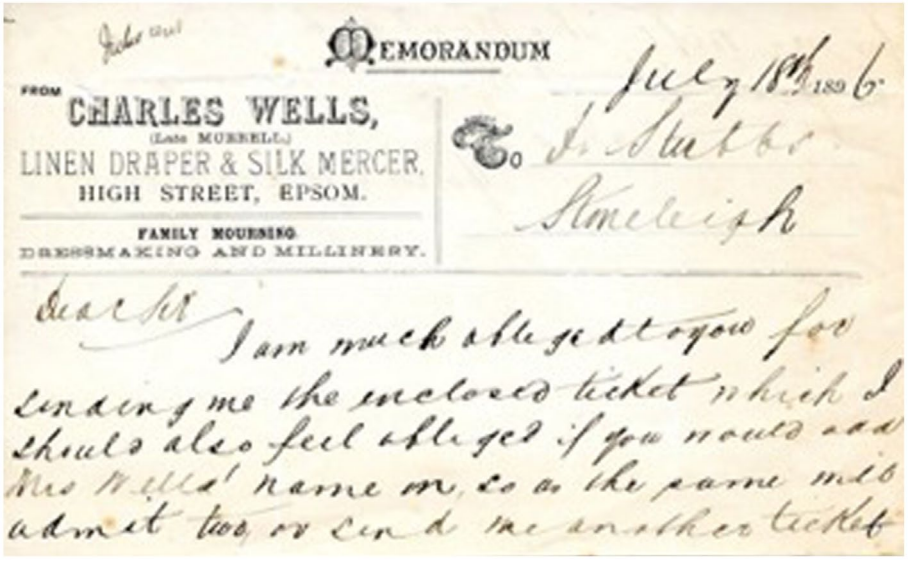

Figure 3. Letter from the Epsom Art School Archive (1886).

Figure 4. Letters from 1896, including acceptance postcards to the opening of the Epsom School of Art.

Studies), the Materials Library, the Tessa Boffin Archive (lesbian, gay, bisexual, transexual and other photography projects), Working Press (working class artist books), the University Institutional Archives, and many artist books and rare books. One of our most recent acquisitions is the archive of Nijhof and Lee Booksellers from Amsterdam (1988–2011) consisting of 3500 items that predominantly date from the 1920s to present day. The archive includes type specimens, magazines, books and catalogues.

Figure 5. Spines, *The Magazine of Art – Illustrated* (c.1890s).

My own research degree made extensive use of archives at University of Reading, The Natural History Museum, London, University of Brighton, Gemeentemuseum in The Hague, and the Hochschule für Gestaltung in Ulm. Being able to experience the feel of handwritten documents and original artwork and artefacts gave me a unique insight into the lives and everyday work of the designers involved, and gave me an understanding of the real stories and influences behind significant events in design history. By piecing together archival material and connecting correspondence (sometimes between international archives) I have been able to unearth little known back stories and surprising factors which have provided me with a new insights into design history – which may to some extent have satisfied the investigator in me, but more importantly has both informed my design practice, deepened my curiosity and integrity as a researcher, and from a pedagogical point of view allowed me to encourage my students to understand the importance of the archival experience in their exploratory practice and primary research.

From the perspective of my own practice as a designer who mainly specializes in the design and interpretation of museums and educational exhibits, the importance of understanding both the main design concept, and the nuances and subtleties of the subject is essential for bringing the exhibit to life. I have spent many fascinating hours working with museum curators exploring the artefacts in their collections gaining intimate insights into their significance and contextual value.

Archival collections from various universities such as University of the Arts London (which houses material from Stanley Kubrick, Tom Eckersley, and Walter Crane among several other notable designers) are increasingly available online and visits can be arranged. The National Archives holds three million designs from 1839–1991 and The British Design Collection in the National Archives is an online resource that is available to provide sources of inspiration for designers, and enrich their practice by learning from the past.

The value of archives at UCA can be measured by the wealth of richly informed major projects completed by our students, where the starting point can be traced back to light bulb moments, discoveries and connections made while reflecting on the context of archival

material. Personally, I will never forget (while researching material for my PhD in the Natural History Museum Archives) finding a memo dating back to the early 1970s which provided absolute evidence that the principles of Isotype (originally devised in Vienna in the 1920s) were being used to design a new way of looking at audience-focused exhibitions in London in the 1970s – a revelation indeed, and absolute evidence that helped to validate a whole chapter of my thesis (and subsequent published essay). In a similar way, these connections and experiences allow students to see history from different, and often highly personal perspectives, which in turn make for original, thought-provoking design solutions. Archives contain the details and minutiae often lost to general histories, but are there to be reconsidered by new audiences.

Notes on contributor

Sue Perks is a designer, educator and researcher. Her doctoral thesis explored the legacy of the principles of Isotype. She has been a partner in Perks Willis Design since 1989 and her area of expertise is in the design of educational exhibits within museums, and the organization and management of graphic information. Significant projects include the graphic interpretation of Tudor House Museum in Southampton, travelling exhibitions for for Aik Saath, permanent and temporary exhibitions in the Natural History Museum (and a recent published essay on their 1970s New Exhibition Scheme) along with design commissions for clients such as the British Academy, the BBC, and English Heritage.

IMAGE CREDIT

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THE CREATIVE PROCESS WITHIN SKETCHING

in relation to Darwin's sketches
in collaboration with
Leslie Atzmon by Sarah von Buren

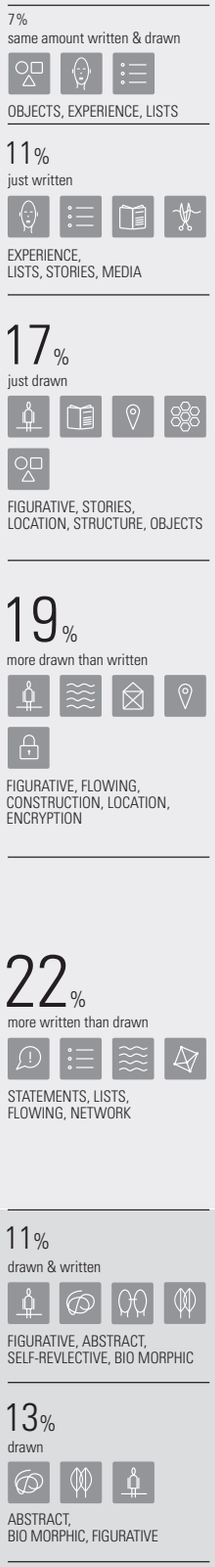
BRIEF
SKETCH YOUR CREATIVE PROCESS

The process every creative individual goes through is 'non-linear' and it is described differently by many theorists. My interest lies within the personal interpretation of each creative person. How do you approach a project; what works best for you? How would you describe or draw your path, from the starting point of a brief until the final outcome? Please feel free to use this page as it seems best for you to illustrate your point of view - there is no right or wrong and nothing you can`t do.

Thank you very much for your participation!

Central Saint Martins, University of the Arts, UK

I first became interested in this project when visiting scholar Leslie Atzmon gave a presentation at Central Saint Martins in January 2016 on how Charles Darwin used sketching as a way to think about evolutionary processes. In this talk, she analyzed several rough diagrams that Darwin drew as part of his attempt to understand how evolution behaves. He used these sketches — along with research data on plants and animals, and written descriptions of his ideas and thoughts — to help him sort out evolutionary processes of mutation, natural selection, and extinction. Darwin's sketches and creative thinking process sparked my interest in the roles that sketching plays in creative thinking in design. Most designers sketch as part of their process; they do so to sort their thoughts, or to explain an idea or action to themselves or others. These factors led me to an exploration of the specific role that sketching plays in the design creative process. And this query suggested questions about the role of sketching: Are there similarities and differences in the ways people sketch? Can any conclusions be drawn from a collection of hundreds of sheets, each depicting an individual's creative process? Would sheets produced by people who work in certain creative fields be different from those who work in other fields?



76%
linear

24%
non-linear

THE PROJECT

In collaboration with Leslie Atzmon, I created sheets with an introduction to ideas from Kyna Leski's book *The Storm of Creativity*. For example, Leski mentions that creativity is a path with no beginning or end. What you create is never an end point. Creativity per se has no formal output, rather, it is an "ongoing process" or "Wanting to know something that you do not know is the creative process." I printed out these sheets and then gave them to hundreds of people from a range of creative media in the arts.

The introductory prompt that I included was intended to make people start thinking about their own creative processes. As a next step, they got an empty sheet with only the hint "I think…"— the exact phrase that Darwin scribbled on one of his most well-known rough sketches — written on it and then they filled it in with whatever comes to mind. What they rendered represents their own individual creative process — or at least the most important parts of it. They were allowed to adhere, draw, or write anything on this page. Any media was allowed for modifying the page; there were no given limitations. Most people spent between 5-10 minutes on the sheet. The only given rule was that the output had to be in black and white for production reasons.

It is worth mentioning here that many of the participants are students in one of the creative fields at Central Saint Martins College, including textile design, jewellery, fine arts, fashion, graphic design, acting and so on.

In total, the collection reached over 110 sheets, which I ordered into groupings according to similarities of form and content. The two main groups that emerged from these sheets were processes that were depicted as linear and non-linear. Within those two groups, five different secondary formal categories emerged: just written, just drawn, more written than drawn, same amount written as drawn, more drawn than written. Relating this project back again to Leslie Atzmon's research on Darwin's work, which was mostly written and then augmented by sketches, I decided that the writings should come first and start with the non-linear process. Within those five secondary categories — just written, just drawn, more written than drawn, same amount written as drawn, more drawn than written — the sheets were put into subcategories relating to their content and what they were specifically expressing. These 18 further categories have a small icon for identification purposes on each sheet: 1.abstraction 2.bio-morphic 3.figurative 4.statements 5.lists 6.flowing 7.networks 8.construction 9.encryption 10.stories 11.structure 12.location 13. objects 14.experience 15.media 16.self-reflection. The sheets mostly got one icon; they only got two icons when two categories were represented in the same amount on the sheet. If one trait was stronger it automatically fell into the more dominant category.

The infographic at the beginning of the visual essay shows the number of sheets (110) ordered into the categories that I created: It shows the amount of sheets in percentage (gray rectangle size is equal to the percentage shown) and the categories are marked with the appropriate icons (beginning with the most used icon to the least used one).

The non-linear processes together on one page are just 24% of the whole infographic. 13% of these are drawn; those sheets have a dashed frame (abstract, bio-morphic and figurative). The drawn sheets are followed by the smaller amount of 11% drawn and written, with have a solid lined frame (figurative, abstract, self-reflective and bio morphic).

The linear processes start with the biggest category: 22% more written than drawn (statements, lists, flowing and networks). Next is 19% more drawn than written (figurative, flowing, construction, location and encryption). Then 17% just drawn (figurative, stories, locations, structures and objects). On the same page 11% are just written; marked with a dotted frame (experience, lists, stories and media). Finally 7% same amount written and drawn with a solid line frame (objects, experience and lists).

In conclusion, it is clear that there were many more depictions of linear creative processes (76%) than non-linear ones (24%). There were more sheets with drawings (69 sheets) than writings (50 sheets), which is the opposite of how Darwin utilized sketches versus writing in his creative process. This could be because I decided to only ask people working or studying in a creative visual field and Darwin was mainly a scientist. He only used the sketches as support for his thoughts, while we in the visual creative fields typically use them as our main form of expression.

There were many similarities in depictions of creative processes within fields. For example, the fine art and illustration people often drew organic, freely flowing processes; many graphic design students were quite visually strict and more linear, and they wrote and used grids more frequently than the fine artists.

I think through this project I realized that how people choose to depict the creative process is relatively individual for each person; but still there are similarities in approaches within same fields. This could originate from the same educational background (similar training, values and norms) as well as interrelationships that build within like minded groups; or from people within groups influencing each other. Furthermore, I expected many more non-linear depictions and was surprised by the mainly linear outcomes. My guess for this result is that it is probably easier and clearer to depict something that is linearly structured than to try to show non-linearity, and therefore people defaulted to linear depictions of their creative processes even if their processes are not necessarily linear.

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3. Teller, A. *Design Things*. (2011). Cambridge: MIT Press.

"Disclosure Statement

No potential conflict of interest was reported by the author."

