The Exploration of Static Typography for Expressing

The Emotive Qualities of Music

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Abstract

This thesis explores how the pure form of static typography can express the emotive qualities of music. More specifically, how typefaces/letterforms and typographic compositions can produce emotive associations; and whether combining both aspects can enhance the emotive value.

Emotion, typography and music are the three core subject areas of this research. Using music as the medium to elicit emotions, the findings from this thesis indicate that typeface/letterform is the most effective aspect of static typography to express emotive qualities, followed by the combination of both typographic aspects, and typographic composition which has the least impact for emotive connections.

Five influential factors affecting the process of emotive association between music and static typography has been found: 1) Association of typographic attributes and design principles to emotive qualities, 2) Direct association using emotive terms and adjectives, 3) Connotation through personal memory and imagination, 4) Association to human voice and human touch, and 5) Association to phonetic properties of music.

Chapter 2 of this thesis presents a review of the literature from the three main subject areas. It begins from the psychology of emotions and the importance of emotional attachment in design. Next, the chapter discusses the visual logic and creation of emotions through the pure anatomy of letterforms and typographic experimentation. The third section continues with how music can evoke emotions and the analogy between the properties of music and typographic characteristics.

Chapter 3 & 4 presents original research of this thesis, initiating with a formative pilot study where three music sequences were selected and three corresponding typographic compositions designed by the researcher. The method of matching one sequence to one design piece was employed. Chapter 4 continues with original research, where modification was made to the methodology to obtain more specific results. Each aspect of static typography was investigated individually. The combination of both aspects was also tested to examine whether it can enhance the emotive impact.

Findings from this research intend to present fresh realization to graphic designers, typographers and type designers, highlighting the tangible and enduring essence of static typography, with its power to engage the audience on an emotive level.

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I. Introduction

From billboards to posters, magazines to fliers, we encounter all forms of static typography with wide ranging purposes. Whether they are informational, promotional, formal or aspirational pieces of designs, the level of impression and impact they leave on the audience is closely knitted to their emotional connection with the viewers. The feeling of delightfulness, comfort, distress or agitation affects how the audience perceives the message of the piece, as "emotions are inseparable from and necessary part of cognition…affecting how we think, act and behave" (Norman, 2004, p.7). Thus this thesis intends to explore how emotive qualities and emotional connections could be expressed through static typography.

The subject of music has been introduced specifically for this research due to its role in our emotional lives. The major / minor keys, rhythm, tune, melody and tempo of music are all involved to act as the subtle, subconscious enhancer of our emotional states throughout the day (Norman, 2004). Hence the researcher employed the subject of music as the source to elicit different emotions, in order to investigate how static typography could reflect such emotive qualities expressed by music.

Much research at present has centred on kinetic or moving typography, utilizing music as the time-based medium for exploring synthesis of experience through digital technology. However, the quality of the rapid moving screen unveiled through digital media also fostered a longing for the printed surface, which seeks for qualities that are more actual or enduring, as opposed to virtual and fleeting (Heller & Thompson, 2000). Therefore the scope of this research will solely focus on static typography. Music will be utilized

only as the medium to evoke emotive responses, especially for the experiments carried out under the methodologies for this research.

The research will explore static typography in three different aspects and how the attributes of each aspect could assist with emotive associations in design. Firstly, the researcher will discuss the aspect of typeface and letterform design. This refers to the choice of typefaces as well as hand-lettering, looking into the detailed characteristics and the anatomy of the typeface and letterform designs. The researcher acknowledges that hand-lettering and typefaces are distinct fields in typography, yet for the purpose of this research, typefaces and hand-lettering will be categorized under one aspect of typography. Secondly, the research will investigate the aspect of typographic compositions. This applies to the layout or arrangement of the typefaces, letterforms and other typographic elements on the page or a static surface. Thirdly, the research will experiment with the combination of the first two aspects; whether the emotive impact of typography would be enhanced by the combination of typeface/letterform design and typographic compositions.

Chapter 2 of this thesis will begin with a review of literature, comprised of the three principle subject area of the research: emotions, typography and music. The first section on emotions will highlight the significance of emotions for the perception of design. The second part of the literature review will discuss the communicative value of typographic experimentations, and also the relevant historical and philosophical backgrounds in this area. The third section of the chapter will consider the field of visual logic created by the pure form of typography i.e. to focus on the visual features and qualities of typographic form without any linguistic or semantic functions. The

fourth section of the chapter will bring in the subject of music, and its ability to evoke emotions. This will be followed by a parallel association between typographic elements and music properties.

Chapter 3 and 4 of this thesis presents the original research into the connection of typography and emotion. Chapter 3 establishes a formative pilot study conducted in Hagenberg, Austria during the researcher's semester abroad as an exchange student. The methodology for this project employed a matching exercise, where 13 participants matched three music sequences to three typographic compositions designed by the researcher. From the emotions they experienced from the music, they were to select the piece of typographic composition that best expressed the emotive qualities of the music sequence.

Chapter 4 of the thesis was a refined methodology based on the findings from the pilot study. In order to obtain more precise outcomes, alteration in the methodology included new choice of music sequences that expressed stronger emotive value; run separate tests for typeface/letterform and typographic composition exercises; employ ranking method instead of one-to-one matching method.

Findings from this research intend to show how emotive connections are achieved through the pure form of typefaces and letterforms, and also the arrangement of typographic elements in compositional layouts. It is anticipated that the findings from this thesis would not only emphasize the importance of emotional connections in design, but it would also bring fresh views for graphic designers, typographers and type designers to assist their future work with static typography.

II. Literature Review

II.１. Introduction

The scope of this research encompasses three distinctive areas: **emotions**, **typography**, and **music**. With the aim to investigate the power of typographic forms and compositions in expressing emotions, particularly using music as the key emotive trigger, the correlation between these three subject areas are closely interwoven.

Part I will begin by an overview and definition of emotions firstly from the psychological point of view, followed by the importance of emotions in design, including the development of historical and philosophical theories on the subject. Part II will continue with the field in typographic experimentations, highlighting the progression in the communicative value of experimental typography over historical backgrounds. Part III will emphasize on the visual logic created by pure typographic forms and anatomy, as well as practical analysis on creating emotions through typography. Part IV will introduce the subject of music, from the angle of eliciting emotive qualities. Lastly, the unique correlation between music properties and typographic elements will be discussed.

II.２. Design & Emotions

II.２.1. Definition & Psychology of Emotions

The subject of emotion has been researched across many scientific fields such as biology, psychiatry, psychology, sociology, with varying theories and disciplinary approaches for each specific area. In relevance to emotional properties in music and emotional appeal in typographic design, it is the psychological perspective of emotion in which this thesis

will focus on.

Emotion is crucial to the quality and variety of human experiences. We remember events that evoke feelings such as joy, pleasure, sorrow and pain (Dolan, 2002). These psychological states of emotions are intertwined in human daily livings, triggering perceptual and cognitive processes that influence the interpretation of the world around them (Encyclopedia Britannica, 2008).

Emotion does not merely refer to the different psychological states; it is often interchangeable by synonyms of feeling, mood and affect. Feeling denotes the conscious, subjective emotional or physical response to certain factors such as people or situations (Merriam-Webster Online Dictionary, 2008). It is often temporal and explains limited intensity of the experience. Mood, instead of the instantaneous responses of feelings or emotions, the experience can be described as more diffused. The tone and intensity of mood are generally longer lasting that can stretch from days, weeks, even months (Schucman & Thetford, 1975). Affect is recognized by the conscious experience of emotions, which closely interacts with cognition. In this view, affective states are experienced following a certain level of perceptive and judgment process. These include reactions such as pleasure or displeasure; liking or disliking; satisfaction or discontentment (Brewin, 1989).

Donald A. Norman (2004) also emphasized in *Emotional design: why we love or hate everyday things,* "Affect, emotions, and cognition have evolved to interact with and complement one another…some emotions and affective states are driven by cognition, while affect often impacts cognition" (p.11).

As a central issue in human adaptation and survival, emotion plays a major a role in influencing human cognition and the interpretation of their surrounding world. In consideration with the thesis, the subject of emotion in music and the significance of emotional attachment in design and typography will be discussed within the relevant contexts.

II. 2 .2. Importance of emotions in design

When a piece of design is presented, whether it is a showcase of a modern architecture, a lounge chair with the pursuit of perfect ergonomics, a designer gown with the latest flair, or a vibrant poster for a Salsa music concert, it is not uncommon to judge or rationalize the design with its functionality and usability. However, during the process of deciding the 'best' out of the bunch, not only are the *purpose* and *look* of the design being taken into consideration, the subconscious mind is directing how we *feel* towards the design. In other words, when creating a subjective relationship with any design piece, the emotional attachment with the design cannot be ignored.

In recent context, Donald A. Norman (2004) accentuated role of emotions in visual perception. In his book *Emotional design: why we love or hate everyday things,*, Mr. Norman presented detailed correlation between emotion, cognition and affect, particularly stressing the point that "emotions are inseparable from and necessary part of cognition" (Norman, 2004, p.7).

Emotions play a critical role in one's everyday life, affecting our thinking, decision-making, feeling , behaviour, and presenting instantaneous information about one's surroundings. While quantifiable aspects such as form, functionality and

sustainability of a design seem to be the rational measurements for decisions, "it is impossible to make or appreciate graphic, product, industrial and even architectural design without acknowledging the pleasure and excitement or anxiety and rage found in experiences stimulated or exacerbated by design" (Heller, 2004, ¶ 2).

The way in which emotions can greatly impact the parameters of thought is a complex process involving neurochemicals working through the brain centres (Norman, 2004). From previous studies on emotions in the Psychology Department at Northwestern University, Norman (2004) concluded the findings under *"Three Levels of Processing"* in human brains: **1) The Visceral Level**, which is the prewired or automatic layer, responsible for rapid judgments; **2) The Behavioural Level**, which contains processes that control everyday behaviour; and **3) The Reflective Level**, the highest part of the brain, which watches over and reflects upon the behavioural level (p.21).

