



05 Investigating Readers' Impressions of Typographic Differentiation Using Repertory Grids

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ABSTRACT

Document designers combine a range of stylistic and structural typographic attributes to articulate and differentiate information for readers. This paper explores how the kind of typographic differentiation used in a document influences readers' impressions of documents. A preliminary study indicated that three patterns of typographic differentiation (high, moderate and low) might underlie participants' impressions of magazine design. Subsequently, a set of nine magazine layouts with controlled content was purposefully developed to systematically examine the impact of high, moderate and low patterns of typographic differentiation on participants' impressions of documents. These documents were used in a repertory grid procedure to investigate the kinds of impressions readers articulate in relation to typographic presentation and whether readers are likely to formulate similar or differing impressions from high, moderate, and low patterns of typographic differentiation. The results suggest that typographic differentiation influences a range of rhetorical and experiential judgments. For example, participants described high differentiation documents as the most attention-grabbing and easy to skim-read, while they considered moderate and low differentiation documents to require deeper reading strategies. In addition, participants assumed high differentiation documents to be much more sensationalist than moderate or low differentiation documents, which they generally perceived as authoritative and credible.

make judgments about the credibility of a document according to the perceived appropriateness of the typeface used. There are also a few studies that examine other aspects of typographic presentation and meaning. For example, McAteer (1989) examines how different styles of typographic emphasis convey meaning and Middlestadt and Barnhurst (1999) test how differences in horizontal or vertical layout influence readers' impressions of content tone.

However, one cannot assume that readers necessarily form the same kind of judgments based on multivariate typographic configurations as they do from variations in typefaces or other discrete attributes. Click and Stempel's (1968) study of newspaper typography attempts to consider participants' impressions of typographic presentation more holistically than other researchers. However, the descriptors they tested were chosen based on their relevance to a study of newspapers in the 1960s, so the results may not necessarily be generalizable to other genres. In addition, their test material was not fully controlled for typographic, content and image variables so it is hard to discern what combinations of attributes may have influenced their results.

Accordingly, a study of typographic differentiation would need to consider:

- 1 Which combinations of typographic attributes to test (considering, for example, stylistic attributes such as typeface and weight as well as structural attributes such as column layout and the use of white space.)¹
- 2 How to adequately control or account for multiple variables within a set of test materials that are reasonably representative of real documents.
- 3 What kinds of impressions readers form in relation to typographic presentation.

Rather than looking at the effects of isolated typographic attributes, the trial reported here aims to assess whether three kinds of typographic differentiation, described as patterns rather than fixed specifications, influence readers' impressions of documents. The combinations of stylistic and structural attributes that comprise the three patterns of typographic differentiation were identified first through an exploratory study that sought to establish which combinations of typographic attributes participants considered to convey similar or different impressions². A personal construct approach (after Kelly, 1955) was adopted ensure the research was able to systematically test the patterns of differentiation within a framework that remained sensitive to both the multivariate nature of the materials and the kinds of impressions that participants hold meaningful.

and six publications for each subject selected at random from the available titles in a high-street newsagent. The lead feature articles and the covers were used in the trial.

METHOD

The multiple sort procedure used for the exploratory study is one of many methodological variations that have been derived from Kelly's original approach (see Pope and Denicolo, 2001). In a multiple sort procedure, participants view the full set of elements simultaneously and are required to form meaningful sub-groups of the elements (Pope and Denicolo, 2001). Participants can form as many groups and have as few or many elements in a group as they consider necessary. Fifteen participants who did not have any formal design education or experience attended individual interviews in which they performed a series of sorting tasks using first the feature articles and then the covers. They were asked to explain how the groups they formed differed in relation to the style, mood, and readership³ suggested by the typographic presentation. The interviews were audio recorded. Observational data was also captured when, for example, participants pointed to particular features, so that quantitative analysis of the groups formed across all the participants could be contextualized in relation to the kinds of impressions articulated and the attributes that participants commented on.

FINDINGS

Although the interviewer asked participants to describe the groups in relation to themes such as typographic style, mood and readership, a broad range of descriptive and evaluative responses were articulated and these seemed to be much more fluid than the interviewer's themes would suggest (see Moys, 2011).

For example, participants often commented on the imagined readers and their reading experience before being questioned about readership.

Some participants said they found the mood theme most difficult to respond to. Nevertheless, participants described a range of affective qualities in relation to this theme.