Notes on contributor

This visual essay was created by Sarah von Buren, a current MA Communication Design Student at Central Saint Martins. She is originally from Switzerland with a background in graphic design. (sarah@vbueren.ch)

24%

non-linear

written & drawn
(11%)

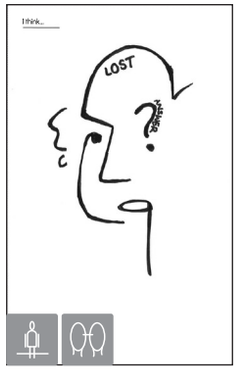
drawn
(13%)

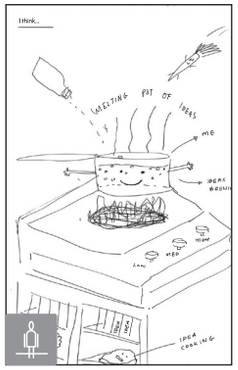
FIGURATIVE

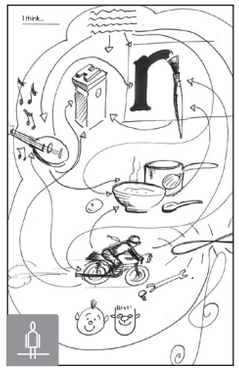
ABSTRACT

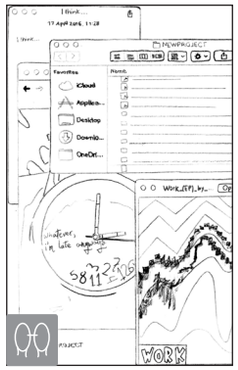
BIO MORPHIC

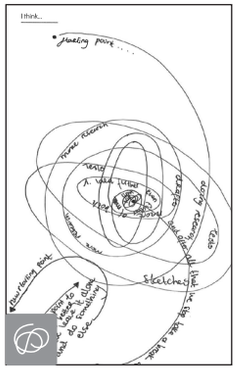
SELF-REFLECTIVE

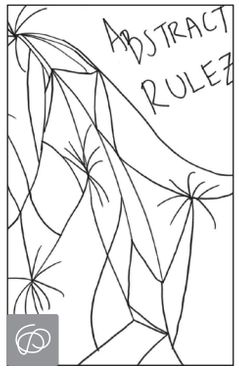


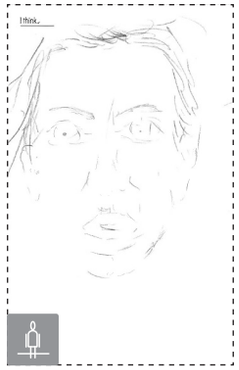


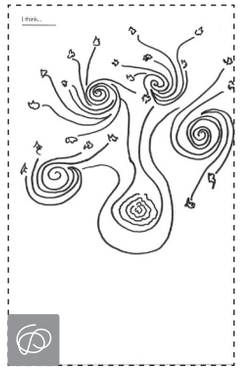


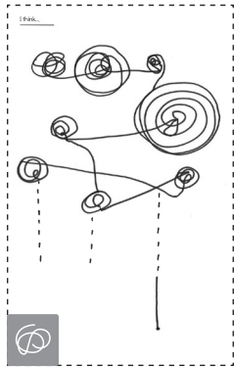


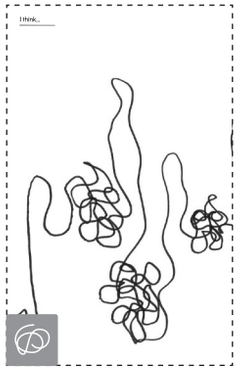


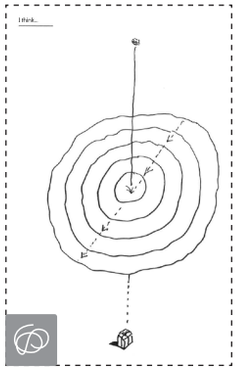


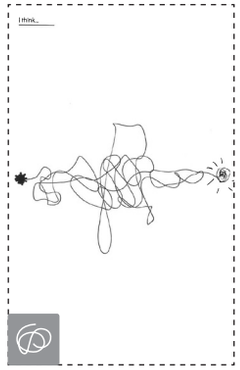


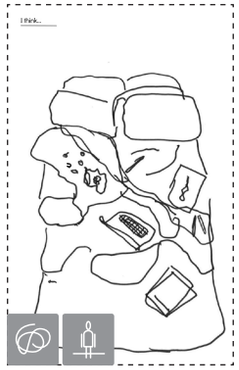


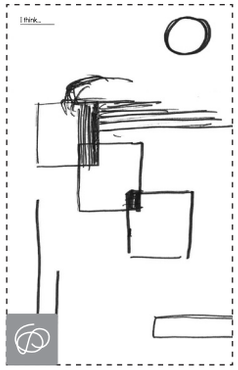


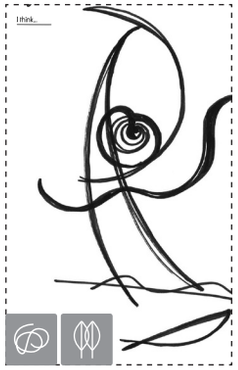


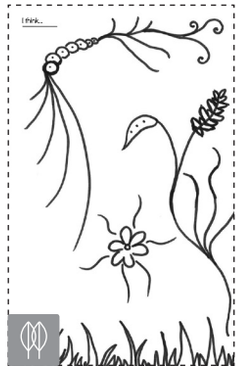


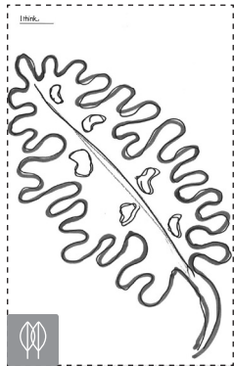


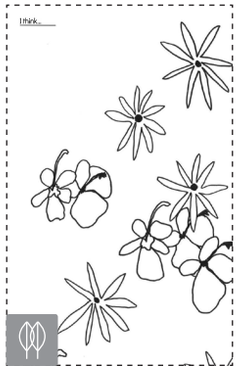












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FLOWING

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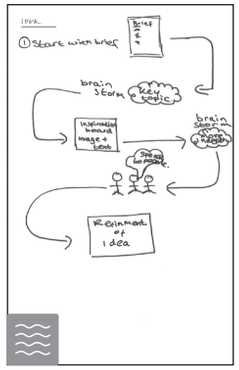

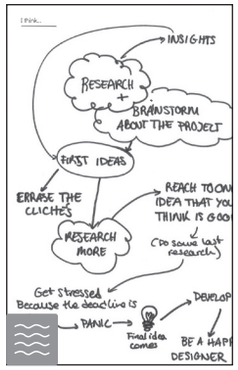

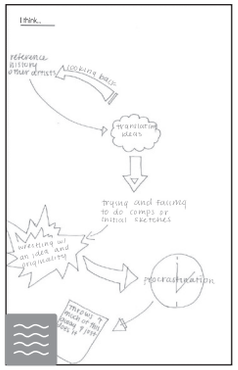

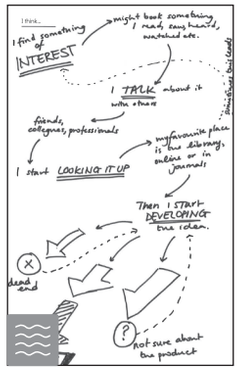

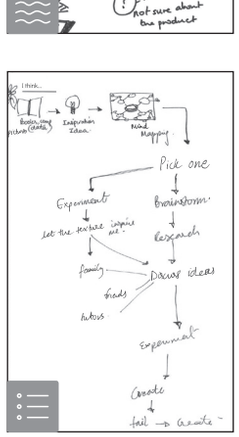

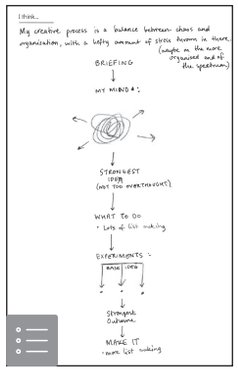

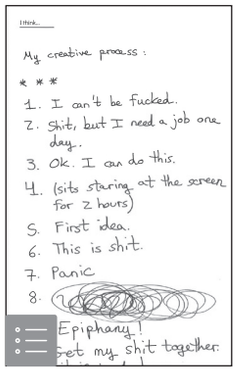

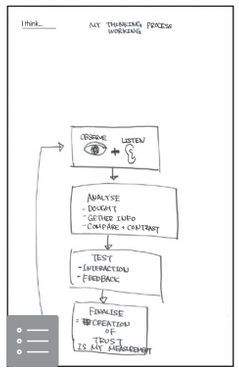

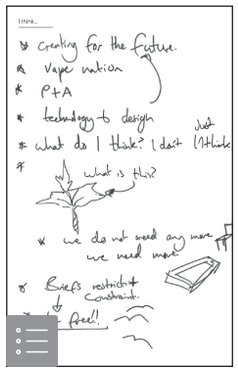

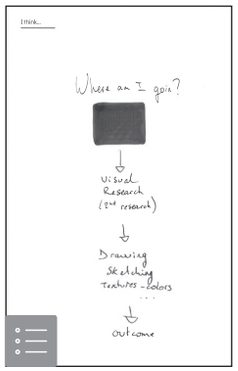

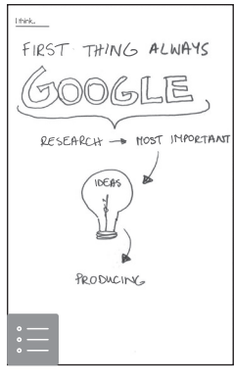

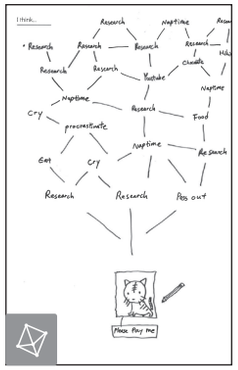

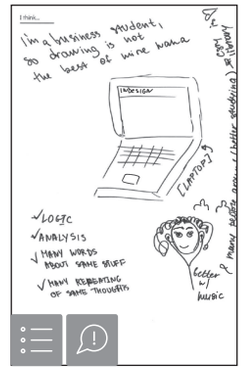

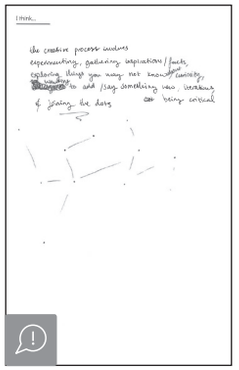

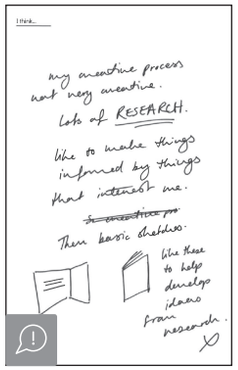

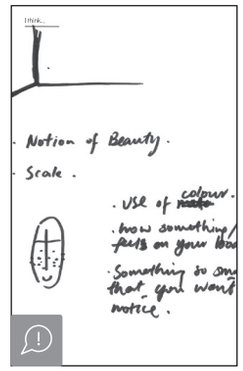

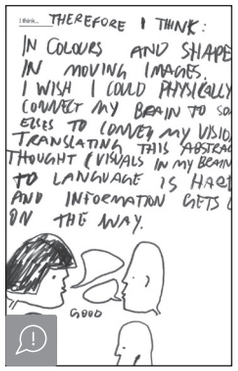

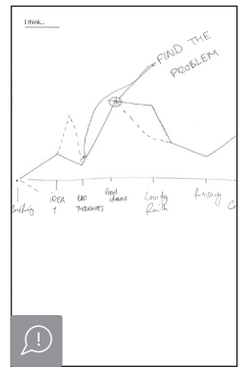

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FIGURATIVE

FLOWING

CONSTRUCTION

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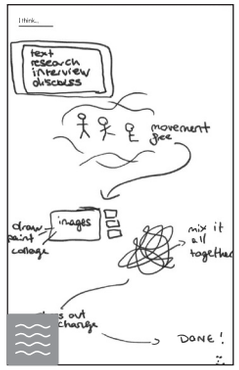