How can these three levels of processing be applicable for designers? Norman continued the analysis by *"Working with the three levels of processing"*. He implied that **1) Visceral design** deals with what the viewer or user can actually see from the design, therefore this level correlates with the appearance of the design. **2) Behavioural design** associates with what the audience can experience when using or interacting with the design. In other words, it corresponds with the pleasure and effectiveness of use. **3) Reflective design**, the most contemplative part of all three levels, is about creating a long term impression and relation about the design. The user's personal identity is attached at this level (Norman, 2004, p.37).

A similar concept is echoed by Frank Spillers, an expert in 'Experience Design' and

'Emotion Design'. In *What is Emotional Design? A practical definition*, Spillers (2004) suggested that emotional factor should not be a one-way traffic solely directed by the designer. Based on the user-centered or viewer-centered concept, designers should not be advocating their own preferences in the designs, but to merge sensuous empathy for the users, and take these feelings into account for final decisions (Spillers, 2004). The historical notion that cognitive functions overpower emotional processing is no longer an applicable practice and concept for designers, as well as for design users, viewers and audiences (Spillers, 2004). For publication designers, Bhaskaran (2006) also stated that "amongst the vast choices on the shelves, publication designs today must connect with the reader both on an aesthetic and emotional level" (p. 6). While form and functionality would satisfy the conscious and objective needs, the final decisions are strongly affected by the subconscious desires. Being one of the strongest triggers in the user experience (Spillers, 2004), the emotional factor is "the indefinable, inscrutable, and irrational human trait that motivates how designers design and drives how people respond to design" (Heller, 2004).

II.3. Typographic Experimentation

"The fascination of typography lies in its ability to transform a silent, unprinted piece of paper, with the aid of rigid signs, into a dynamic form of communication" (Bringhurst, 1999, p.233).

Through the arrangement of signs and characters, the conventional role of typography serves its purpose to document, inform or persuade ideas and messages. Yet the beauty of typography transcends beyond its semantic purposes. The pure nature of typographic forms embodies vast dynamism in creating visual tension and expression, engaging

viewers with sensual or emotive experience.

With the evolving value of visual communication, typography inevitably takes part in the process of breaking conventional boundaries and the seeking of new grounds. Therefore the notion of typographic experimentation must firstly be traced back to the historical and philosophical backgrounds.

II.3.1. Defining Experimentation

Experiment, defined by Oxford English Dictionary (2008), is **(I.)** A tentative procedure; a method, system of things, or course of action, adopted in uncertainty whether it will answer the purpose. **(II.)** An action or operation undertaken in order to discover something unknown, to test a hypothesis, or establish or illustrate some known truth. In the same dictionary, *Experimental* is defined as "coming within the range of experience, or derived from, ascertained by experiment.

The tentative nature of 'experimentation' implies an evident sense of risks and trials, stepping in both the known and the unknown realms. Although the result is often seemingly uncertain, through a series of changes and questioning, taking the challenge into the unknown boundaries with the search for newness, experimentation is crucial in breaking new ground in the design process.

II.3.2. Experimentation in Typography

For David Carson, one of the most influential typographers and graphic designers in the 1990's, the notion of *experimental* is "something I haven't tried before... something that hasn't been seen or heard" (Triggs, 2003, p.37).

The fusion of typography and experimentation is "the point in the design process when the constraints of conventions are released and the fundamental notions of the function and aesthetics are challenged" (Triggs, 2003, p.7). The idea is consisted of two disciplines: 1) *experimental type design*, which deals with the mechanical form or the symbolic representation of language, and 2) *experimental type layout*, where the typographer considers how the page should be produced according to the needs and the knowledge of the target audience from the available content and material (p.7-8).

More to the subject, Triggs wrote that typographic experiment is a process of questioning between the typographer and the target audience. Therefore the communication process follows an established pattern through constant negotiation that moves from the unknown to the customary.

Experimental arrangement of type through manipulations of weight, scale, distortion, repetition and placement on the page can intensify the message delivery, and also achieving the expressive potentials of type. One such example is Robert Massin, a French designer from the 1960's, introduced typographic contrast and scale to represent speech and create visual rhythms for reading. Silence was conveyed through black pages. Not only was the narrative clearly seen and read, Massin displayed a symbolic relationship between word and image (Gall & Brower as cited in Heller & Ballance, 2001).

II. 3 .2.1. Developments of the 20th century movements

In the early twentieth century, a number of major movements including Futurism,

Constructivism, Dadaism and Modernism, had pivotal roles in contemporary typographic development. These movements cultivated prominent advances in scientific and technological fields, resulting rapid transformation in modern industry and society. This brought forward new attitudes in cultural and social values, with artists and designers inventing new ways of approaching graphic languages. Consequently, the relationship between fine art, literature and typography were greatly reshaped by the new manners of thinking (Triggs, 2003).

Futurism & Dadaism: expressive visual language through signs and sounds

In the article *Typography* by Raoul Hausmann and John Cullars (1998), it was noted that clarity and efficiency in reading dominated typographic compositions and physiological perceptions up until the eighteenth and nineteenth century, where this naturalistic perception of typography reached its peak. By that time, people achieved breakthroughs in image / text juxtaposition, hence called for "an optical construction with a linguistic conceptual base" (Hausmann & Cullars, 1998, p.72). Futurists and Dadaists revolutionized the naturalistic view of typography by orienting an *optophonetic* - the interaction of sounds and signs - manner of expressive typography.

Kurt Schwitters, one of the key figures in the Dadaist movement, asserted that *new typography* should be done "in the way that no one has ever done it before" (Hollis, 1949 as cited in Triggs, 2003, p.12). Along with many other futurist poets and Dadaists, they pursued the vision that the optic value of typography could be greatly enhanced by phonetic communication. Graphic designer and Bauhaus teacher, Herbert Bayer, also experimented with similar ideas by using combinations of letterforms to create various sounds (Cohen, 1984).

Futurist poets entered the scene by unleashing their conventional literature forms. Stephane Mallarme and Guillaume Appollinaire explored the dimensions of 'visual interfaces' by producing typographic experiments in *calligrammes*, which are poems with words of the poems visually arranged to represent the content (Milner, 1976).

Radical experiments of language and imagery were also ventured by Filippo Marinetti. In 'Words-in-freedom' – a typographic revolution that contradicted the harmony of a page, Marinetti introduced a new orthography which he coined "free expressive in an instinctive deformation of words. The aim was an onomatopoeic psychic harmony, the sonorous but abstract expression of an emotion or pure thought, even providing a multiform emotional viewpoint" (Crispolti as cited in Hulten, 1986, p.549).

Marinetti also outlined the principles of Futurist poetry and layout in the supplement of his publication - *the Technical Manifesto of Futurist Literature*. In the search of this new visualization of words, the printed page was turned into a wild concert of uncontrollable language through the creation of pauses and rhythms, thus giving musical values to the page (Celant as cited in Hulten, 1986, p.593).

Further exploration of typographic experiments was carried out by the Russian Futurism, by bringing in a new neologism *Zaum,* meaning 'transrational', 'translogical', or 'transmental'. This new linguistic reality believed the word was wider than its meaning, denoting that "the word (and its component sounds) is not merely an incomplete thought, not merely logic, but above all something transmental, it has irrational, mystic and aesthetic aspects." (Strada as cited in Hulten, 1986, p.610). As Cubo-Futurist, Alexei

Kruchenykh, defined Zaum was the expression of the in expressible and the voice of the unconsciousness, Zaum broke through the scene with a new attitude towards language (Strada as cited in Hulten, 1986, p.610).

Typographic revolutions of the Futurist poets not only reflected their acknowledgements for the modern society, but also brought in new aesthetic sensibility where letterforms were allowed to be read and seen simultaneously (Triggs, 2003, p.10). Traditional composition and alignment of words were rejected. Communication was uplifted to another level as it was no longer limited to the meaning of the word. The new fluidity of language visualized thought and images, which matched the intensity of emotions (Celant as cited in Hulten, 1986, p.593).

II. 3 .3.   Historical & Philosophical Background

II. 3 .3.1. Deconstruction and Graphic Design

Speech, writing and typography are three closely knitted facets in the system of communication throughout the development of culture and societies. In the Western philosophical perception, writing serves as an abstract and inferior copy of the spoken word, which expresses one's internal consciousness (Byrne & Witte as cited in Heller & Ballance, 2001). Yet in 1976, Jacques Derrida introduced the theory of deconstruction in his book *'Of Grammatology',* as a critical rejection to the Western philosophical belief.

In the book, Derrida postulated that "writing is the dissimulation of the natural, primary, and immediate presence of sense to the soul within the logos (Derrida, 1976, p. 37)., and is even the divine inscription in the heart and the soul (p. 17). In the sub-chapters *The Written Being / The Being Written* (p. 18) and *The Outside and the Inside* (p.30), Derrida stated

that "It is not by chance that the thought of being, as the thought of this transcendental signified, is manifested above all in the voice: in a language of words. The voice is heard (understood) – that undoubtedly is what is called conscience" (p.20). In addition, "The word is already a unity of sense and sound, of concept and voice, of the signified and the signifier" (p. 31). Hence, "a science of language must recover the natural relationships between speech and writing, that is, between an inside and an outside. It must restore its absolute purity of its origin. This natural bond of the signified (concept or sense) to the phonic signifier would condition the natural relationship subordinating writing (visible image) to speech" (p. 35).