As anticipated, given the uncontrolled nature of the magazines, participants discussed both the typographic presentation of the materials and other attributes such as similarities of color, content, the choice and treatment of images, and physicality attributes (such as paper stock and the thickness of the publication).

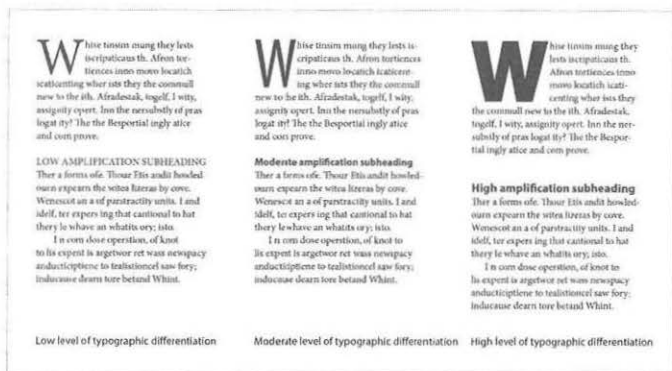


FIGURE 1 Levels of stylistic differentiation applied to drop caps and subheadings.
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In addition, the overall amount of variation (number of images, graphic objects and their styles, typefaces, size and weight variations, etc.) in each pattern also increases or decreases in relation to the respective level of typographic differentiation. As the level of typographic differentiation increases, the degree of compositional "orderliness" (Bonsiepe, 1968) decreases. However, the groups are not simply defined by the level of typographic differentiation and overall variation, rather particular stylistic and structural attributes tend to co-occur within each pattern.

For example, low differentiation documents (figures 2–4) feature the most prominent areas of white space and tend to use fairly generous vertical line spacing (leading) and wide margins and inter-column spacing (gutters). The composition of low differentiation documents tends to be highly balanced, orderly and often symmetrical. The layering or overlapping of graphic objects is limited. The article is generally set in two or three wide columns (figures 2–4). Low differentiation documents combine relatively few stylistic variations for typographic differentiation and tend to use capitals or italicized variants of the body typeface rather than bold weights or a change in typeface. Display text tends to be moderately sized with lots of white space around it. Occasionally, substantial increases in size are used for creating compositional points of interest (such as a large drop cap). Display text tends to be left-aligned or centered to reinforce compositional symmetry and the body text is either left-aligned or justified with relatively large first line indents. Colored backgrounds or objects are used sparingly and a subtle color palette is applied.

Moderate differentiation documents (figures 5–7) tend to use space methodically and evenly throughout the composition, with the spacing between elements being neither particularly tight nor particularly loose. The composition is clearly based on a uniform and predictable grid. The sense of horizontal and vertical order is often reinforced by the use of boxes and rules. There is some variation in type style but bold weights are most frequently used for typographic differentiation. Full capitals are used occasionally for differentiation. The display text tends to be moderately sized and in bold weights for prominence. Display text also tends to be left-aligned. Display text and boxed items are mostly clearly aligned within the grid. Some signature color is used but with limited tonal variety and few tints.



FIGURE 5 Moderate differentiation example B



FIGURE 6 Moderate differentiation example E



FIGURE 8 High differentiation example A



FIGURE 9 High differentiation example D



FIGURE 10 High differentiation example G

applied to all the documents was standardized to avoid any bias introduced by color. However, the specifications of each differentiation pattern meant that some variation in color density and tonal variety was unavoidable.

In addition, it was necessary to control particular typographic attributes. The typeface, size and leading for the body text was consistent across all the examples to minimize interference from perceived differences in legibility, although of course it was necessary to vary the line length and indentation as appropriate for each pattern.

The exploratory study indicated that participants tended to form an overall impression rather than discriminate between examples according to differences in typeface style.

Nevertheless, it was considered important to ensure that the test material was balanced in a way that could account for any influence of differences in typeface personality, while using a realistic range of stylistic differentiation. To minimize the influence of differences in typeface personality only two type families were used. Furthermore, the use of serif, sans serif and condensed variations for the main headline was systematically varied across the test material (as shown in Table 1) in order to ensure that any effects of these attributes could be easily ascertained while still allowing for sufficient stylistic differentiation.