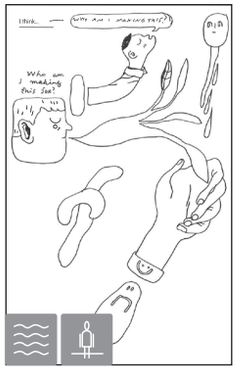

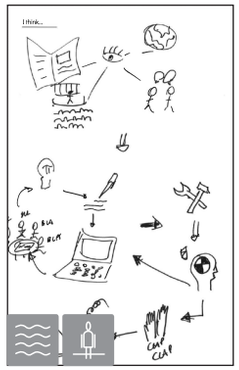

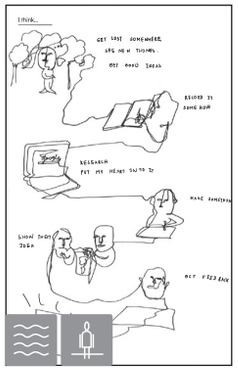

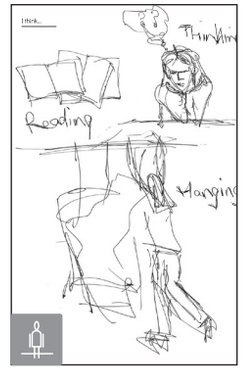

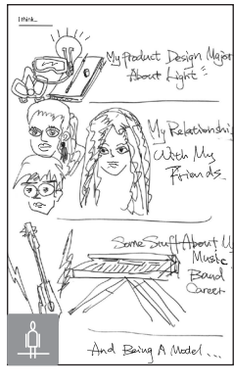

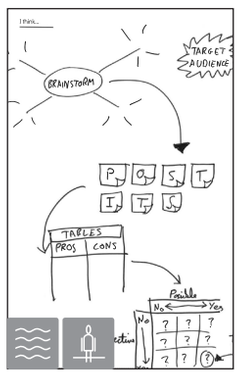

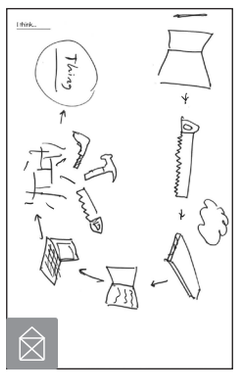

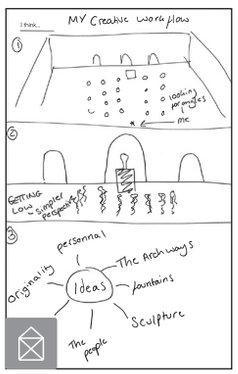

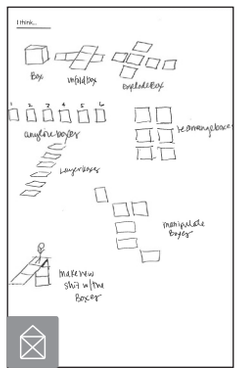

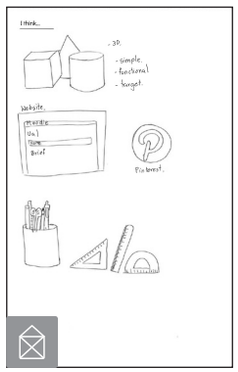

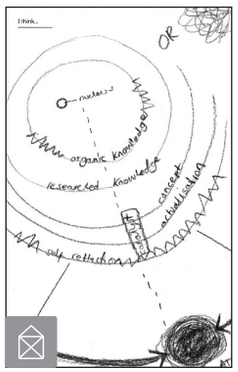

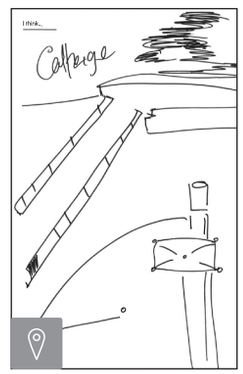

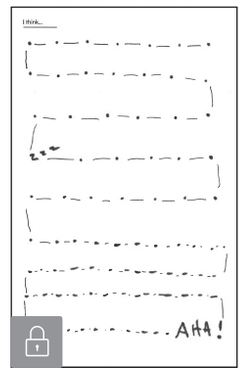

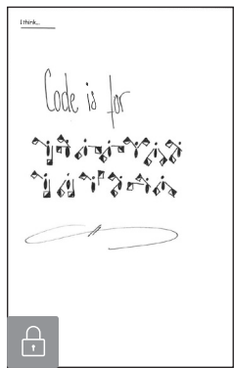

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FIGURATIVE

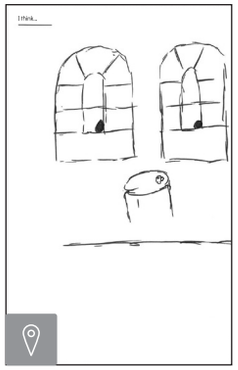
STORIES

LOCATION

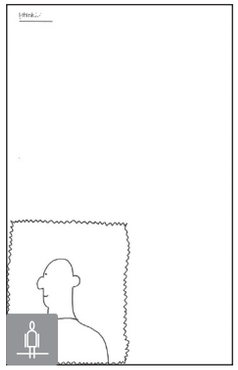
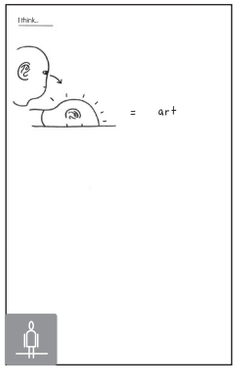
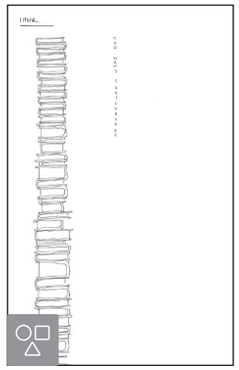
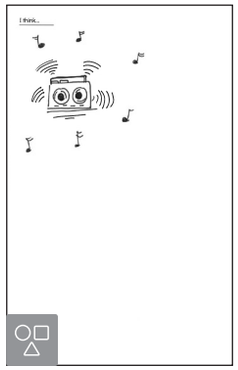
OBJECTS

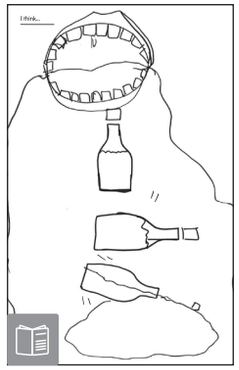
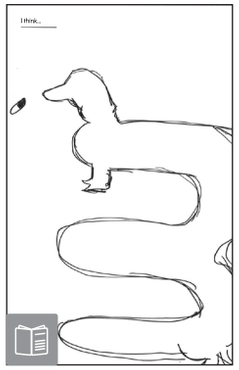
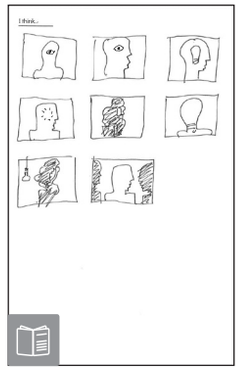
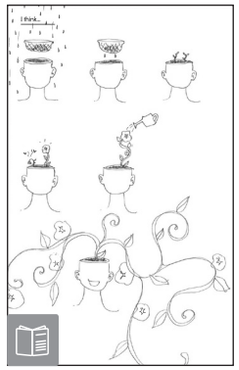
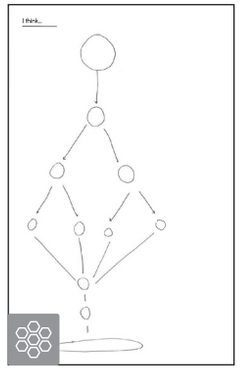
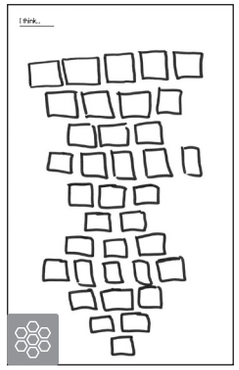
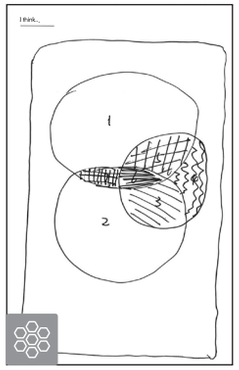
STRUCTURE







76%
linear

same amount
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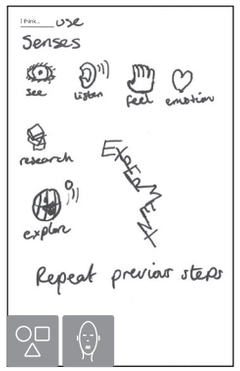
EXPERIENCE

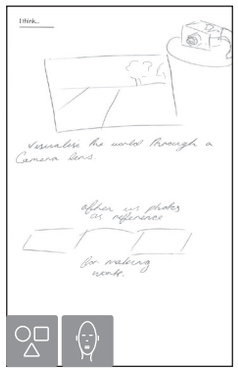
OBJECTS

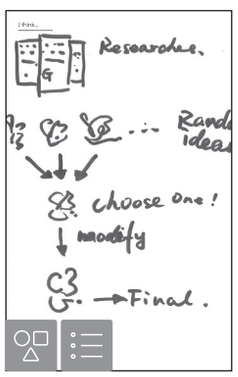
LISTS

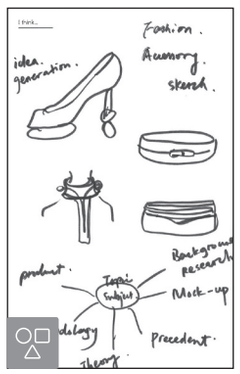
STORIES

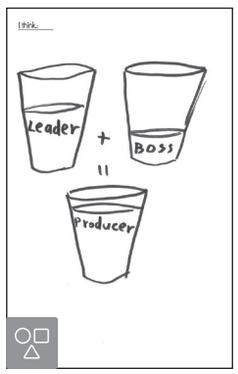
MEDIA

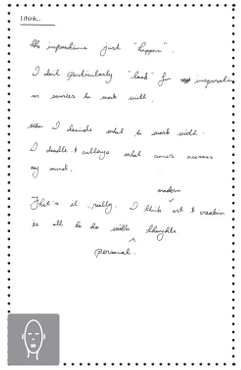


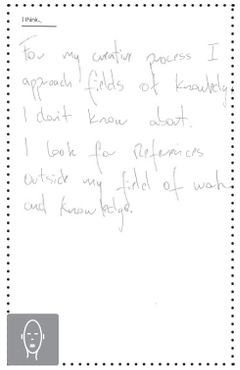


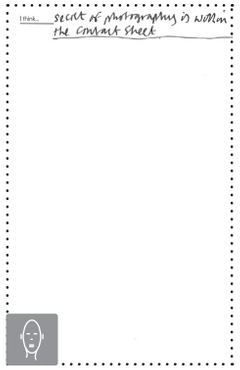


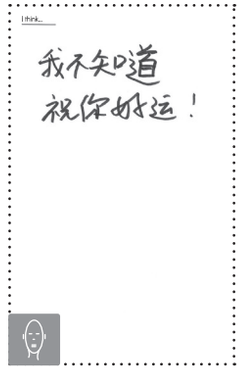


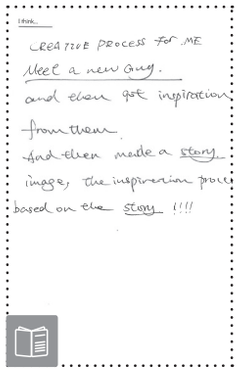


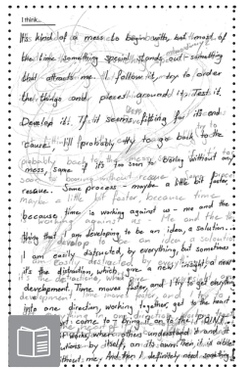


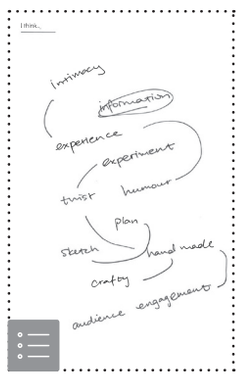


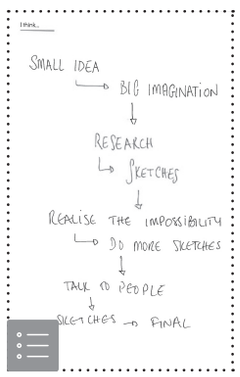


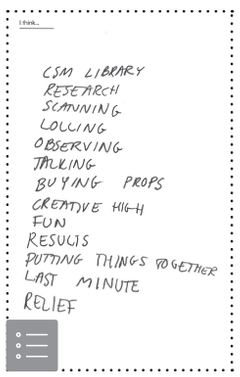












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WORKSHOP REFLECTIONS

Designing interaction design education workshop

Lauren Currie

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The Interaction Design Education Summit met for its fourth year in 2016, this time in collaboration with Interaction 2016's education partner Aalto University in Finland. Each year, the Summit brings together design educators from research academia, design & art schools, vocational programs, corporate/industry training, and lower-ed (K-12) as well as industry practitioners to talk about how all of us can better fulfill the Interaction Design Association's (IxDA) mission of advancing its subject. Daniel Harvey and I were invited to run a workshop on our proposed topic of 'designing designers'. Daniel and I submitted this proposal because we are both firm believers that design education is one of the design industries biggest design challenges. Designers have more influence than ever before. Our discipline is valued and appreciated by the tech and business world. Furthermore, governments and institutions around the world are embracing our methodology. This raises a vital question of how might we educate future designers.