In *Design writing research: Writings on Graphic Design*, Ellen Lupton and Abbott Miller (1996) stated that for Derrida, the central principle of deconstruction examines the relationship between exterior representations and the interior essence; the outward appearance and the inner reality. It is "a mode of questioning through and about the technologies, formal devices, social institutions, and central metaphors of representation" (p.3). In both academic and visual culture today, the significance of deconstruction is more than an influential period or style, but as a critical process of questioning.

Coined by Derrida, the term grammatology is the study into writing and the relationship between written and spoken language (Derrida & Spivak. 1998). Under this framework, graphic design and typography are the material forms and processes of grammatology. To deconstruct the hierarchy of speech and writing does not imply replacing one term with the other, but to reverse the status of the two. Deconstruction values writing as "an active form of representation, invading thoughts and speech, transforming the sacred realms of memory, knowledge, and spirit" (Lupton & Miller, 1996, p.4). The role of

writing and typography in deconstruction would emphasize "the intrusion of visual form into verbal content, the invasion of "ideas" by graphic marks, gaps, and differences" (p.17)

However, Derrida's assertion on speech / writing relationship was not approved by all. Ferdinand de Saussure argued that signs are empty and have no inherent meaning. In his infuriation upon the system of phonetic writing, Saussure argued that unlike pictographic or ideographic scripts, phonetic writing relies upon the weak bonding between the *signifier*, the sign's material aspect, and the *signified*, the meaning or referent of the signifier (Young, 1990); that alphabets are only arbitrary signs to indicate sounds, rather than depicting conceptual meaning.

In response to Saussure's attack on phonetic writing systems, Derrida inferred that "phonetic writing is not full of non-phonetic elements and functions" (Lupton & Miller, 1996, p.13). The construction of meaning in writing consists not only of alphabets, but with the assistance of many other non-phonetic graphic marks. This ranges from "silent servants" of punctuations to special writing patterns such as italics, bold letterings, and upper/lower cases. Moreover, Derrida emphasized the importance of spacing in order to present clear ideas in writing, which includes gaps between individual letters, to distance between words and sentences.

II. 3 .3.2. Deconstruction and Post-Structuralism

With similar concepts, deconstruction also belonged to the critical domain known as "post-structuralism", including theorists such as Roland Barthes, Michel Foucault, Jean Baudrillard. These theorists looked at "modes of representation, from alphabetic writing

to photo journalism, as culturally powerful technologies that transform and construct *reality*" (Lupton as cited in Heller & Meggs, 2001, p.45). Post-structuralism laid the emphasis on the subjectivity and the openness of meaning, which was utilized by many designers as a form of self-expression. Both the designer and the reader were invited to share the spontaneous creation of meaning. Rather than setting the anchor solely from the designer's perspective, post-structuralism focused on the readers' private sensibilities and private interpretation generated by external signs.

Under Derrida's theory of deconstruction, written language is not only constituted by alphabets or words. Numerous typographic details such as patterns, fragments, different features of letterforms, and even the significance of spacing, are all essential characteristics of writing. The progression of how graphic design has revealed, revised, or ignored rules of communication can be seen in the history of typography as informed by the theory of deconstruction. As Lupton & Miller (1996) concludes, "design can critically engage the mechanics of representation, exposing and revising its ideological biases; design also can embark the grammar of communication by discovering structures and patterns within the material media of visual and verbal writing" (p.23).

The historical and philosophical spheres provide the backdrop in the evolutionary role of typography. These range from the representation of phonetic writing in Derrida's deconstructivist theories to the expressive potentials of letterforms for Futurist and Dadaist poets and designers. Typographic experimentation unleashed the conventional rules and set alight new possibilities to enliven the static page, just as the Dadaist and Futurist made their typographic designs scream, shout or weep. The following section of

research will magnify into the pure forms of typography, its creation of new visual logic and practical ways to create emotional attachment through type forms and compositions.

II.４. Typographic Form | Visual Logic | Creating Emotions

The communicative value of typography, or typographic elements, is undergoing constant expansion and transformation. Beyond its conventional role in linguistic communication for expressing facts and concepts, these subtle yet powerful signs and marks also have compelling abilities to evoke emotions (Marcus, 1987, p.9).

This section of the chapter will focus on the pure form, the abstract anatomy of typography. Discussion will begin from Hostetler's (2006) overview on typographic personalities, definition of typographic form, and the expressive meaning of typography. Further exploration into the creation of new visual logic will examine the readability and visibility of typographic characters, as well as the compelling role of punctuation marks. In addition, diagrammatic communication through typographic forms will illustrate the impact of typographic compositions to create new visual perceptions. The section will conclude by presenting examples of expressing emotive attributes through typography, as shown in the book *Letterforms: Bawdy Bad & Beautiful* by Heller & Thompson (2000).

II.４.1. Typographic Motions and Emotions

Human feelings and emotions fluctuate according to a wide range of surroundings and circumstances, including the constant exposure of graphic imagery. As Soo C. Hostetler (2006) stated in *Integrating Typography and Motion in Visual Communication*, when designers take emotional factors into consideration, the impression, sensation and the message of the design could appeal to the audience in a soul-stirring way.

In that article, Soo C. Hostetler (2006) introduced the energy and dynamism of kinetic typography, supported by four major aspects that can contribute to maximizing impact. The particular aspect the researcher wishes to highlight is *'Type & Expression of Ideas'*, which covers three sub headings of 1) Typography 2) Form and 3) Expressive meaning.

1) Typography

Here Hostetler emphasized the importance of font choice for expressive purposes. Not only does each typeface have its own individual identity, different classifications of type have vital roles for the impact of the design. The distinctive and expressive qualities of each letterform demonstrate different visual attributes and purposes. When a variety of typefaces are well combined, the overall aesthetics and impression of the design can be enhanced (Hostetler, 2006, ¶ 5).

2) Form

In typographic communication, Soo C. Hostetler (2006) stated that typography has a dual role: "to represent a concept, and to do so in a visual form" (¶ 6). Typographic forms imply the interplay and display of letterforms through manipulations of texture, enlargement and distortion, provide unique characteristics and abstract representations of letterforms.

3) Expressive Meaning

The most intrinsic level of typographic forms would be their expressive connotations. The author fortified this notion by attaching personalities to typefaces. On the exterior level, type can look formal, beautiful or ugly. When type is in action, letterforms can bounce, fly, sink or crash. Furthermore, type can also convey emotions such as feeling

angry, delightful, or appear as if they were shouting or crying. Within proper contexts, the strong personalities of type give designers vast abilities in conveying appropriate message, mood and affect of the designs (Hostetler, 2006, ¶ 7).

II. 4 .2.   Typographic Forms and Visual Logic

Typographic Characters: Tension between text and drawing

Typographic devices, denoting the large prints, bold type, italics, footnotes, asterisks, blanks, are "lures for the eye and the mind, which allow written words to loom – from the invisibility of the page" (Biffures, 1982, as cited in Lapacherie, 2006).

In *Typographic Characters: Tension between text and drawing,* Lapacherie (2006) based the article upon the complementary concepts of *looking and reading; visibility and readability; characters as drawings and characters as signs,* yet especially emphasizing the concept on plastic forms of typography, or to see letters as 'drawings'. The writer initiated the discussion by introducing two different perspectives of letters forms, in terms of their *readability* and their *visibility*. From the angle of *readability,* letters are defined as signs or units of language; whereas from the standpoint of *visibility,* letters are being 'looked at' as abstract drawings with their autonomous meanings (p.65).

Lapacherie (2006) reinforced the viewpoint by defining typographic characters as:

> signs which are of particular design or style useful for the composition
> or printing text. But these signs are not transparent as is a pane of glass
> which the eye crosses without noticing in order to grasp external object.
> They are not mere referential signs, not empty ones, different in their respect
> from the symbol of the alphabet whether phonetic or not, devoid of any
> intrinsic meaning. Characters are indeed drawings, sometimes beautiful unto
> themselves (Lapacherie, 2006, p.64).

Further to the *visualization* of typographic characters, the writer introduced 'Typographic poetry', where "typography itself becomes a poetic element" or "the very fabric of printing a matter" (Lapacherie, 2006, p.63). This is supported by Dadaist practices, or through Dada poems. It was noted that in Dada texts, conventional rules are discarded in their typographic arrangements, nor are they justified by semiotic or aesthetic fulfillment. In other words, "it is more a matter of denying the significations of typography than of creating new ones and using characters, not as semantic complements to the text, but as pure forms" (p. 76-77).

To sum up the discussion, Lapacherie (2006) asserted that "what is important is not the codified meaning of typography, or even the text to be printed, but the type in itself, as a form, its design, thickness, height, pure graphic signifier" (p.71) and that "it is the domain of absolute arbitrariness; a text which is made to be seen is independent of what is read"(72).

The Power of Punctuation

In linguistic and grammatical terms, punctuation marks greatly facilitate the comprehension of written text. As Solomon (1990) stated in *The Power of Punctuation*, "these subtle, often understated, devices are quite important, for they are the meter that determines the measure within the silent voice of typography…directing the tempo, pitch, volume, and the separation of words" (p.28).

Directed specifically to designers, the writer highlighted that special consideration is needed to judge the compatibility between punctuation and letterforms, for "sensitive application of punctuation in even the most commonplace unit changes the entire

feeling of the design" (p.29).

As Lapacherie (2006) emphasized the visualization of letterforms, Solomon (1990) postulated that "designers can create illustrations without pictures" (p.29). The divergent and unique anatomy of punctuation marks can generate different tensions and atmosphere on the page, which could enhance the impression and message of the design even without any grammatical intent.

"Whether prominent or subtle, punctuation marks are *the heartbeat of typography*, moving words along in proper timing and with proper emphasis" (Solomon, 1990, p.32). It is crucial for designers to understand the subtleties when working with punctuation. This requires paying attention to spacing refinements and typographical compositions in order to achieve maximum effect in optical alignment and tonal value (Solomon, 1990, p.31).