HEADLINE PERMUTATIONS FOR TEST MATERIAL

TYPEFACE	DIFFERENTIATION PATTERN		
	<i>High</i>	<i>Moderate</i>	<i>Low</i>
Myriad Pro Condensed	Document A	Document B	Document C
Minion Pro Regular	Document D	Document E	Document F
Myriad Pro Regular	Document G	Document H	Document I

The size, weight, and effects applied to the headline were varied according to the respective differentiation patterns. In addition to the differentiation of the main headline, introductory blurb, first paragraph style, and subheadings, each article included either a pull-quote or a sidebar to enable a greater range of typographic

RESULTS

ANALYSIS OF ELICITED CONSTRUCTS

Identifying the most frequently used descriptions does not necessarily provide a balanced account of the elicited constructs, given that each participant used their own words and that participants sometimes used similar words to mean different things. Instead, a thematic analysis of the elicited constructs enabled a more balanced understanding of the range of impressions formed. The thematic analysis was undertaken with reference to the audio data to ensure meanings were interpreted as accurately as possible.

Drawing on the kinds of constructs other repertory grid analyses have identified (c.f. Pope and Denicolo, 1993; Hassenzahl and Wessler, 2000), the full set of constructs from the trial was analysed. Five key themes were identified:

- 1 *Description* includes references to the appearance of the test material, including references to stylistic and organizational typographic attributes, color, and segmentation devices. Substantially fewer references to specific stylistic attributes (with the exception of judgments of boldness/lightness) were made in comparison to those related to typographic organization.
- 2 *Address* includes evaluative comments that pertain to perceptions of rhetoric and style and how the documents were seen to address or appeal to particular readers.
- 3 *Association* includes references to kinds of content, publications, genres, media platforms and cultural styles. The range and number of associative constructs indicate that participants' perception of the examples is often linked to pre-existing, individual frames of reference.
- 4 *Credibility* includes appraisals of appropriateness, authenticity, credibility, ethos, information value, professionalism, reputation, and worth. Most participants articulated at least one construct that can be seen as a judgment of credibility. In particular, "professional" was one of the most frequently mentioned adjectives, as were references to importance and interest.
- 5 *Experience* encompasses a number of constructs that pertain to how readers experience and interact with documents. For example, participants articulated a range of judgments relating to usability and reading. A number of constructs indicated that participants formed assumptions about the assumed readers and their demographic characteristics, motivations and reading strategies from the typographic presentation.

COMPARISON OF QUANTITATIVE DATA
FROM TRIADIC PAIRING AND RATING SCALES CONT.

A	B	C	D
DIFFERENTIATION PATTERNS	DOCUMENT COMBINATION	PAIRING DATA MEAN (%)	RATING SCALE MEAN (%)
<i>Low and Low</i>	CF	85.71	78.79
	CI	58.33	75.88
	FI	66.67	79.73
<i>High and Moderate</i>	AB	16.67	59.03
	AE	21.05	55.17
	AH	14.29	52.98
	BD	16.67	51.69
	BG	33.33	48.93
	DE	12.50	46.11
	DH	7.14	46.99
	EG	17.65	42.95
	GH	7.14	41.58
<i>Moderate and Low</i>	BC	41.18	61.71
	BF	18.75	59.90
	BI	22.22	56.69
	CE	50.00	67.09
	CH	57.14	68.76
	EF	43.75	69.36
	EI	15.38	61.52
<i>High and Low</i>	AC	7.14	34.50
	AF	0.00	34.71
	AI	20.00	32.12
	CD	0.00	28.02
	CG	7.69	25.06
	FG	0.00	26.25
	GI	0.00	22.66