Daniel Harvey leads the new talent programme at Sapient Nitro. Sapient Nitro is a marketing and consulting company that provides business, marketing, and technology services to clients. I've spent time as a student at Duncan of Jordanstone School of Art and Design, an employer as founder of Snook (a service design agency) and an educator at various universities and private schools across the world. So together we feel really strongly about this challenge from various angles. We're keen to celebrate the innovative work that is happening in industry whilst being a bridge between learning and practicing, helping to prototype new ways of doing things.

We kicked off our three-hour session by inviting the workshop participants to self-organize using a 'scale of agreement' in response to two statements: 'design education is broken' and 'design education should be better understood'. We crafted these statements in the hope they would be provocative but continue to be open to each participant's interpretation. Participants were invited to introduce themselves and then share their position with the group.

For example, Michael – a workshop participant, explained: 'My problem isn't a design problem it's a people problem.'

We used the responses from the scale of agreement to push us towards identifying themes or ideas as well as to raise relevant questions for discussing in the workshop:

- What would an accreditation board look like?
- Do we need better collaboration at the 'hand off' stage between industry and educators?

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Figure 1. Lauren Currie (author) addressing audience of the Design Education Workshop. *Image courtesy of the author*.

- How can we test and measure critical thinking?
- Should all this start earlier? What would it look like in pre-school?
- Who do young designers aspire to be like?
- What should our relationship with business be? Do we try to change the system from the inside or do we create new systems like Hyper Island, Kaos Pilots and General Assembly?
- Are designers required to have a license to design?
- How do we go about agreeing on the fundamentals of a design degree?
- How can we help industry understand better what design grads are good at?
- Should educators ask for more clarity from companies on what they need?
- Does design needs to be taught to everyone?

Following an initial discussion, we then split up into teams and focused on five key questions for the remainder of the sessions. They were:

1. How might we help the industry better utilize and understand the skills of graduates?
2. How might we create the foundation for all interaction design courses?
3. How might we enable a more person centered transition from a student identity to a professional one?
4. How might we create the best design school in the world?
5. How might we create better structures for collaboration between academia and industry?

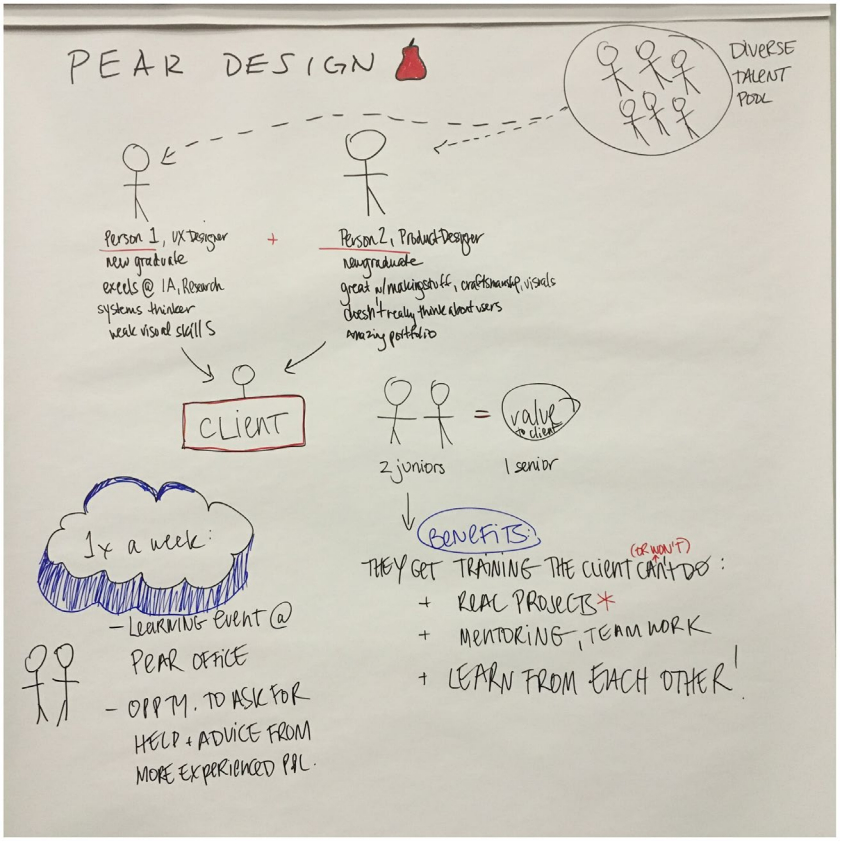

Figure 2. Participant sketch of their proposed idea. *Image courtesy of the author.*

'I don't care about design, I care about helping students be intellectually engaged with the world' – Michael, Participant

Each team spent time working on their problem statement and prototyped a solution in order to start a conversation with the other teams. One example that came out of the workshop discussions was the identification of a potential solution called 'Pear Design'; that is, a new way to structure a design agency to encourage learning and development amongst its employees.

We ended the session with a commitment to action. This is a big conversation in a very short amount of time. It's often easier to talk than it is to do, so we encouraged all participants to commit to an action and to share this with us. The resulting participant actions ranged from an events-orientated approach including, for example, more presentations about design education to actions which proposed pairing up junior designers with senior designers and developing a mentoring scheme between practitioners and students.

We ended the session with a 'check out'. Checking out is a favourite tool of mine to allow each group member to reflect or express a feeling. The range of sentiments nicely reflected the non-judgmental tone of the workshop which everyone found refreshing. Some left feeling optimistic, others left feeling a deeper understanding of the complexity of the problem, while others doubled-down on their commitments to action.

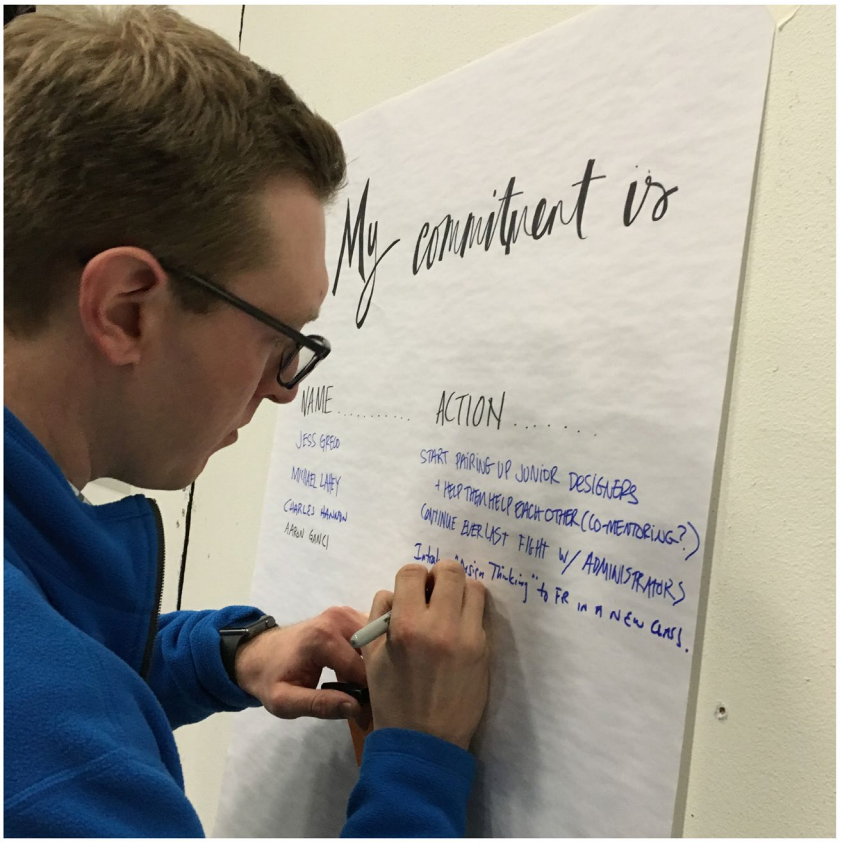

Figure 3. Participants committing to an action. *Image courtesy of the author*.

My personal reflection was that the role of a designer as a sole (and more often than not male – think Philippe Stark, Mark Zuckerberg and Steve Jobs) hero who creates an ingenious multi-million dollar idea in his bedroom, is the type of designer many educators and practitioners think education should be promoting and producing. This scenario scares me and is the opposite of the type of designer a) I strive to be and, b) that the world needs.

Perhaps the workshop is best summarized by a quote from entrepreneur and assistant professor at MIT Media Lab, Kevin Slavin, who observes: 'We can build software to eat the world, or software to feed it. And if we are going to feed it, it will require a different approach to design, one which optimizes for a different type of growth, and one that draws upon – and rewards – the humility of the designers who participate within it' (2016).

Notes on contributor

Lauren Currie is a Scottish designer and entrepreneur. She makes, thinks, writes and speaks about design, social change, education and entrepreneurship. She co-founded Snook, Scotland's leading service design and social innovation agency which uses design to make public services better. *Management Today* recently named Lauren as one of the UK's top 35 business women under 35. She was recently featured in *ELLE UK* as 30 women under 30 changing the world. Lauren now lives in London and splits her time between Good Lab and #upfront.

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WORKSHOP REFLECTIONS

ico-D Education Platform Meeting 2016 Art Centre Pasadena, California

Rebecca Wright

Central Saint Martins, University of the Arts, London, UK

The strapline on the cover of the participant pack for the International Council of Design (ico-D) Platform Meetings 2016 reads: 'Design is Valuable' and for three hot August days at Art Centre Pasadena, 45 participants from 17 countries and six continents representing educational, professional and promotional members engaged in dialogue, debate and exchange, that explored the role and value of design. Whilst ico-D services the worldwide design community in a myriad of ways, for our purposes here, it is 'through initiatives that promote and represent design as a medium for progressive change', which underpins the Platform Meetings.

Launched in 2013, Platform Meetings provide an interactive forum to discuss the needs and aspirations of members and inform ico-D's agenda, with separate Professional/Promotional and Educational Platforms to address priorities and concerns. The inaugural Education Platform in Hong Kong organized in 2014, focused primarily on members sharing local knowledge and in identifying common areas of educational interest. In Pasadena, the broader objective of looking towards the 2017 Montreal World Design Summit prompted a structure centered around developing previously defined issues and reporting on the progress of established working groups via presentations, roundtable sessions and discussion forums.