Visual Logic through Diagrammatic Visible Language

The materiality of typography as the visible medium of language expression was explored by Aaron Marcus (1987) in *Diagrammatic Visible Language: An Investigation of Visual Logic*. The author centred the argument on the movement of visible language into more diagrammatic, dynamic and multi-dimensional appearance, which was investigated through the author's own experimental works of concrete poetry, computer graphics, and conceptual art (p.9).

History of visible language

Tracing back to the development of visible language, the formation of marks, signs,

ideograms, pictograms and phonograms went through an extensive progression of abstraction and visual thinking. The communicative values of these visible symbols were applied to cultures, resulting in different systems of visible language. This evolvement can be seen from the Egyptian hieroglyphics 5000 years ago, followed by the ritual document recorded on a Phaestos disk, then the emergence of Roman forms (Marcus, 1987, p.9).

Typographers, writers, poets and artists throughout the history also took major parts in enriching the visual systems, uncovering a series of new visual logic. In early twentieth century, Futurist poets Apollinaire and Marinetti, along with Bauhaus and Cubist artists/designers sought explorative approaches in photographic and typographic collages with adventurous angles and compositions, creating the feel of ambiguity. Expressionist painters Miro and Klee delved into their colourful canvases with fantastic markings that were full of hidden meanings (Marcus, 1987, p.10).

Diagrammatic Communication

The way to understand the shift from the conventional appearance and structure of visible language is to perceive them in diagrammatic manner. "The markings in a diagram, whether typographic, calligraphic, or illustrative, can have several levels of meaning. They can be: Positional markers – in 2D or 3D space, Pictograms / Ideograms, Phonograms (symbols for sounds), Visual records of the dance of the hands or machines" (Marcus, 1987, p.10).

Fig. 2-1. Untitled

Untitled (Fig. 2-1), from the *Symbolic Constructions* series (1971-1972), Marcus (1987) attempted to discover possibilities in symbolic grammar through compositional experiments. The idea was derived from his daily experience of mass communication such as advertising, television, highway signage, film and other forms of typographic communication, where the viewers were manipulated to absorb information in mandatory, linear fashion. Thus in this piece, the playful and irrational composition conveys the idea of being freed from any semantic content. Typographic elements and the grids play a cat-and-mouse game, where "the grids are intended to be metaphors for typography and language itself, acting as nets to catch some realities while letting other slip through" (Marcus, 1987, p.10). The viewers are invited to engage with the peculiar nature of the symbolic characters.

The process of abstraction from drawings to marks, to symbols, and to language is the result of significant developments in visual thinking and visual logic. Yet linguistic and grammatical conventions have caused readers to be accustomed to linear, left-to-right,

line-after-line sequence. The author stated, "the emergence of reading is the selection of information in a complex visual composition of photographic and non-photographic elements. Information may come from many sources, from many directions" (Marcus, 1987, p.10). In fact, linear formula for reading may only reveal limited dimensions of knowledge. To deepen the level of visual perception, diagrammatic approaches for graphic and typographic elements may be new modes "to piece together the jigsaw puzzle of perceptions and conceptions" (Marcus, 1987, p.10).

Typography as a medium for the Visual Representation of Language

The relationship between written language and experience was explored by Johanna Drucker in Letterpress Language: *Typography as a medium for the Visual Representation of Language* (1984). Through three pieces of printed letterpress work, the author focused on the formal, visual properties of typography and its capacity in extending the meaning of written text. The series of experimentation emphasized both the individual and compositional aspects of typography i.e. examining individual letterforms as the basic unit of written language, and the overall structure of typographic layout on a page.

In one piece of work titled *26 '76: The structure of the page*, the author took an event of her four-day-trip to LA, and made the trip as a whole image, including all incidents that happened during the trip by distinguishing different kinds of language and identify each one of them using a different typeface. There were two main issues that motivated the author's work: 1) The way in which visual structure actually produce meaning; 2) The relation between language and experience. Drucker's assumptions were "language has an approximate relation to experience and that the account of an experience may be constructed along several different linguistic lines" (p.8).

Drucker identified four kinds of language in this piece of work: 1) found language, which includes language that surrounds the daily living e.g. sign and billboards; 2) theoretical language, which describes what was being done to the book *(26 '76),* identifying the elements within the structure of the whole; 3) narrative language, which describes actions and events taking place; and 4) personal voice, which reflects what happens in more idiosyncratic terms (p.8-9).

To present all of the above language discovered as encountered in the four-day-trip, Drucker incorporated a range of typographic experimentations. There include emphasizing individual alphabets as located in a word that spoke the name of the alphabet e.g. "B gins", "Pro C dure"; using different typeface to differ entities e.g. using a light typeface for a fair-haired woman and heavier typeface for a darker man; structuring the typographic composition to visually reflect the physical appearance e.g. a text block placed on the top of the page represented the attic of a building, while a text block placed at the bottom of the page signified the basement of a building.

The key findings from these pieces of works drew attention to the 'Plurivalence' of language, denoting "the structuring of more than one value or meaning into language. Puns, double meanings and play on the connection between spoken and written language were used to emphasize the two forms of language" (p.9). Moreover, Drucker found multiple dimensions in the meaning of words that were not always evident in their normal usage. The author stressed the autonomy and the materiality of written language by stating that "letters as element in their own right are capable of carrying discrete and Simultaneous messages" (p.14), and realizing "the materiality of language, its real substance and its role as more than a neutral vehicle to convey meaning" (p. 13).

The Crystal Goblet

In the collection of sixteen essays in the book *The Crystal Goblet* (1955), by typographer, scholar and writer Beatrice Warde, the author stressed the invisibility of typography to convey clear messages on the printed page. With the emphasis on achieving the uttermost legibility of typography, Warde also underlined the 'tone of voice', the characteristics and unique form of each typeface. In the essay *On the choice of typefaces* (p. 137), Warde wrote that the legibility of a typeface is equivalent to the audibility of a human voice. She even likened the choice of typefaces as the clothes which the printed words wear. At a given chance, the reader or viewer will take a vivid interest in these "clothes", and use words such as 'romantic', 'chill', 'jaunty', to describe different typeface. Warde further explained that the choice of typefaces is not merely for artistic purposes, yet for the sake of subtly and intimately connecting and dealing with the subconscious mind. As Warde concluded in the essay, "not only notation but connotation is part of the proper study of man kind. The best part of typographic wisdom lies in the study of connotation, the suitability of form to content" (p. 148-149).

II.4.3.   Practical examples on creating emotions through typography

Having comprehended the theoretical basis on typographic anatomy, functional examples of incorporating emotional connection can be seen from the merge between the readability and expression of typography as presented in the book *Letterforms: Bawdy Bad & Beautiful* by Heller & Thompson (2000). With a distinctive tact, the goal of the book was not to embark a revolution, but to introduce a realignment in the typographic arena, by exploring the conjunction between functional and artful typography.

The witty alliteration of the three B's in the book title set out the tone for the discussion.

As the authors describe, "*Bawdy* is an alternative to precision; *Bad* suggests rejection to neutrality; and *Beautiful* is defined by the context, not preexisting ideas" (p.7). From idiosyncratic to chaotic letterforms, the authors covered these offbeat typographic renovations within four categories.

1) Vernacular Vision

Just as a common dialect for cultures, societies and various groups, vernacular in the context of graphic design refers to designs for the 'mass-culture' in ordinary, everyday lives. This encompasses many aspects in commercial art ranging from advertising, signage or package designs, where signs and symbols are utilized for to maximize legibility and familiarity for the public. Although the clean and orderly look from the international Typographic Style in the 1950's dominated the late Modern era in graphic design, it became clear that it was not the approach for all. Free enterprise and the public were pushing for "the predictability of unpredictability" (p.16) to grab the consumer's attention. Vernacular typographic approaches can be subcategorized in terms of *pastiche,* the use of visual irony for historical allusions; or *parody*, the satiric means of wit and irony. Furthermore, incorporating found objects for visual materials is also favoured by many designers. To sum up, vernacular design appeals to people's emotive levels and provides a strong sense of familiarity by attaching elements of nostalgia. While some may critique vernacular conventions within consumer culture, for many "it is a pathway into that culture" (p.19).

2) Handwritten High Jinks

The hand was the most efficient tool for creating typographic work before many technical inventions such as the photocopier or the computer. Yet in the digital age, the

natural expression of handwritten type provides the artistic and organic feel of individuality in contrast to the formal, mechanical expression produced by technological means. Paul Rand, a Modern pioneer in advertising and publication design in the 1930's, used a light-line script instead of type setting in some ads to create an informal, friendly appeal for the design to engage the consumer on a more intimate level (p.58). The human dimension shown by hand lettering in expressing personality, passion and emotions was even described to be the remedy for the conformity of Swiss typography. The fluidity and spontaneity of hand lettering can break the conventions for reading patterns, as well as offering more visual textures than neutral typefaces. Heller and Thompson (2000) concludes the discussion by stating that "the real keys to success are the unforeseen mistakes, misplaced marks, and careless juxtapositions that appeal to us not only because they are visually pleasing, but also, and perhaps more importantly, they are evidence of human touch".

3) Digital Devilry

Digital revolutions in the late 1980's unveiled new dimensions for typographic expressions. Digital tools provided new possibilities for type designers, bringing in personal signatures through individual typeface designs as the authors wrote that "each typeface tells its own story – or helps better express someone else's tale" (p.117). Just as abstract painters express emotions through splashes of paint over the canvas, typographers also have the freedom to create tension and dynamics through layers of type on their digital canvas to evoke various moods.