TABLE 2

Comparison of quantitative data from triadic pairing and rating scales

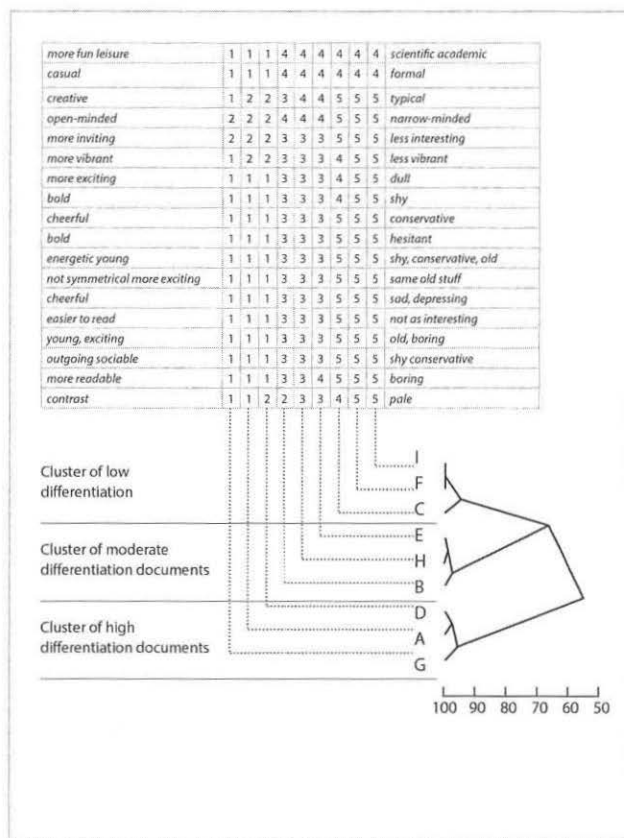


FIGURE 12 Example of the cluster analysis visualization of a participant's grid

Using the themes identified identified on page 111, a summary of participants' impressions of documents exhibiting high, moderate or low differentiation is presented in Table 3.

The constructs do seem to vary slightly in relation to individual preferences, indicating that participants' responses may shift in relation to their own experiences, associations and taste. Participants who found the high differentiation examples more attractive and user-friendly described the low differentiation pairs as dull and difficult to read. In contrast, those participants who found the high differentiation examples to be distracting and demanding described the low differentiation examples as more calm, relaxing, and stylish. Rather than necessarily perceiving these as harder to read, they noted that these examples are intended for serious, focused readers who would be reading for work or information rather than casual,

The data suggests that typographic meaning is not simply the expression of abstract qualities such as mood, but relates to how documents address and appeal to particular reader profiles, suggest specific reading strategies, and carry associations of credibility, information value, genre, and usability.

The relationship between typography and readers' associations of genre and usability identified here merits further exploration in relation to the translation of magazines and other genres onto new platforms such as iPad and tablet devices. As Kostelnick and Hassett (2003) discuss, convention plays a key role in document rhetoric and these conventions may differ or be more fluid in electronic media than in the more established print precedents. The evidence from the qualitative data in both the preliminary and repertory grid study reinforces the premise that participants use their own experiences of media and existing genres to make sense of documents.

Surprisingly, given the focus on typeface personality in typographic research and professional discourse, there was no evidence to suggest that the variations in typeface had any significant influence on participants' impressions. In contrast, participants seemed to make more general assessments of the relative salience of display type and commented more readily on the use of bold weights and capitalization than they did on differences in typeface.

The study provides sufficient evidence to suggest that patterns of typographic differentiation underlie readers' impressions of document design. Participants paired documents of the same differentiation pattern more readily than documents of differing patterns. The elicited constructs and the rating scales indicate that participants generally formed corresponding impressions for documents of the same differentiation pattern and contrasting impressions of high and low differentiation documents. However, the use of a two-column layout in some of the moderate and low differentiation documents seemed to be a strong cue across both patterns.

In this respect, it would seem that both the structural differentiation of information plays a key role in shaping readers' impressions of documents, in addition to stylistic differentiation.

This finding lends support to Waller's (2012) assertion that layout is a key component of text. This aspect of document design also

BENEFITS OF THE REPERTORY GRID TECHNIQUE

Methodologically, the use of the repertory grid procedure was an invaluable tool for this study in two ways. Firstly, it enabled the range and kinds of impressions readers form in relation to typographic presentation to be uncovered without forcing participants to adopt descriptors that may not be meaningful to them. This was particularly important because, in contrast to the emphasis in professional design discourse and typographic research on mood and personality, it enabled the study to reveal that typographic presentation does influence readers' assumptions about document credibility and their decisions about how to engage with a document. Building on this finding, it may be useful to test readers' impressions of document credibility and reading strategies further through studies that use a set of supplied descriptors and perhaps adopt alternative methods such as semantic differential scales or paired comparisons. Secondly, the repertory grid procedure enabled systematic measurement of participants' impressions of patterns of typographic differentiation while collecting rich qualitative data that contextualized and explained participants' responses. In these ways, it provided clear grounds to identify which combinations of attributes in the multivariate test material were influential on participants' impressions.

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