While the Professional/Promotional Platform considered topics including national design policy and accreditation and certification, the Education Platform looked at the challenges facing design education; in particular, focusing on curriculum development. To provide a context, the opening speaker presentations illustrated initiatives and drivers of curriculum development in five institutions. Karen Hoffman (US) spoke about Art Centre's Experience Portfolio project that prepares Product Design students for emerging creative economies; Zhao Chao introduced the multi-cultural and multi-disciplinary design innovation ecosystem at Tsinghua University (China); ico–D Vice President Ziyuan Wang spoke of the changes in design education at CAFA (China) and the new role of design as part of culture and as a strategy for development; Lawrence Zeegen asked what we should be considering when designing a twenty-first-century design school and shared the principles informing an approach taken by Ravensbourne College of Design (UK). In my own, talk, I presented the recent curriculum redesign of Graphic Communication Design at Central Saint Martins,

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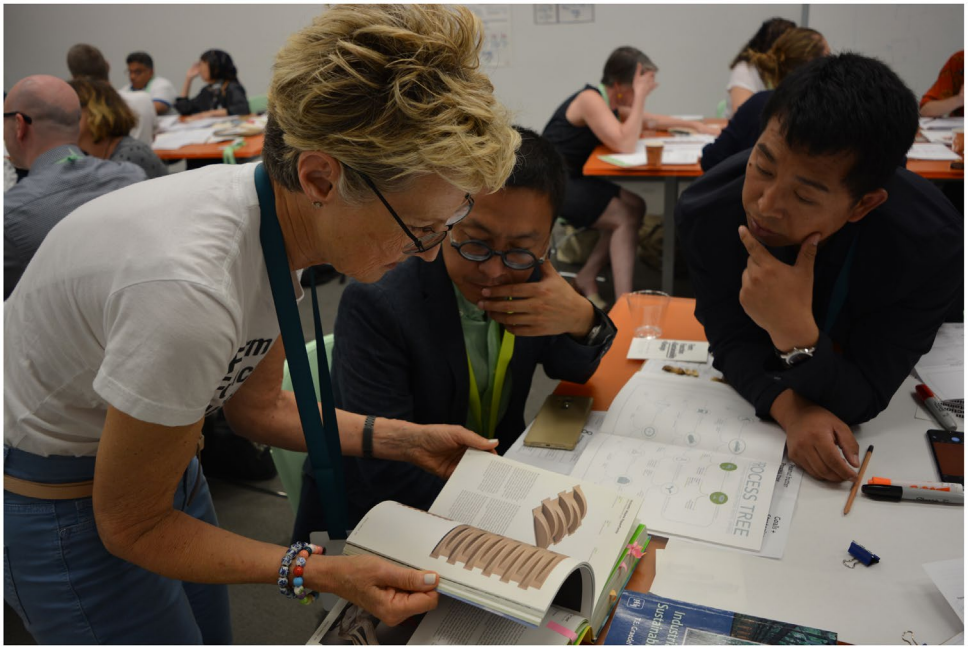

Figure 1. *Nuts to Butter; a sustainable design exercise* workshop led by ico-D Vice-President, Professor Heidrun Mumper-Drumm, Pasadena Art Center (USA). *Image courtesy of Alisha Piercy, ico-D*.

University of the Arts London (UK) and how we responded to the challenge of designing curricula for unknown futures and uncertain times.

These short presentations illustrated a range of pedagogic approaches while also revealing common themes dominated by discussions on the role of curricula in preparing students for industry and professional practice. What was more surprising was the emphasis on the importance of equipping students with skills and knowledge that transcend narrow definitions of design – for example, how to teach transferable interpersonal skills that underpin confident collaboration and teamwork; how to provide meaningful interdisciplinary and multidisciplinary learning experiences; and how to foster enterprise skills to empower students to innovate and flourish in future economies. Curricula concerned with developing communication and human skills superseded technical concern with craft.

During the roundtable session members, who had identified their primary challenge as educators, directed the discussion towards individual issues that reflected regional and institutional nuance. Challenges of legislation and compliance, anxiety around gaps in tutor skills and knowledge in a digital age, the impact of political turmoil on educational freedoms, and raising awareness of design as a valid study option were among the issues that surfaced here, all of which defy simple solution. Yet, at a time when international politics appears to be signaling a populist desire for insularity, the participants in the Pasadena meeting demonstrated the value in coming together as a community to share experiences and gain valuable perspective and insight. The real challenge however, is what to do with this awareness and catharsis and how to translate words into action that is sustainable outside of these annual events.

The concluding activity of the Pasadena Education Platform Meeting provided clues to one possible model for how we might as a community achieve this.The *Nuts to Butter* sustainability workshop led by ico-D Vice-President and Art Centre Professor Heidrun Mumper-Drumm brought together Promotional/Professional and Education members to work in teams on a short exercise that explored a lifecycle-informed design method (Figure 1). This playful but serious activity resulted in tangible, if hypothetical design proposals, proving that through collective critical thinking and a facilitated workshop format we can produce provocative ideas and potentially actionable outcomes, within the constrictions and timeframe that Platforms provide.

This should be empowering. For while there is no shortage of desire or need for ico-D to pursue its agenda of cooperation, advocacy and knowledge exchange, the critical question remains – how do we realize the agency of ico-D and its community to impact understanding of the value of design? With the 2017 Montreal World Design Summit approaching, the proof of the success of the ico-D Education Platform will be in how we collectively progress and articulate not just our concerns, but also a vision and proposals for change on this global stage. *Design is Valuable* must be more than a truism and for our purposes become our rallying cry.

The ico-D General Assembly, Design Congress and Platform Meetings will be held during the World Design Summit Montreal 2017 (16–25 October).

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Rebecca Wright is a design educator, researcher and writer. She is Programme Director of Graphic Communication Design at Central Saint Martins, University of the Arts London, where she leads undergraduate and postgraduate study across specialisms that include graphic design, design and interaction, illustration, moving image, advertising, typography, digital media and communication design. She was previously Academic Director of Communication Design at Kingston University and her other academic positions include Visiting Professor at Musashino Art University, Tokyo. Rebecca is co-founder of GraphicDesign&, a pioneering publishing house exploring how graphic design connects with all other subjects and the value that it brings. She is the Vice-President of ico-D (UK).

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CONFERENCE REVIEW

Pedagogic research symposium, graphic design education network, Loughborough University, 20 April 2016

Jonathan Baldwin

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I have been to a couple of events (the now-legendary *New Views 2* held at London College of Communication [2008], for example) where I could not help thinking the world would be a better place if most of those present just barricaded themselves in the building and founded their own design school. The second Graphic Design Event Network (GDEN) event, held at Loughborough University's recently built (and rather impressive) School of Art and Design was one of these – as, indeed, was the first in Salford in 2015. Given that this meeting was compressed in to a single afternoon it just goes to show that, given the right audience and the right speakers, you can achieve a great deal in a short space of time. The organizers managed to pack more into a single afternoon than most longer events I have experienced.

The event could be summed up in two statements

- Interesting research.
- Good discussion.

What more do you need? For me it revealed (or reaffirmed) a split in the positive sense of the word between those who see graphic design as a practice with a sense of tradition that needs preserving and those who see it as progressive, in need of renewal and new relevance – a range of conceptions hinted at in James Corrazo's soon to be published PhD work which looks at how students see themselves and their roles.

GDEN was set up in 2015 by a group of UK-based graphic design educators and their mission is to incite discourse about graphic design practices and to advance its practices. A demand for GDEN to take on a role in building or redefining relationships with industry was apparent, with some noting the irony that the loudest critics missed the point that courses are heavily populated by practicing designers. However, it was acknowledged that the majority of interactions with industry were positive but there does seem to be a need to be more assertive in making our case to be experts in our field and a member of the sector, rather than simply providers of entry-level employees who need to be told what and how to teach.

But most importantly it was encouraging to hear from a range of speakers engaged in active research in to their practice as teachers, with a desire to not only understand what it is they are doing, but to enhance it too. A lot of pedagogic development takes place under the radar, because it is easier to seek forgiveness than it is to ask permission. I noticed a mix here: some projects taking place out in the open, and others developed almost in secret in

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case the QA department found out and stamped it out. But universities, and design courses in particular, are creative organizations where variation, experimentation and risk taking are to be encouraged.

That being said, it is important to share what we do (a key factor in the most successful creative environments) even when, and arguably *especially* when, it doesn't work. Each of the speakers was rightly proud of what they were doing, but none were closed to constructive critique. Networks like this, and their events, are likely to be successful if they encourage teachers to stand up and share their work, and the audience to provide support, encouragement and (well-meant) questioning.

There are ongoing events from the network on a yearly basis – see their website for the latest update – www.graphicdesigneducators.network. I recommend active membership to anyone involved in the delivery of graphic design education.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Jonathan Baldwin is the Associate Head of School in the Faculty of Creative Industries at the University of South Wales. Prior to taking up this post he was the Director of Teaching and Learning in the Institute of Continuing Education at the University of Cambridge. He has particular interests in interdisciplinarity in research and teaching, and in creativity and innovation of the curriculum.

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TELEVISION REVIEW

Brazilian graphic design on TV

Sara Goldchmit

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Brazilian graphic design, Brazil (2015); 1st Season: 8 episodes; Duration: 52' each episode; Production company: Aiuê; Directors: André Saad Jafet and Jorge Saad Jafet

The documentary television series *Brazilian Graphic Design* (*Design Gráfico Brasileiro*) was launched by the Brazilian channel, 'Arte 1', in 2016. The series was divided into eight episodes, with the following subjects covered in its first season: 'Poster', 'Editorial', 'Music Industry (album covers)', 'Typography', 'Spatial', 'Brands', 'Motion', and 'Textiles'. Well-known Brazilian experts and designers presented their opinion on creative processes, repertoires, work methods, and the relationship between art and design, among other topics. In Brazil, there are few initiatives of this kind, which spread the relevance of graphic design in shaping the country's visual culture amongst an audience reaching beyond that of professional designers, academics, researchers, and students. Channel 'Arte 1' has over 13 million subscribers,[1] even though is geared to a specific audience interested in visual arts, literature, cinema, dance, and so forth.

The episodes were filmed mainly at the designers' own work place, namely, their studios, agencies, publishing and production companies, which are usually attractive spaces. There are also scenes and interviews recorded at design schools, as well as images captured on the streets depicting contemporary Brazilian graphic design in the real world. The pace of the narrative, surrounded by a pleasant soundtrack, resembles that of Gary Hustwit's film Helvetica (2007). The professionals interviewed for this documentary explain the main concepts of the trade and give examples of work drawn from their own portfolios. The public will certainly recognize their work but may never have stopped to consider how it was done. The designers use an open and didactic approach geared to lay viewers, thus revealing their literacy and communication skills.

The themes of the episodes follow the traditional division of graphic design specialties, as regards support and products. The episode entitled 'Poster' opens the series explaining the meaning of communication through images. There are examples of posters created for cultural events, amongst which the posters by Kiko Farkas created for the São Paulo State Symphony Orchestra and the ones known as 'lambe-lambes' (Figure 1), created by the Bijari studio, stand out. The second episode is called 'Editorial' and it includes an interview with Elaine Ramos, art director responsible for the innovation as well as the visual and graphic quality of the books published by Cosac Naify. This publishing house was a benchmark in the Brazilian editorial market during the last decade, but closed down at the end of 2015. The third episode, 'Music Industry', presents covers for Brazilian popular music records of the 1970's, created by Elifas Andreato, and of pop and rock music records created by Gringo Cardia in the years 1980 and 1990. The fourth episode, 'Typography', discusses the criteria for the design and use of the types, some parameters which are both intangible and surprising for anyone outside this trade. The topic is explored by Edna

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Figure 1. 'Lambe-lambe' posters in São Paulo, created by the Bijari studio. *Image courtesy of Bijari Studio.*

Cunha Lima and Priscila Farias, acknowledged Brazilian researchers, among others. Curiously, this episode is the one with greater female participation.

In the fifth episode, named 'Spatial', there is a discussion about the synesthetic experience generated by visual design in interaction with architecture. The highlights in this episode are the exhibition design projects by Celso Longo, the commercial settings by Marko Brajovic and Guto Requena's interactive architecture. The sixth episode is called 'Brands', and it compares the viewpoint of Fred Gelli, Tátil Design creative director and coordinator of the brand strategy for the 2016 Olympic games in Rio de Janeiro, with that of Alexandre Wollner, a pioneer of Brazilian modernist design. It also presents the ads for the 'Havaianas' brand flip-flops (Figure 2), created

Figure 2. Advertisement for the Havaianas brand, created by Almap BBDO. *Image courtesy of Almap BBDO and Marcello Serpa.*

by Marcello Serpa at the Almap BBDO advertising agency. This is an emblematic case of brand repositioning through the communication of a new image, for one of Brazil's most popular products. The seventh episode in the series is called 'Textiles', and it covers the interaction between graphic design and the fashion industry. This is well summarized through the prints and photographic images of Jum Nakao's creations. The eighth episode is 'Motion', and it introduces Alceu Baptistão, Mateus de Paula and Jarbas Agnelli with their internationally renowned portfolios of video clips, animations and advertisements.