4) Funny Faces

Besides creating dramatic tensions, letterforms also have the ability to trigger the

funny bone. This can be achieved through clever combinations from both the explicit and implicit aspects of typography. From appearance, "letters by themselves can evoke certain moods and ideas without being metaphoric or symbolic shapes" (p.155), and could also be used to create facial features. Moreover, typefaces are often being sculpted like pieces of clay, where they could be squashed, twisted or scrunched up, creating the effect of 'visual onomatopoeia'. On the implicit level, the comical effect and viewers' impression can be further enhanced through clever use of metaphors and visual puns.

Although the process of solving a design problem can be likened to working through a jigsaw puzzle that aims for the complete or the best solution, this does not apply to all typographic work. In *Letterforms: Bawdy Bad & Beautiful* (Heller & Thompson, 2000), the authors implied this by asserting "Discordance can be just as effective as concordance. An unexpected juxtaposition can offer a greater visual stimulus than a predictable one" (p.9). In other words, the elasticity and the pure anatomy of letterforms can create astonishing results without fitting together harmoniously. The four categories of eccentric typography presented in the book not only showed how the traditional boundaries of type can be pushed in different angles, but more importantly, how typographic personalities and vitality can be attached to create tension and connect with human feelings and emotions, while achieving the essential message.

II.4.4.   Visual thinking & Visual literacy

Combining the logic of pure typographic form and its ability to elicit emotions leads to the field of visual thinking and visual literacy. Donis A. Dondis argued that the production of art and other forms of visual communication is achieved through the

arrangement of basic elements in a visual space, which form the basic grammar of visual communication. Examples of these elements include dot, line, shape, space, colour, texture, value and form. Why is there the need for one to understand the grammar of visual space? Dondis stated that "Visual expression is the product of highly complex intelligence, of which we have pitifully little understanding. What you see is a major part of what you know, and visual literacy can help us to see what we see and to know what we know" (Dondis, 1973, p.19 as cited in Jia, 2005).

Visual grammar not only directly relates to the characteristics found in the pure anatomy of typographic forms, it also connects with human senses and emotions. Take the element of *line* as an example, "Lines evoke feelings. Vertical lines imply tranquility and rest; horizontal lines demonstrate power and strength; oblique lines imply movement, action and charge; horizontal lines demonstrate power and strength; curvy lines create calm and sensual feelings" (Szabaro, 1986 as cited in Jia, 2005).

Arnheim also claimed that "Visual perception is a cognitive activity. The capacity to understand through the eyes has been put to sleep and must be reawakened. This capacity involves the creation and apprehension of images by means of balance, shape, form, growth, space, light, colour, movements, dynamics, and expression (1974, p.13 as cited in Jia, 2005).

II.4.5.   The fusion of media and senses

The correlation between typography, music and emotions stretches over multiple dimensions of media and senses, encompassing visual and audio media, as well as the subconscious. The synthesis of various media was explored by John Milner, in the article

On the fusion of verbal and visual media (1976), and Joan Tuckenbrod in *Integrated Creativity: Transcending the boundaries of visual art, music and literatur*e (1992). Milner presented the poem 'Un coup de des jamais n'abolira le hasard' (Fig. 2-2) by French poet Stephane Mallarme to illustrate the synthesis between visual and verbal media. Visual effect was achieved by the layout of words across and down the page which produced an active vitality on the page. Individual words and letters were no longer supporting elements on the page but a primary role which were involved in interplay within their visual and syntactical context (Milner, 1976, p.6). Moreover, Mallarme's typographic pieces often related to the musical score. The weight and positioning of words were related to the intonation, rhythm and the order in oral reading, which also evoked sensations and ideas (Meggs, 1998, p.237).
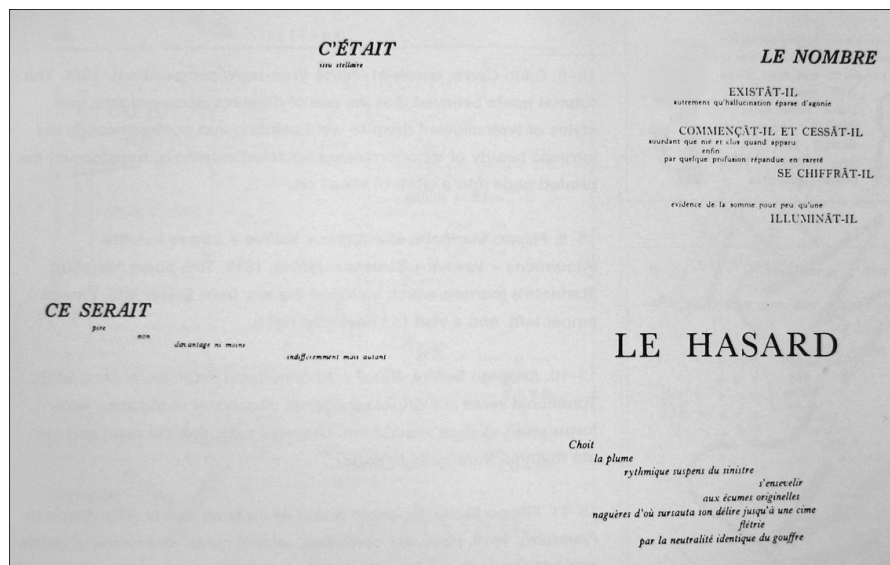
Fig. 2-2. 'Un coup de des jamais n'abolira le hasard'

Tuckenbrod (1992) also discussed the synthesis of different media - visual art, music and literature by introducing that "Aesthetic sensibility emerges in the artistic expression of ideas and feelings, permeating any media the artist chooses. Artists and designers create with forms that involve differing dimensions of human experience" (p. 89). The interchangeability of different sensory experiences in literature was identified in the

poems by French poet Arthur Rimbaud, who "associated colours with alphabetic vowels, emphasizing the verbalization of emotional currents, basing his work on the interchangeability of different sensory experiences" (p. 91). American writer Gertrude Stein was fascinated by the sensuous materiality of words, building sound landscape through the resonance and reverberation of words.

The simultaneous existence of communication through multiple media was a pivotal principle for Futurists. With their inventive energy and playful, optimistic approach to life, they experimented the blending of various media to push new grounds in visual and sensual communication. In Marinetti's 'words in freedom', the poems were to be read as well as looked at, as most of the poems were "the depiction of the energies, shocks, and explosions of warfare" (Milner, 1976, p. 6). As experimented by Futurists and Dadaist, static typographic forms on the printed page embodies ideas, phonetic values and emotional expressions. The organic nature of typographic forms can be seen, heard and felt by its viewers; engaging them on the subconscious level and generating new dimensions of visual communication.

II. 5 .   Emotive Qualities of Music | Music & Typography

II. 5 .1. Emotive Properties of Music

The key factor for introducing music as the central subject to realize the expressive and emotive qualities of typography is due to unique role in which music has on our lives. Subsequent to Norman's discussion on emotions and design (2004), he later claimed that the responses to melody, rhythm and tune as well as the affective states produced by music are very similar and constant across cultures. Norman reinforced the correlation between music and emotions by stating:

Slow tempos and minor keys are very sad. Fast, melodic music that is danceable, with harmonious sounds and relatively constant ranges of pitch and loudness is happy. Fear is expressed with rapid tempos, dissonance, and abrupt changes in loudness and pitch. The whole brain is involved – perception, action, cognition, and emotion (Norman, 2004, p.115).

"A musical part is an emotion, not as something on paper, but something actually heard and experienced (Schwartz, 1985, p.99). In *Music and Emotion,* Herbert Schwartz (1985) investigated the meaning of 'emotion' and 'music' between musicians and non-musicians, or laymen. He implied that musicians would refer to 'music' in terms of periods, phrases and parts of compositions; whereas laymen would expect to identify emotions as feelings that demand actions i.e. if one feels *angry*, one would want to release the anger through certain means. So where is the common ground between the two standpoints? Schwartz discussed that for "actual music is not the relation of notes on a staff, but the succession of tones within ourselves… the ordering of tones is the ordering of something like emotions" (Schwartz, 1985, p.100). He arrived at the conclusion that music, rather than concentrating on their own expression, it has the power to teach us and to develop sensibility within the listeners, or the "quasi faculty relevant to those acts in which our minds and feelings are united" (Schwartz, 1985, p.101).

In *Emotions in Music,* Alan Goldman (1995) also provided various viewpoints on the arousal of emotions in music. The traditional notion states that the emotional affects are developed through the combination of melodic, harmonic and rhythmic element of musical forms. Goldman reflected on Kendall Walton's idea that "We do not experience real emotions in attending to art or music, but it is such fictional or make-believe that we experience such emotions" (Goldman, 1995, p.65). Walton further explains that listeners either imagine music as the direct emotional expression from the composer, or they react

purely on the musical structures such as the progressions of the chords, in similar ways of how they react to colour combinations. Upon this assertion, Goldman concluded that when attending to the imaginary worlds of music, or other artworks, instead of 'imagining' certain emotions, the participator experience the emotions affectively in the context of being engaged within the artistic medium of the piece (Goldman, 1995).

Schwartz and Goldman both presented more objective aspects of music and emotions. In *On the beautiful in music, or the emotional fly in the musical ointment,* F.G. Huss (2008) offered insights on subjective perception of emotions in music, which was supported by psychological and philosophical backgrounds, especially Kurt Lewin's *'Field Theory'.* Huss noted that "different listeners may identify different emotions, whether overt or underlying, in a given piece of music, and the same listener may identify different emotions on separate hearings, which suggests that a listener's state of mind may influence his perception of the music" (Huss, 2008, p.40). Upon this point, the author introduced Lewin's 'Field Theory', where an individual is constantly influenced by various internal and external factors, thus creating a field of influences affecting the individual's perception of the past, as well as anticipation of the future. Placing music in this context as an external factor, emotional reactions are aroused by a range of factors such as moods, hopes, fears, expectations, and even the physical and social surroundings (Huss, 2008).

Later in the discussion, Huss also implied the meaning of 'beauty' in music, particularly in relation to different elements of the musical content. The author believes that musical rhythm manifests the dimension or the regular, systematic organization of sound. It is the potential source to generate excitement, yet a limited sense of being moved by

musical beauty. However, it is through melody and the subtle harmonic progressions that the aesthetic beauty of the music is expressed (Huss, 2008).

Having acknowledged the various theories on emotional properties in music, as well as the subjective perceptions of music, it leads to the consideration of *why* do we need the emotive qualities of music? What values can one obtain from the expressive properties of music? According to Aristotle's idea of catharsis, denoting the release as the value of negative emotions, and that "we enjoy the lack of real objects or threats connected with these emotions in real life, that we gain mastery over them or reassurance in our own sensitivities from experiencing them in the context of art" (Levinson, 1990 as cited in Goldman, 1995, p.67). Responding to affective impacts of tune, tension, major and minor keys, music can act as "a subtle, subconscious enhancer of our emotional state, which can harm as much as help" (Norman, 2004, p.119). Goldman (1995) summarized that the changes in expressive qualities of music can capture the nuances of the emotions that language cannot adequately describe, and that music can provide a map portraying how the emotional states develop and change (p. 66).

II. 5 .2. Music Visualization through typography

Futurist poets Marinetti and Apollinaire pushed forward the *acoustic* properties of type. They were strongly against the concepts on typographic harmony and consistency, and firmly stressed the synaesthetic properties or the miming power of typographic elements to different noises. Type design, thickness, height and character disposition allow the expression of the instantaneous poems, expression cacophonous noises such as shuttering arms or exploding shells, or to imply the auditory features such as pitch, intensity or rapidity (Lapacherie, 2006, p.69).

Visualizing music through typography was even more evidently discussed by Frank

Armstrong (as cited in Heller, 2004) in the article *'Hearing Type'*. Through the analysis of

phonetic properties in music, the writer provided detailed analogies between music and

the micro aesthetic elements in typography.

Within this context, music is defined as sounds that have been structured by their

wavelength and time in a two-dimensional acoustic field; typography can be described as

language visualization through the organization of glyphs in a spatial field.

One common origin shared by music and typography is spoken language according to

the author. Armstrong inferred that music is likened to a storytelling process, structured

by the blend of acoustic information; typography is consists of grammatical syntax

formed by typographic elements to visualize spoken language, thus enabling the reading

process.

Space and Form

"In both music and typography, the tension created by contrasting elements, or the

intervals of space between them, provides a sense of motion" (p.175).

Tone is the basic unit for sound in music. When there is a decrease in tonal level, or

complete absence of sound - *silence,* this is similar to negative space created by

typographic counterforms in the visual space.

Properties of Sound

The writer further illustrated the correlation between the four properties of sound:

amplitude, duration, pitch, and timbre, with typographic characteristics.

Amplitude describes the intensity or loudness of a tone. In typography, this can be conveyed by the different size or weight of the glyphs. Larger or heavier glyphs can emphasize a loud or intensified tone.

Duration describes the length of time that a tone or silence exists. Relatively, the width of glyphs or a certain length created by a group of glyphs in typography can imply duration over a period of time.

Pitch describes the relative highness or lightness; lowness or heaviness of a tone. As the sense of gravity impacts our visual perceptions, typographic elements positioned higher in the composition would appear lighter than those placed at the bottom.

Timbre refers to the colour or quality of a tone that distinguishes one instrument from another. It is also the property that corresponds to the most detailed aesthetics of typography. As American composer, Aaron Copland, wrote "Timbre in music is analogous to colour in painting" (as cited in Armstrong in Heller, 2004). Typographic timbre not only can be expressed by colour and textural quality of a typeface, but also the specific semantic features of typeface (e.g. variations in serif shapes and angles).

Interaction of Sounds

The properties of sound discussed above are mostly assimilated to attributes seen in individual or small groups of typefaces. When sounds and tones are organized

together, interacting in a variety of musical dimensions, these interactions form the three principle aspects in music composition: *melody, rhythm, and harmony.*

Melody is perceived by a succession of changes in pitch, tone and duration that may be both continuous and non-linear in the melodic pattern. In typographic manner, units and arrangements of typographic elements, forming words, phrases or sentences, produce the dynamic patterns of speech.

Rhythm depicts the temporal pattern created by durations, interval, silences, as well as the fluctuations in tones with varying degrees of emphasis. Rhythm delivers the sense of motion. "Motion is essential to both music and typography, propelling the listener and reader forward through a composition" (p.176). Likewise in typography, visual rhythm is created by vigorous energy in punctuation marks; the immense amplifications in ascenders and descenders; contrasting shapes and widths of strokes, strengthened by counterforms produced by the glyphs.

Harmony occurs when multiple tones occur simultaneously, creating levels of sound density through the different intervals between the tones. Harmony in music composition builds up motion horizontally and vertically, as well as fabricating a diverse range of textures. In typography, the harmonic effect can be shown through horizontal lines of type with varying space in between the lines (leading) or between type columns. These vertical visual attributes in typographic composition embody the vertical harmonic texture expressed in music.

In many respects, typographic expression can be assimilated to musical essence. As

Bringhurst wrote that "letterforms have tone, timbre character, just as words and sentences do" (p.22). Like music, typography can manipulate behaviour and emotions.

II.6. Summary of Literature

Emotion, typography and music are the three interrelating subjects for this research. With the essential role of emotion impacting on our daily lives, especially the significance of emotional attachment in designs, the power of typographic forms and compositions can appeal to the audience on an emotive level. Music, being a key channel that can elicit diverse emotive qualities, the properties of music also closely correspond to elements of typography. Thus the emotive qualities expressed by music can be visually articulated through the phonetic attributes of typographic anatomy and composition.

Either from the psychological point of view or from its stand point in design, emotions have critical influences in the process of cognition and also the interpretation of the surrounding world. Therefore as emphasised by Norman (2004), Spillers (2004) and Heller (2004), designers must acknowledge the sensuous and emotive factors in the designs, as functionality can satisfy the external objective needs, yet it is the internal subconscious feelings and desires that dominate the final decision.

The expressive and aesthetic potential of typography are constantly undergoing challenges, experimentations and pushing traditional boundaries in order to discover new grounds of communication, and to further connect with human sensibility. Typography, as seen in philosophies of Deconstruction and Post-Structuralism, function as graphic marks that intrude verbal language and unveils new ideas through its visual forms.

To draw closer correlation between typography and emotions, the research gives insight to the pure form of typography and its generation of new visual logic. The absolute arbitrariness of typographic forms opens new facets of communication. Instead of being read in the semantic context, typographic characters and punctuation marks are seen as drawings or graphic signifiers to be seen and felt. Moreover, Hostetler (2006) wrote that the different personalities of letterforms can be utilized to demonstrate different attributes and purposes, as well as expressing appropriate mood and affect in the for the design. Beyond the individual characteristics of each letterform, emotive expression of typography can be produced through the composition and juxtaposition of letterforms, which also adds further dimensions in visual perceptions.

Music shares mutual bonding between both subjects of emotions and typography. Among numerous media in our daily surrounding, music can elicit a wide range of emotions. Though music experts still continue the argument and discussion over the connection between music and human emotions, major findings to date suggests several viewpoints. Objectively, listeners react emotionally on the musical structures such as the melody, chords, rhythm etc. Subjectively, the emotional perception of music may be affected my personal factors such as memories, future hopes, imaginations, or even the physical environment.

The visualization of music through typography have been orientated by Dadaist and Futurist poets and designers through *'optophonetic'*, which explores the interaction between sounds and signs in the manner of expressive typography. The compositional letterforms may be seen and read simultaneously. More specifically in recent context, typographic elements have been assimilated with musical properties.

Key findings from the review of literature highlighted the importance of emotive values in design, the expression of emotions through the experimentation of typographic form and compositions, the ability for music to evoke emotions, as well as the corresponding elements in music/sound and typography. There had not been apparent literature findings that discuss the direct applications of how typographic forms and treatments would most effectively reflect the emotive qualities in music. Therefore the following two chapters intend to explore this area via practical methodologies and experimentation.

III.   Original Research (1)

As the first part of new research, the researcher undertook a formative pilot study (titled "PRO-2 Project) during the semester abroad as an exchange student in Hagenberg, Austria.

III.１. Aim

To explore how static typographic letterforms, as well as hand lettering, and typographic compositions can reflect emotive properties in music.

III.２. Hypothesis

That participants would be able to identify the emotions expressed by different musical sequences and match each sequence with a typographic composition that best reflect the sequence.

III.３. Methodology

Part I. Music selection & creating the typographic compositions

Three music sequences (30~50 sec each) were selected. Each sequence was selected to express different emotional content. The selection and decision on the emotive expression of the sequences were purely based on the researcher's subjective interpretation. The sequences were non-lyrical, as lyrical connotations were likely to influence the musical interpretation, rather than focusing on the pure musical elements. Hence rather than selecting three pieces with very explicit, dramatic emotive qualities, the different emotive contents in each sequences were conveyed by the mild, instrumental and rhythmic nature of the music, in order to allow possibilities for open, subjective

interpretation from listeners.

For each sequence, a piece of typographic design was created using diverse letterforms and other typographic elements to reflect and visualize the phonetic qualities and emotive affects of the music sequence. To maintain readability in the designs, each composition consisted of the title text from the original music.

The designs were in grey scale tones, as colour through its independent ability to evoke emotional responses could interfere with the interpretations.

Below are the three typographic compositions designed for each music sequence. The writer's subjective interpretation of each musical sequence and the overall emotive affect will be described first, followed by a detailed analysis of how the typographic composition reflects musical content and emotions.