The script of the series highlights and celebrates the work of the designers, a characteristic guiding other programs at 'Arte 1' channel that describe the profiles of professionals in other creative areas, such as architects, artists and photographers. Although the series is entitled Brazilian Graphic Design, only professionals from the two largest capital cities – São Paulo and Rio de Janeiro – are featured in this first season, which could indicate a follow-up including designers from other Brazilian regions. 'Arte 1' channel and the series are not available overseas. This is unfortunate, since they bring part of the present context of Brazilian graphic design to the attention of experts and lay people, in a very pleasant manner and seen through the eyes of its authors. This viewpoint is not only inspiring but also often unknown. This is a series to watch.

Note

1. Channel Arte 1 <http://arte1.band.uol.com.br/>access on July 20, 2016.

Notes on contributor

Sara Goldchmit is Professor of Visual Design at the School of Architecture and Urbanism at the University of São Paulo (FAU-USP). She holds a PhD and a Master's degree in Design and Architecture from the same university, and her main research topics are visual communication, image and creative process.

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BOOK REVIEW

Outline of the era 2000–2014: the complete type specimens of Cadson Demak, edited by Anuthin Wongsunkakon and Pongtorn Hiranpruek, Bangkok, Cadson Demak, 2014, US$46, 365 pp., (hardback), ISBN: 978-6-16922-221-7

Cadson Demak press was founded by Anuthin Wongsunkakon and Pongtorn Hiranpruek (with Burin Hemthat as a silent partner) in 2002. Fourteen years on, the name Cadson Demak, which means 'carefully chosen' in Thai, is synonymous with type and typographic design among Thai communication designers and educators. At present, Cadson Demak has six designers working full-time on type design, the largest number in this industry in Thailand, three in the graphic department and two on content management. Aside from being a design firm, Cadson Demak has been active in design education. They organize talks and campus tours regularly. In 2010, Anuthin and his team initiated the Bangkok International Typographic Symposium (BITS). Since then, BITS has become an annual design event that both graphic designers and design students alike look forward to. With their latest contribution of 12 Thai fonts to the Google fonts project in 2015, Cadson Demak's name has reached an even wider audience.

From the outset, Cadson Demak was to be, a 'communication design firm offering typographic solutions'. Even though neither Anuthin nor Pongtorn was trained as a type designer, they saw type as an essential element in graphic design. Anuthin, in particular, took interest in typographic form and communication and trained himself to be a type designer. At that time though, taking type design – especially Thai type as a key design activity in Thailand – was like embarking on a non-existent path. As Anuthin reflects in the book's preface, '… if you were to tell anyone that Thai font design would one day be a successful business, they probably won't laugh at you, but not because it was not a ridiculous idea; rather they would simply ask "what do you mean by a font?"'

For Anuthin, this indifference and ignorance can be traced back to the growth of desktop publishing in the 1980s. It was then that the emergence of relatively affordable design technologies began to replace existing craft forms of composition and page layout. In the introduction, Anuthin argues that this transition from analogue to digital design media was somehow mishandled and despite – or perhaps because of – the ease with which type and image could be manipulated, the communicative significance of typographic form in general was underplayed and a sensitivity to Thai visual language lost. At that time, fonts were perceived as essentially free media rather than carefully crafted designs with significant cultural connotations.

In fact, Thai type design had existed for more than 150 years and during the early part of the twentieth century a lively and innovative print culture existed in an increasingly cosmopolitan Bangkok. Thailand's first design agencies appeared alongside the growth of American inspired consumer capitalism in the late 1950s and by the 1970s the type industry was an important component of a flourishing print media in the country. Even so, those who made a living by drawing and making typefaces during this period were usually referred to as craftsmen or sometimes artists and only rarely as 'designers'. During the transitional period mentioned above, the opportunity to consolidate and extend indigenous type design and establish type design as a profession was missed.

Figure 1. *Outline of the Era 2000 – 2014 The Complete Type Specimens of Cadson Demak*. *Image courtesy of Cadson Demak press*.

Not surprisingly then, *Outline of the Era* is the first printed type specimen book produced by any Thai Type foundry in many years. It comes in an A5 size book of nearly 1.5 inches thick. With paperboard cover and an open spine binding, the book has an unusual, sturdy and almost industrial look, yet the light green book jacket brightens it up considerably. Its title, in Thai,

is embossed on the cover, set in *Thonglor*, one of Cadson Demak's retail fonts named after a fashionable area in central Bangkok (see Figure 1). According to its description, *Thonglor* was designed for print as well as digital media. An aesthetic response to the Ministry of Energy's policy of saving energy, *Thonglor's* letterforms exhibit numerous visual 'shortcuts'. Interestingly, the street of *Thonglor*, where Cadson Demak's office is located, is also famous for many secret shortcuts known only to the locals and frequent visitors. One can note such subtle and thoughtful relationships like these throughout Cadson Demak's works.

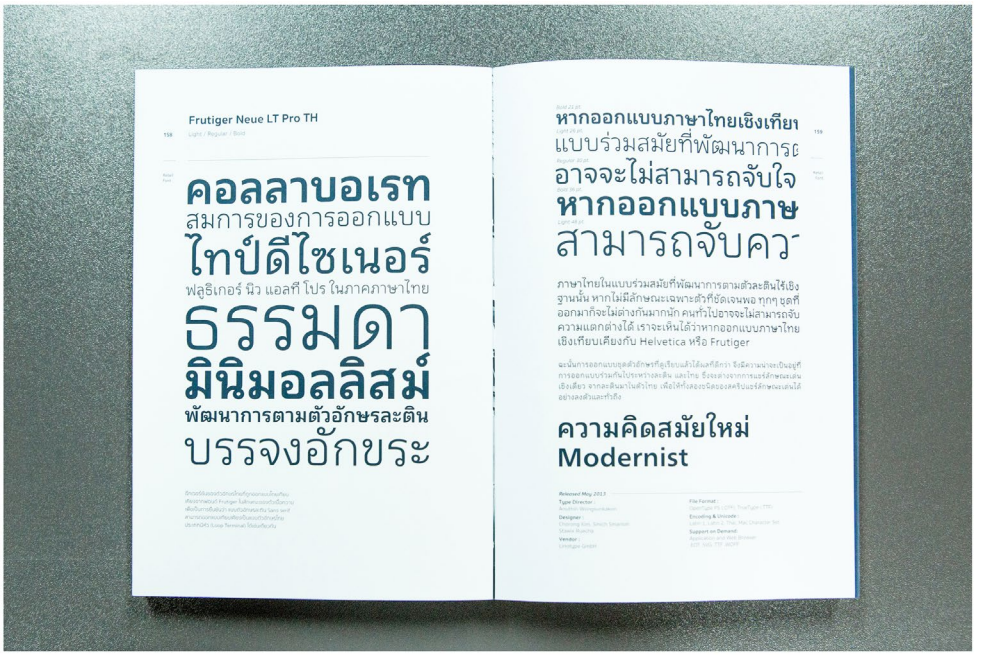
The book opens with a preface by Anuthin who looks back to the time that they chose to walk the path they did and where they now stand upon it. It is unfortunate that this section is available only in Thai as it also works as a prelude to an essay towards the end of the book entitled *Stones in Our shoes*. This one is available in both Thai and English and will be useful for anyone interested in gaining an overview of the development (or its lack) of the Thai font industry since the 1980s. In the main section, 138 type specimens are grouped into: Custom Font, Retail Font, *Katatrad* (a point I will return to below) and Picture Font. Fonts in the Custom Font group are commissioned by particular clients, international and Thai, usually as components of brand identity. Retail Fonts contains typefaces that are available for general purchase. All specimens are designed and produced by Cadson Demak either by their in-house design team or in collaboration with 'their associates', freelance type designers and Cadson Demak's interns.

Overall, *Outline of the Era* is a testament to the important role played by Cadson Demak in reinvigorating typographic design and communication in Thailand. Two points will suffice to demonstrate this.

Firstly, the studio's work on harmonizing Thai and Latin fonts is of both local and international significance. Written Thai is a unique orthographic system and presents complex challenges for designers needing to integrate Thai and Latin scripts. At the turn of the new century, the telecommunications giant Orange had won plaudits in Thailand for its success in this area. In response, the local telecommunications market leader AIS commissioned Cadson Demak to design their own custom typeface, SMB Advance. The success of this venture opened up a new chapter in Thai type design and many other international organizations – from *Vogue* to Tesco, and IKEA to Peppa Pig – began to seek locally sensitive typographic solutions that spoke in the same tone as their global brand identities. Along with these custom fonts, Cadson Demak's designs for Thai typefaces that compliment popular Latin faces such as Helvetica and Frutiger has also made a significant contribution to design and visual culture in Thailand (see Figure 2 and 3).

Secondly, in browsing *Outline of the Era*, it is delightful to see fonts from Thailand's pre-digital era such as *Manop* and Monotype being dusted off and brought back to life. In this aspect Cadson Demak is trying to reconnect with Thailand's forgotten typographic past. By reinvigorating these products of a bygone age for contemporary use, these beautiful creatures will once again breath their much-deserved life. However, to ensure that these lives and many others will live on, there is a general feeling that the whole of Thai font design industry must be pulled into the modern world, making the type designer an appreciable profession. This point also links to Project *Katatrad 1* and *2*, type design workshops designed and offered by Cadson Demak for anyone interested in exploring the creation of letterforms. These turned out to be more successful than expected and, as a consequence, a new type foundry, *Katatrad*, was born under the wings of Cadson Demak in 2011. *Katatrad* fonts are included in this collection.

For 14 years Cadson Demak and Associates have opened up new paths across the neglected territory of Thai typographic design. *Outline of the Era* provides a unique record of their pioneering work and sets a challenging agenda for others to follow.



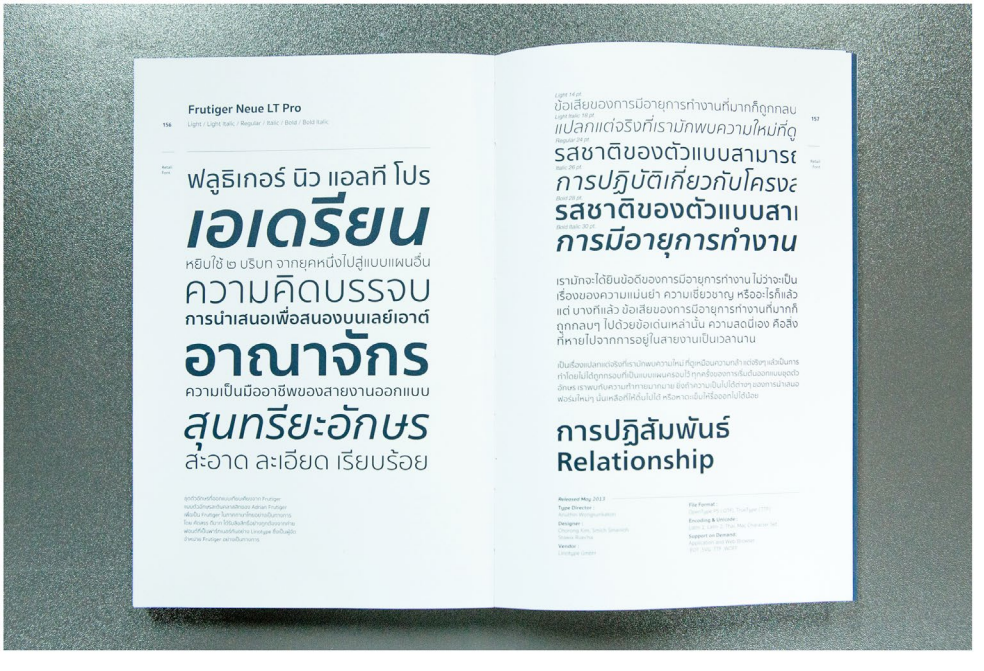


Figure 2 and 3. Both Frutiger Neue LT Pro TH and Frutiger Neue LT Pro are designed to compliment the Latin face, Frutiger. The former, however, maintains the loop which appears at the head of most Thai characters and which is believed to be a unique characteristic of the Thai script, while the latter foregoes the loop. *Images courtesy of Cadson Demak press*.