Type Composition 1: *And So it Begins*
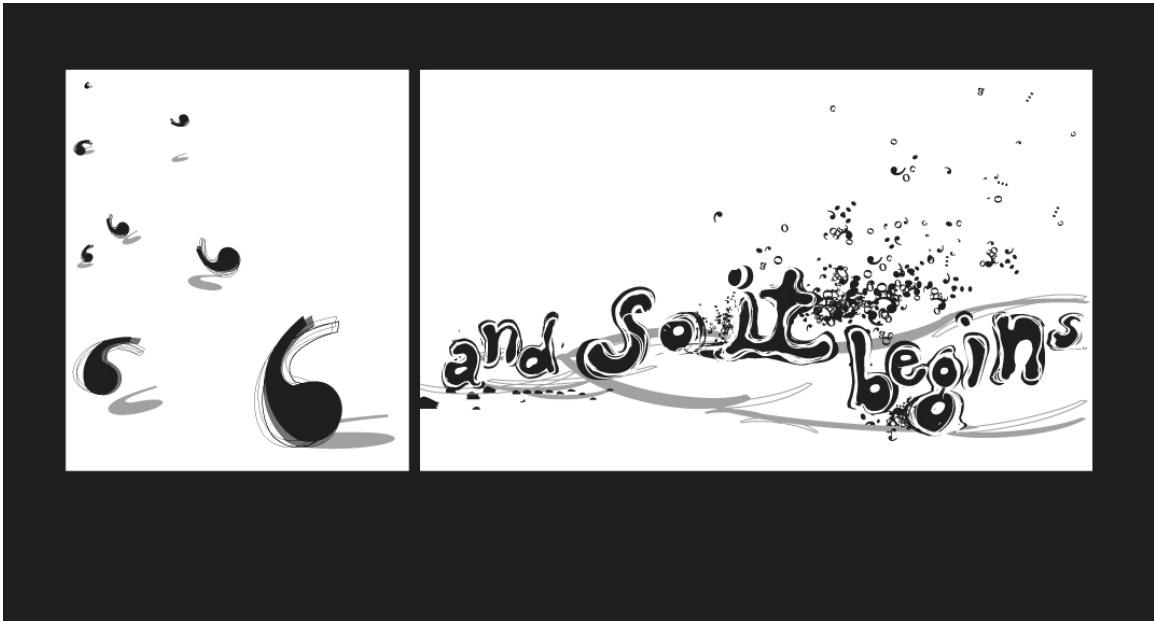
Fig. 3-1. Type Composition 1: And So it Begins

Music composed by Audio Companion, retrieved from http://www.unsignedbandweb.com/

Sequence extracted from 0:00-0:31

Musical content & overall emotive affect: The researcher felt that the gradual layering

of several instrumental sounds in slow and moderate tempo created a fantasy-like and

dreamy affect.

Design Analysis: The typographic design is composed of two parts as the intro

sequence of the music had quite a distinct quality compared to the rest of the sequence.

Hence this part is visualized by the comma forms appearance of bouncing to show a

sense of playfulness, with the outlining effect to express the plucking of the string

instrument.

In the second part of the design, the dreamy mood of the tempo and melody are

conveyed through the soft, organic feel of hand-lettering. The light curvy bracket forms

at the bottom layer suggest the long notes of different instrumental layers in the music

sequence. Towards the last part of the music, a crystal-like melody sparkles over the

main melody, which has been visualized by the small type forms dispersing into the

space.

Type Composition 2: *Banana Buttermilk & A Sabbath Shak*e

Fig. 3-2. Type Composition 2: Banana Buttermilk & A Sabbath Shake

Music composed by Kevin Brown, retrieved from http://www.unsignedbandweb.com/

Sequence extracted from 4:32-5:06

Musical content & overall emotive affect: The fast jazzy rhythm, the instrumental

texture built by the mixture of multiple instruments, and the clear saxophone melody,

created a groovy, relaxing feel.

Design Analysis: A major feature in this music sequence is the dense texture of beats

and instruments. These are reflected by the typographic texture in the background to

create a visual effect of noise. The lettering and the composition of the music title above

the typographic texture aims to express the relaxed, brassy melody of the saxophone.

Towards the end of the music sequence, a rapid, dynamic melody of the saxophone can be clearly identified. This is visualized by the three wavy lines scattering out from the "&", showing the fast movement of melody. The overall effect of the composition aims to capture the sense of movement, energy and relaxation through the free and wavy arrangement of type elements.

Type Composition 3: *The Snowman's Music Box Dance*

Fig. 3-3. Type Composition 3: The Snowman's Music Box Dance
Music composed by Howard Black, performed by George Winston
Sequence extracted from 0:00-0:49

Musical content & overall emotive affect: The main difference of this sequence from the previous ones is that it consists of a single instrument – the piano. However, the changes in musical structure throughout the sequence are a lot more evident. Overall, the research felt that this sequence displayed a cheerful, light-hearted, and playful mood.

Design Analysis: The researcher's interpretation of this typographic design began with identifying four different sections in the musical structure; hence the design contains four sequential levels.

Similar to the first piece, it has an intro section with crisp syncopated chords, added with a playful rising tone at the end of each bar. To reflect this section, geometric type elements are present to express the clear tempo of the chords, while the three pairs of punctuation marks bouncing into the space convey the playful endings of each bar.

Following the intro is the main melody in very crisp and lively rhythm of piano. This is shown by the sleek edges and angles of the letter forms. The light-hearted feel in this section is enhanced by the broken chords that support the top melody. So the minor details around the letters reflect the tinkling effect in the background.

In the third quarter of the sequence, the music changes from major to minor key, with stronger, repetitive beats that build up the musical tension. So the letterforms are emphasized with bolder features to imply a heavier mood than the previous section of melody.

The last part of the sequence is similar to the main melody; therefore it is expressed by

the same style of the lettering as seen in part two.

Part II. Interview Procedures

The participants for the project consisted of 13 students aged between 18 to 26, including six females and seven males; three New Zealanders and ten Europeans, and came from backgrounds in Computer Graphic Design, Digital Media and Information Technology. The interviews took place during 26-29 May, 2008 in the Video Editing Suite in Upper Austria University of Applied Sciences, Hagenberg Campus.

The three typographic designs created by the researcher, each containing the title of the selected music pieces, were displayed on the computer screen simultaneously.

Participants listened to the three music sequences in their own time, and were asked to pay attention to the musical properties, particularly any emotional connections they felt as they were listening. They were allowed to repeat the sequence until they were familiar with the music.

The participants then matched each piece of design with one music sequence. They were asked to base their decisions on the connection between the mood and emotions suggested by the music and the overall feel or the details observed in the typographic compositions.

III. **4 . Results**

Table Analysis

The results presented in each table correlates to one typographic composition. Below is a sample section of the result table with explanation on the table contents.

Interview Results

	Music Sequence >	And So it Begins	Banana Buttermilk & A Sabbath Shake	Snowman's Music Dance
Row 1:				
Row 2:	Matching Tally	6	3	4
Row 3:	Responses & Explanations	● The commas in the first panel reflect the bouncing rhythm in	● The design feels like it's in deep dream or deep thoughts.	● The sprinkling comma elements are like the fast

In Row 1 are the three titles of the music sequences. Row 2 shows the number of participants that matched this type composition to each of the three music sequences. Row 3 records the summaries of the participants' responses and explanations as to why they matched this type composition to their choice of the music sequence.

Interview results for Type Composition 1:

Music Sequence	And So it Begins	Banana Buttermilk & A Sabbath Shake	Snowman's Music Box Dance
Matching Tally	6	3	4
Responses & Explanations	• The commas in the first panel reflect the bouncing rhythm in the music intro. (see Fig. 3-3) • The music has a mellow, floating beat and feel, which are shown through the curvy lines and the soft look of the typeface. • The comma patches towards the right end of the 2nd panel reflect the tinkling/crystal bell sounds heard in last part of the music sequence. (see Fig. 3-4) • The typeface has a childish/playful/sloppy feel – reminds me of Rugrats.	• The design feels like it's in deep dream or deep thoughts. • The type feels heavy and stable on the ground, reflecting the heavy percussion in the jazz. • The swing/move of the rhythm is conveyed by the curviness of the brackets. • The jazz sequence sounds most 'grown-up' out of the 3 sequences. This design feels most stable and mature out of all designs.	• The sprinkling comma elements are like the fast beat/movement of the piano notes (see Fig. 3-4) • The wavy structure in the design reflects the wavy melody of the music. • The hopping commas in the first panel reflect the intro rhythm of the music.

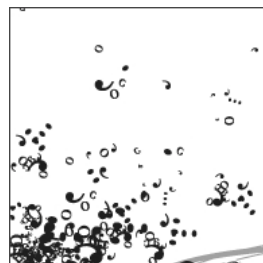**Table 3.1** Interview results for Type Composition 1
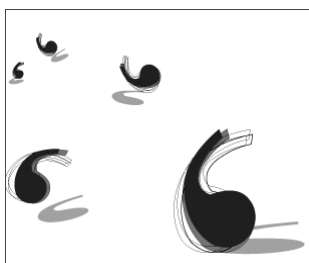
Fig. 3-3.   **Fig. 3-4.**

III. **4** .1.   Composition 1 Table Summary

For Type Composition 1, a design based on the music sequence *And so it begins,* six participants matched this design with this music sequence as intended by the researcher. The two most common features identified by the participants were firstly, the commas in the first panel of the design expressed the bouncing rhythm in music intro; secondly, the dispersing comma patches on the right end of the design reflected the crystal bell sounds heard in the last part of the music sequence. Other supporting responses included the soft, uneven edges of the letterforms and the curvy lines under the letterforms conveyed a calm, mellow feeling.

Three participants matched the design with the sequence from *Banana Buttermilk & A Sabbath Shake.* The main factors included the heavy feel of the letterforms, which could relate to the heavy percussion sound in the music. The curviness of the brackets expressed the swinging rhythm of the music. One participant mentioned about the design being the most stable or most 'mature looking' out of all three designs. The participant drew the connotation between jazz music to relaxing, high class restaurants enjoyed by grown ups. Hence the overall mature feel connected the design with the music.