Notes on contributor

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BOOK REVIEW

Black transparency: the right to know in the age of mass surveillance, by Metahaven, Berlin, Sternberg Press, 2015, €22 / £18.50, 288 pp., ISBN: 978-3-95679-006-5

Metahaven's work tends to divide fellow graphic designers into two camps: those who cannot get past the self-indulgent noise of such alienating and anti-modernist graphics and those who whole-heartedly embrace imitating its tropes and ticks (see also David Carson). However, if you are able to overcome the initial stylistic shock and awe and engage with the thinking behind Metahaven's designs, you will find a clear-eyed vision deserving wider imitation in a field in need of more critically engaged voices. 'Part essay, part zine' *Black Transparency* collects the visual and critical works resulting from Metahaven's interactions with Wikileaks between 2010 and 2014. Founded by Daniël van der Velden and Vinca Kruk in 2007, the 'design think tank' has built a reputation for applying graphic design to areas far beyond its typical commercial and cultural remit. Their previous publication 'Uncorporate Identities', examined the geopolitical through the lens of branding. More recently, they have been exploring the impact of surveillance on our personal lives through their work with composer and musician Holly Herndon for her 2015 album *Platform*. As with these other works, *Black Transparency* is not easy, happy or even likeable, but that is not the point. This is work that demands a lot from its audience, but rewards them with a vision bolder and sharper than more conventional graphic design could produce in its wildest dreams.

The book's starting point is the black transparency of the title: forced transparency as practiced by WikiLeaks. It then spirals out through an examination of the visual rhetoric of WikiLeaks, a genealogy of transparency, post-modern Russian propaganda, and the political implications of cloud computing. Both written and visual essays trace the ways that actors such a governments, corporations and activists deploy information, images and narratives to seize power. The graphic work presented in the book renders a post-Internet media landscape where '[f]antasy and reality, fiction and fact are made equivalent. They exist as one surface – a single, shareable veneer' (p. 164) in print form. High production fashion images, video stills, official documents (fake and authentic), infographics, and design proposals sit side by side, all framed by RGB bright colours, random vector junk and distorted type. Infographics are cropped across pages or disappear into the binding, denying your desire to grasp the totality. Instead, you get glimpses through leaks, slippages, and die-cuts. The result is a fever dream of internet aesthetics and anti-design tropes right down to the choice of high gloss paper stock, rather the near ubiquitous current vogue for aggressively matte uncoated. Rather than lapsing into nostalgia for the tactility of a pre-digital world, Metahaven forces us to confront the mediated reality we inhabit in the here and now.

The result of the analysis is bleak at times, revealing the powerlessness of both governments and individuals in the face of chaotic technocracy, but there is hope too. We are pointed to the need for '[n]ew polities, new technologies and new imaginations'. This is found realized in Iceland's ability to wield law and technology to serve its citizens and in 'NullifyNSA', an effort to mobilize communities to cut off power and water to the surveillance state's data centres. But most of all, hope is found in the ability of dreams and fantasy to truly reveal the secrets of the powerful. WikiLeaks can only reveal information, but Pussy Riot tell an anti-fairy tale that 'thrives not on

releasing information about the powerful, but on hijacking their deepest fantasies, triggering responses that are themselves disclosures.' (p. 169)

Black Transparency is not a book about graphic design, but it is undoubtedly a book that is written through the lens of graphic design. Metahaven's rejection of conventional design values could lead to comparison to earlier post-modern graphic design movements. However, where an earlier group of graphic rebels in the US and UK largely ignored the political ramifications of their work, the relationship between the formal and the political is the entire point for Metahaven. They are better placed in the critical graphic design tradition of Jan van Toorn's 'dialogic' graphic design, but reconfigured by the networked age. As explored in their earlier publication *Can Jokes Bring Down Governments?* in the face of a complex media ecosystem coupled with increasing economic precarity, graphic design can no longer be complacent in its role as a mediator between private interest and a broader public. And yet *Black Transparency* is itself a strong argument for the need for critical graphic literacies so that we might navigate these shifting political and media landscapes.

Notes on contributor

Cally Gatehouse is a Graduate Tutor at Northumbria University where she teaches on the Graphic Design BA. Her PhD research explores critical design practices that reimagine networked public spheres. Previously, she has worked as a freelance graphic designer and has an MA in Communication Design from Central Saint Martins.

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GRAFIST and MSFAU the centre of graphic design application and research

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The Grafist/İstanbul Graphic Design Week is an educational activity organized by the Graphic Design Department at Mimar Sinan Fine Arts University (MSFAU) with the collaboration of the Turkish Society of Graphic Designers (GMK). Having been organized annually since 1997, it celebrated its twentieth anniversary last year between 18 April and 18 May, not only with activities such as seminars, workshops and exhibitions, but also with the opening of MSFAU the Centre of Graphic Design Application and Research.

Ayşegül İzer, the Head of the Graphic Design Department at MSFAU and the Grafist Organizing Committee, sees the 'Department', the 'Grafist' and the 'Centre' as three pillars of values in their constitution: accessing and sharing knowledge; cooperating with each other; interdisciplinary work; and investment of time and effort into the graphic design field.[1]

The Grafist events bring in graphic designers and students from all over the world through seminars, workshops and exhibitions, in which interactive sharing of work, evaluating and discussing design take place.[2] Initiated within a project called 'Icograda Regional Design Education Collaboration Programme' by Sadık Karamustafa, a well-known Turkish graphic designer and lecturer, and David Grossman, an environmental graphic designer and lecturer, the 1st Grafist İstanbul Design Week took place on 4–9 April 1997. Being the first and only example of its kind in Turkey, the primary motive behind this project/event was to facilitate meetings between designers, educators and students from neighbouring countries rather than the West, whose design activities were undoubtedly followed through the years. The aim was to raise the quality of graphic design education, and contribute to the experiences of design students and young professionals in building international relationships. In doing so, the Grafist organization became a model for future Icograda regional design events that are held several times a year across the world.[3] Hence, the Grafist can be seen as a platform for the decentralization of graphic design education, and has developed into a respected international event through the years.

Besides organizing workshops, seminars and exhibitions, the Grafist conducted research projects and prepared publications on a different theme each year. Since 2014, a section called 'In Memoriam' is prepared for researching important personalities of Turkish graphic

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design history, and since 2001 the Grafist events are documented in a book in Turkish and English.[4]

Within 20 years, a rich archive of graphic design has been compiled through the donations and contributions of Grafist guests and organizers that resulted in the foundation of MSFAU the Centre of Graphic Design Application and Research in 2014.[5] The regulations of this research and application centre were promulgated in 2013 announcing its purpose as to research, analyse, introduce and archive within the field of graphic design and to found the centre for graphic design information and documentation. Its areas of activity can be summarized under the titles of: (1) archiving the works of Turkish graphic designers and the works accumulated at the Grafist events; (2) building up a digital archive beneficial to every researcher; (3) promoting graphic design through publications; (4) organizing symposiums, panels, workshops, seminars, travelling exhibitions; (5) collaborating with local authorities and non-governmental organizations to expand the field of graphic design research; (6) collaborating with international associations, archives and museums; and (7) becoming a centre for researchers from all around the world. The purpose and the areas of activity of MSFAU the Centre of Graphic Design Application and Research reflect the aims and works embodied within the Grafist events and transform them into an institute.[6]

The opening of MSFAU the Centre of Graphic Design Application and Research was held on 19 April 2016 with the exhibition called 'Archive, 20 Years of Grafist'. In total, 2200 posters and 300 packages from all around the world are exhibited in addition to the autographed books, correspondence, gifts, photographs and videos taken during Grafist activities, seminar

Figure 1. Grafist 20 'Crossing Frontiers ...' Prize Competition for Poster Design. *Image courtesy of the author.*

records, and students' works produced at the workshops. Well-known designers across the world contributed to Grafist events such as Fukuda, Massin, Piippo, Tartakover, Erkmen, Loesch, Momayez, Altıntaş, Jordan, Troxler, Orosz, Madrelle, Boom, Beeke, Fletcher, Arvanitis, Logvin and many others.[7] Notable examples of hosted designer and student exhibitions include: The Korean Posters; Posters Commemorating the 50th Anniversary of Israel's Founding; Fax Posters Against Nuclear Trials; Contemporary Illustrations of İran; the commemorative exhibition entitled 'Forget-me-not' for Alan Fletcher, Morteza Momayez and Shigeo Fukuda; posters for the theme of 'İstanbul as felt by …' discovering the city beyond the ordinary descriptions; posters for the theme of 'Kalimera Mellon' ('Good Morning Future') saluting the Greek graphic designers and students; posters for 'Henryk Tomaszewski Centennial' for memorial; and Japanese Packages and Cigarette Packages of Atıf Tuna.[8] This year the theme of Grafist 20 was 'Crossing Frontiers …', (see Figure 1) in which Workshops and Prize Competition for Poster Design was organized to commemorate Sadık Karamustafa

Figure 2. MSFAU the Centre of Graphic Design Application and Research. *Image courtesy of the author*.

for his seventieth birthday and fiftieth year in the profession, and a T-shirt Design Project was organized to speak up for the refugees themselves when they come across the interrogator while crossing the border.[9]

The archive at the MSFAU the Centre of Graphic Design Application and Research is rich in size and diversity reflecting the 20 years of Grafist events. The centre is preparing a digital archive within the categories of thematic, canonical, periodic, memorial, student posters for researchers from all around the world,[10] and is ready to welcome individuals and groups via reservation at their place: Matara Sokak, No: 17, Cihangir, İstanbul (see Figure 2).

Notes

1. İzer, Ayşegül. "Foreword." In *Grafist 20: 20th İstanbul Graphic Design Week*, edited by Başak Ürkmez, 8-13. İstanbul: Mimar Sinan Fine Arts University Publications, 2016.
2. See "Grafist" http://www.grafist.org/index_en.html (accessed 4/07/2016).
3. See "Fifteen years with Grafist" by Sadık Karamustafa http://www.ico-d.org/connect/features/post/382.php (accessed 4/07/2016).
4. "Archive: Grafist's 20 Years." In *Grafist 20: 20th İstanbul Graphic Design Week*, edited by Başak Ürkmez, 224-311. İstanbul: Mimar Sinan Fine Arts University Publications, 2016.
5. "Archive: Grafist's 20 Years." In *Grafist 20: 20th İstanbul Graphic Design Week*, edited by Başak Ürkmez, 224-311. İstanbul: Mimar Sinan Fine Arts University Publications, 2016.
6. See "Yönetmelik [Regulations]" http://grafistarsiv.com/yonetmelik/ (accessed 4/07/2016).
7. "Archive: Grafist's 20 Years." In *Grafist 20: 20th İstanbul Graphic Design Week*, edited by Başak Ürkmez, 224-311. İstanbul: Mimar Sinan Fine Arts University Publications, 2016.
8. "Archive: Grafist's 20 Years." In *Grafist 20: 20th İstanbul Graphic Design Week*, edited by Başak Ürkmez, 224-311. İstanbul: Mimar Sinan Fine Arts University Publications, 2016.
9. "Crossing Frontiers…" In *Grafist 20: 20th İstanbul Graphic Design Week*, edited by Başak Ürkmez, 418-453. İstanbul: Mimar Sinan Fine Arts University Publications, 2016.
10. See "Grafik Tasarım Uygulama ve Araştırma Merkezi [The Centre of Graphic Design Application and Research]" http://grafistarsiv.com/ (accessed 4/07/2016).

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Sinan Niyazioğlu, Head of MSFAU the Centre of Graphic Design Application and Research; and Lecturer at Mimar Sinan Fine Arts University, the Graphic Design Department.

Disclosure statement

No potential conflict of interest was reported by the author.

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FULL DETAILS OF THE EVENT UNDER REVIEW:

GRAFIST 20: 20th İstanbul Graphic Design Week 18 April–18 May 2016

Organization of Mimar Sinan Fine Arts University (MSFAU), Faculty of Fine Arts, Graphic Design Department with the collaboration of the Turkish Society of Graphic Designers (GMK)

Address: Meclis-i Mubusan Caddesi, Fındıklı 34427, İstanbul, Turkey

Website: http://www.grafist.org/index_en.html

Telephone: +90 212 2521600 / 4265 - 4266

Opening of Mimar Sinan Fine Arts University (MSFAU) the Centre of Graphic Design Application and Research 19 April 2016

Address: Matara Sokak, No: 17, Cihangir, Beyoğlu 34433, İstanbul, Turkey

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CONFERENCE REVIEW

Information Plus Conference, 16–18 June 2016, Vancouver, BC, Canada

Angela Norwood

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Vancouver's Emily Carr University of Art and Design (ECAUD) was the site for the first gathering in North America of interdisciplinary experts including practitioners and educators in design, data journalism, computer science, and bioinformatics, whose interests intersect across the gamut of information visualization.

The Information Plus Conference comprised three parts: a two-day, single-track conference, a one-day hands-on workshop and an exhibition of data visualization projects from around the world. The event was organized by design professors Isabel Meirelles of OCAD University in Toronto and Katherine Gillieson of ECUAD. Additionally, prominent members of the IEEE VIS community encouraged involvement from the visual design and data journalism communities to strengthen the impact of data driven work. The two organizers took on their role out of concern over the apparent lack of interest within the larger design community to address the issue in any formal way. In fact, of the impressive list of organizations sponsoring and endorsing the conference, the professional organizations for graphic designers in Canada and USA were absent. That fact is unfortunate since the event fostered, for the first time in this author's experience, an open appeal to designers to share our particular expertise rather than conform our skillsets to look more like data scientists.

The single-track format functioned as a strategic structural device. While it limited the number of presentations possible over the two days, it also provided the basis for the sense of community built over the course of the event as members of diverse communities sought common language and conceptual ground through this shared experience. The conference program included keynote addresses, presentations by specially invited speakers, 20-minute research presentations and five-minute lightning talks. The range of formats provided variety throughout the plenary event. The presentations were grouped thematically which gave opportunity to hear perspectives on how different fields approached similar information visualization challenges. A few presentations featured projects by interdisciplinary teams, adding layers of complementary perspectives.

Tamara Munzner, Professor of Computer Science at University of British Columbia, opened the conference with a keynote address in which she presented a systems framework for the design and analysis of data visualizations. Munzner set the tone for the conference by asking questions such as, 'how are computer scientists and designers alike, how are we different, where is the common ground, and what are the differences in the kinds of images we make?'

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She suggests the differences lie in what she calls 'technique-driven work vs problem-driven work.'

Invited speaker Scott Murray of O'Reilly Media, drawing upon his influential book, discussed developing online learning experiences. Subsequent peer-reviewed presentations ranged from Andy Kirk of Visualizing Data, Ltd. UK, discussing the need for visualization literacy, to Michele Mauri of DensityDesign Research Lab in Italy presenting a project in which his students submitted infographics to Wikipedia to gauge the public's response to design. The results send an important, if deflating message for information designers and educators.

The health care sector was well-represented throughout the conference. The designer/client team of Guillermina Noël, Carmen Dyk and Janet Joy presented their collaboration on improving hospital operations through data collection and visualization. Will Stahl-Timmins discussed designing interactive graphics for *The BMJ*. Design professor Karen Cheng of University of Washington demonstrated points of intersection among the audience with her humorous and critical presentation on the value of visual information design for scientific publications.

That the data journalists won over the audience for the day makes sense given their mission to inform and engage the widest range of viewers. Invited speaker, journalism professor Chad Skelton of Kwantlen Polytechnic University shared information on some of Vancouver's famous citizens as revealed through parking ticket data. Designers from ProPublica and NPR in the USA gave lively lightning talks on challenges they face from reporting information based on the human form, to knowing how to shape a narrative with information.

Colin Ware, Director of the Data Visualization Research Lab at University of New Hampshire, kicked off day two with his keynote address on visual thinking about data. Well known throughout the audience for his work on perception, Ware confirmed the importance of cognition received through eye tracking. A visual query, he said, includes seeking patterns in data to help solve problems. He also discussed the importance of sketching as an aid for extending memory.

Invited speaker, Catherine D'Ignazio of Emerson College, established the day's cultural and community oriented themes with her discussion of the profound inequity common in data collection, and her work with civic groups on creative ways to build data literacy. Another resonant idea was her call for 'data visceralization,' data that is felt, not just seen.

Yanni Loukissas of Georgia Institute of Technology, discussed the importance of context and locality in visualizing data. He joined other speakers in calling for more 'messy data' to allow for varied interpretations over seeking Tuftean perfection in presentation. Robert Kosara of Tableau Software and Drew Skau of ScribbleLive, shook the foundation upon which the entire audience stood with their rigorous study of pie charts by dismantling received assumptions about their uses and limitations. Drew Hemment of University of Dundee and Moritz Stefaner, a data visualization designer in Germany, presented Project Ukko on behalf of their entire international collaborative team. The project visualizes global weather conditions to aid decision-making. The mesmerizing display perfectly marries refined design aesthetics with sophisticated programming. Patricio Davila of OCAD University suggested considering community-based visualizations as part of larger assemblages, in order to fully understand the contexts in which the data are gathered and utilized.

Invited speaker Gregor Aisch of *The New York Times* concluded the conference with a talk that unified the audience as he discussed the context and challenges of time-consuming but data-rich interactive visualizations in the news today.

Videos of the presentations, highlights from the exhibition, and a summary of the workshop may be found on the conference website: http://informationplusconference.com/

Notes on contributor

Angela Norwood is an associate professor and chair of the Department of Design at York University where she teaches across the curriculum with an emphasis on information design. Her current research interests include examining the role of design in indigenous communities through social, cultural and cognitive aspects of wayfinding and signage systems, advertising, and design pedagogy. She has conducted workshops and focus groups on this topic in Ladakh, India and Nunavut, Canada. She is a former professional graphic designer having worked in Chicago, IL, Raleigh, NC, and as a designer and consultant on the global marketing team for Democrats Abroad, an organization that empowers US citizens in 71 countries to participate in US elections. Her work has been published in design journals and recognized by several organizations and publications including the Type Directors Club, *Graphis* and *Communication Arts* magazines. Her work is included in the American Institute of Graphic Arts (AIGA) National Design Archive.

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CONFERENCE REVIEW

AIGA design educators conference 2016

Nuts + Bolts: Tightening Up Classroom Fundamentals, Reinforcing Careers, +Constructing the Future of the Discipline

Marty Maxwell Lane

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During the 2015 AIGA national conference, Revival, there was an affinity session titled, 'Thinking About Teaching? How to Trade Clients for Curriculum'.[1] The session was targeted to non-academics, but it turned out to be a packed house of educators. This unexpected audience led to a discussion about current educators needing an opportunity to learn more about the nuts and bolts of teaching. Thus, the Nuts+Bolts AIGA Design Educators[2] conference was born. The conference took place on 14–16 June 2016, at Bowling Green State University. The conference was framed as a context for educators to demystify academia; clarifying teaching methods, assessment, and relevant project ideas specific to the field of graphic design. What was supposed to be a valuable, pragmatic conference turned into a rich discussion about our identity and values. Is graphic design classified as a discipline, a profession, or a pre-profession? And why does it even matter to define ourselves? Furthermore, are we properly preparing students to be researchers and makers in a world that requires cross-cultural literacy? And finally, how are we even able to accomplish it all?

Who Are We?

All keynote speakers addressed this question of identity. Deborah Littlejohn, Assistant Professor at North Carolina State University, proposed that we are not yet there as a discipline. In Littlejohn's compelling keynote, she stated that a discipline has specific characteristics that define it, including a large and diverse number of academic journals, a specific disciplinary vocabulary, and a critical mass of active researchers and historians. She pointed out that a scientific field such as Physics has hundreds, if not thousands, of journals, while graphic design supports only a mere fraction of that number. She argued that the many ways in which we define what constitutes 'research' ultimately dilutes its meaning and power, especially when compared to other, more established disciplines. There is a distinct difference between empirical research and research that happens in professional practice, which also requires a different kind of curriculum than the traditional studio model for training professional practitioners. Does harping on the clarity of language really matter? Yes, if we intend to be truly collaborative beyond our own walls and to be interdisciplinary. Deborah states that to be interdisciplinary, to be able to have a seat at the table to solve the world's ,messy

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problems,' we must first understand our own area of work and this comes with clarifying our language, among other things. One of the most compelling points made by Littlejohn was that it's time for educators to push back against the notion that our sole purpose as educators is to prepare students to practice. Teaching to fulfill the aims of professional practice is very different from teaching to help students understand how to study a subject. With over 2000 active design programs in the US (versus 120 in architecture, for example), perhaps it is time to truly diversify and specialize. Not all programs can be all things and we need to create the conditions for empirical researchers, historians, and scholarly writers to thrive.

Louise Sandhaus, faculty at California Institute of the Arts was one of the conference moderators. She stated that we are educators, researchers, but also a profession. Educators are often sidelined to 'professionals' working in the field and it is important to recognize and value our own work as educators and researchers.

Cross-Culture Literacy

Audrey Bennett, Associate Professor of Graphics at Rensselaer Polytechnic Institute, shared her cross-cultural and trans-disciplinary work focusing on HIV/AIDS awareness in Africa during her opening keynote. Bennett stated that students *must* be cross-culturally literate and possess the skills to be collaborative, empathetic, and curious. Bennett placed value not on design aesthetics, but on the appropriate fit of solutions. Furthering her point about the value of this type of work, Bennett expressed interest in which fields are citing our work. There is a great deal of discussion about the need for more quality design research, and it's critical to look beyond our own colleagues to consider the impact our research is making in other fields.

Nuts+Bolts

Pivoting back to the impetus for the conference, there were several break-out sessions where educators shared approaches to the following themes: assessment, assignments, becoming a design educator, critique, curriculum, culture of care, defining research, design thinking, environments and space, faculty engagement, learning models, navigating academia, science of teaching, scholarship of teaching, standards of teaching and ethics, teaching beyond the designer of 2015, and finally technology and teaching.

One of the most exciting and inspiring break-outs was a fast-paced Pecha Kucha which featured a variety of student projects and pedagogical methods, ranging from experience mapping to entry level typography. Two stand-outs were Tyler Galloway, presenting from the University of Kansas, titled Ten Methods for Critique, and Joseph Galbreath, presenting from West Virginia University, titled In Defense of Collecting: Artifact-based Research in the Classroom.

Another interesting breakout session featured Stacey Cannon, an educator who specializes in assessment from Liberty University. Cannon presented her approach to making assessment more approachable and useful by reinforcing the point that assessment should not be punitive. Cannon works to establish a culture of continued improvement – when focusing on course and program learning objectives, faculty need not be afraid of weak outcomes. Cannon connects outcomes back to Blooms taxonomy[3] as well as Boyer's[4] scholarship of

teaching, both excellent resources for educators writing curriculum and managing assessment.

Do we all need to be researchers?

During the closing panel with Deborah Littlejohn, Geoff Kaplan, Aubrey Bennett and Louise Sandhaus, the discussion came full circle addressing the pragmatics of the need for research and cross-cultural work. Many educators asked how they could prioritize this approach when they need to also prepare students to enter the current workforce. How can we expect students to learn the basics and create compelling portfolios while also understanding research in a four-year, or even two-year program? The speakers made it clear that not all designers need to be researchers and that there is absolutely a value in 'traditional' practice. However, there does need to be more support for educators wanting to incorporate research into their classrooms, that we need to build programs that incorporate research at the outset, and we need to diversify our programs and degrees. Further suggestions included establishing collaborative, interdisciplinary, project-based approaches and a reminder that teaching curiosity and empathy even in small doses have lasting impact.

Conclusion

The weekend was an inspiring and motivating investigation into the balance of teaching traditional practice while pushing back against that very expectation. The conference presenters instigated a reflective state, asking attendees to work to define our profession – the profession of design teaching and design research.

Note on contributor

Marty Maxwell Lane is as an Assistant Professor of Graphic Design at The University of Arkansas. Her research explores pedagogy, collaboration, and participatory design. As a long time AIGA member, Marty has served on numerous boards, including the Director of Education for AIGA KC and currently serves on the national AIGA Design Educators Steering Committee. Marty holds a BFA in Graphic Design from the University of Illinois-Chicago and an MGD from North Carolina State University. As a mother of two young kids, Marty aims to be a mentor for other new moms navigating the world of tenure.

Notes

1. https://educators.aiga.org/thinking-about-teaching-dec-affinity-session-at-revival/
2. http://nutsandbolts.aiga.org/ Supported by AIGA DEC www.educators.aiga.org.
3. Bloom, B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain.* New York: David McKay Co Inc.
4. Boyer, E. K. (1997). *Scholarship Reconsidered.* New York: Jossey-Bass.