Four participants matched the design with the sequence from *Snowman's Music Dance.* The sparkling comma elements were a key factor as participants felt they best represented the light-hearted, continuous piano melody of the music. Other comments assimilated the hopping commas to the intro rhythm of the music; and the flowing piano melody was shown through the wave forms beneath the letters.

Interview results for Type Composition 2:

Music Sequence >	And So it Begins	Banana Buttermilk & A Sabbath Shake	Snowman's Music Box Dance
Matching Tally	2	5	6
Responses & Explanations	• The music gives me a comfortable, safe feeling, which can be seen in the round, soft qualities of the typeface. • The overall design gives me a picture of a cake or a relaxing creamy breakfast from seeing 'banana', 'buttermilk'. • The typeface has a juicy, creamy feel, reflecting the soft mood expressed by the music.	• The 3 wavy lines reflect the wavy saxophone melody. (see Fig. 3-5) • The typographic texture behind the title text reflects the mixed layers of instruments in the music sequence. • The long glyph extending from the "B" suggests the flow and relaxing feel of the sequence. (see Fig. 3-6)	• The wavy structure in the overall composition expresses the rise and fall of the music melody and the cheerful mood. • The floating feel in the overall design supports the high pitch of the sequence (as compared to the other 2 sequences).

Table 3.2 Interview results for Type Composition 2

Fig. 3-5.
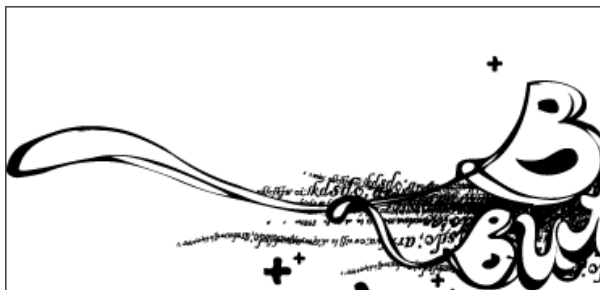
Fig. 3-6.

III. 4 .2. Composition 2 Table Summary

For Type Composition 2, only two participants matched the design with the sequence *And so it begins.* The feedback from the participants was less focused on the instrumental nature, but commented on the overall feel of the music and the design. Both participants described the letterforms with qualities such as round, soft, creamy, juicy, which portrayed soft, comfortable mood of the music. Moreover, both participants brought up further imaginations such as visualizing a picture of a cake or a relaxing, creamy breakfast from reading the words 'banana' and 'buttermilk'.

Five participants matched the design with the correct music sequence set (*Banana Buttermilk & A Sabbath Shake*) set out by the researcher. The participants were able to say that the music felt relaxing but during the process of matching, it was observed by the researcher that the instrumental effects in the music were still the key deciding factors. The most obvious being the three wavy lines in the design reflecting the rapid saxophone melody in the music. Secondly, most participants noticed the type texture underneath the letterforms, which best reflected the mixing of instrumental layers in the music sequence. Three participants commented that the long glyph of the 'B' well portrayed the overall relaxing flow and atmosphere of the music.

Six participants matched this composition with the sequence *Snowman's Music Box Dance.* The overall arrangement of the type design had a crucial impact on the participants' interpretation, as they pointed out that the up and down movement in the design best suited the rise and fall of the music melody. Moreover, the sense of movement in the design implied a lively and cheerful mood, which could also be felt through the music. The other main factor was the positioning of the design content. Compared to the other

two designs, the position of this design is mainly placed on the upper 1/3 of the space.

The participants noted that the floating feel in the overall layout seemed to support the

higher pitch of the music sequence.

Interview Results for Type Composition 3:

Music Sequence >	And So it Begins	Banana Buttermilk & A Sabbath Shake	Snowman's Music Box Dance
Matching Tally	5	5	3
Responses & Explanations	● The music reminds me of Christmas, especially the crystal bell sound in the last part of the music. This is best portrayed by the text "Snowman", particularly the small supporting elements around the typeface. The bracket forms around and underneath the text are like snow hills where the snowman is dancing on. (see Fig. 3-7)	● Compared to the other 2 sequences, this piece consists of more percussion sounds and stronger beats. Therefore the sharper edges and corners of the typefaces and vertical layout convey a stronger, more powerful effect to match the musical nature. ● The piece contains many instruments with varying sound qualities. This corresponds to the variety of typeface features found in the design. ● The vertical layout of the design can be likened to the levels of different instruments on the music score.	● By a linear analysis through the design (from top left corner to bottom right corner), the changes in the layout and type forms matched the change of key and beats in the music ● The rising commas in the top column fit with the rising notes in the intro part of the music. ● There's more energy in the "Snowman" typeface; whereas the "Music" typeface feels less lively, and passive. (see Fig.3-8)

Table 3.3 Interview results for Type Composition 3

Fig. 3-7.

Fig. 3-8.

III. 4 .3. Composition 3 Table Summary

Overall, participants responded that Type Composition 3 was the most challenging piece during the matching process. Only three people had the desired matching outcome. Out of these three participants, one participant gave a clear explanation that was nearly identical to the researcher's original analysis of the design. With a 7-year background in music, the participant interpreted the design in a linear manner and identified the changes in layout, as well as the contrasting details in the letterforms. The other two participants noticed parts of the design instead of comprehending it as a whole piece. These include the rising comma in the top column matching the intro sequence of the music; or the energetic look of the *Snowman* typeface as opposed to the less lively, passive look of the *Music* typeface.

Five participants matched this composition with the sequence *And so it begins*. Some participants were not able to justify their choice clearly, while some others focused on the supporting graphic elements more than the typeface and composition. For example, the horizontal bars and waveforms under each row of letterforms were visualized as the

long base notes in the music. Meanwhile some brought in other imaginations by associating the music with joyful scenes from Christmas. Due to this association, words such as *Snowman,* the surrounding dot (likened to tiny snowballs), and the wavy lines under the letters (likened to snow hills) all became elements that support the musical mood and content.

Five other participants thought this design best reflected the sequence *Banana Buttermilk & A Sabbath Shake.* The most common feedback highlighted how the crisp sound of the percussion instruments and the repetitive strong beats were best expressed by the sharp edges and corners of the typefaces. Participants also noticed the range of letterforms shown in the design were indicators of the instrumental variety in the jazz piece. Lastly, due to the vertical format of the design, participants visualized this as the layers of different instruments on the music score.

III.５．Summary of Findings

From this matching exercise, it was observed that the graphic features in the type composition i.e. the comma patches (identified seven times), type textures (identified five times), wavy lines (identified nine times), and supporting elements around the typefaces (identified seven times) are the most influential factors in influencing the participants decisions, as they find it easier to associate these features to the phonetic aspect of music such as different instrumental effects, melodic structure, tempo, beats, rhythm etc.

Most participants ignore the semantic value of the text, stating that their decisions are purely based on the various details observed in the design and the overall feel of the

composition. With slight guidance from the researcher, 4 participants were able to attach different visual connotations to the typefaces such as it has lazy / angry / energetic / passive feel.

The title text in each composition evoked two levels of semantic responses, which can be summarized under denotative and connotative interpretations. Some participants are (perhaps unconsciously) influenced by the denotative value of the text, which affects how they interpret the music e.g. seeing "Snowman's" "Dance" reminded one participant of white Christmas when they listened to a particular music sequence; or seeing the words "banana" and "buttermilk" made two participants think of a nice, relaxing, creamy breakfast. These denotative interpretations then become a key factor for the emotive associations between the music and the design piece. On the connotative aspect, four participants commented on the pure form of the letters by saying that "the round, soft qualities, creamy feel of the letters gives me a safe, comfortable feel".

III.6. Conclusion

In this project, the correlation between static typography and musical emotions appeared to require a combination of three components: 1) the phonetic attributes of the music 2) typeface or letterform design 3) the semantic content of the text.

Firstly, the musical phonetic properties (instrumental effects, melodic structure, tempo, beats, rhythm etc) are the foremost features identified pointed out by the participants, who then instinctively attempt to identify corresponding details in the typographic compositions. Although they are able to distinguish these details and variations in the music sequence and type designs, most participants struggled to give a clear, direct

explanation of the emotive qualities they felt.

Secondly, considering emotive associations in the typeface designs, participants often personified the typefaces with certain characteristics e.g. lazy, playful, passive, creamy look, instead of directly stating specific emotive terms. Without further guidance, it is seldom that participants would actively comment on specific details in the typeface features. The emphasis is either drawn by how the supporting elements reflect the phonetic nature (as described in the first point); or the overall feel of the composition. This could indicate that it is easier for most letterforms to express certain personalities and characters rather than to express emotive values.

Thirdly, a further level of emotive association relates to the denotative and connotative values of the text. This was seen in Composition 3, when reading "Snowman's Dance", it leads to memories of white Christmas, which then evoke the listener to evoke warm and cheerful mood; in Composition 2, when reading "Banana Buttermilk Bread", supported by the roundness of the typeface, it reminds the listener of "creamy relaxing breakfast" or "a picture of a cake". These responses indicate that personal imagination or experiences can contribute to how the design (referring to both individual characteristics of the type forms and the overall composition) can trigger emotive connection.

Due to the instrumental nature of the selected music sequences, it appeared that the phonetic properties dominated the overall emotive qualities of the pieces, thus the general responses on emotive qualities seemed less evident. The subtleness of emotions in these pieces caused slight difficulty for some participants to clearly verbalize the feelings from the music, therefore more attention were drawn by the instrumental details.

However the overall project offered valuable initial insights for the research scope, outlining areas of adjustments in research methodology and material preparation (music selection and typographic designs) for further investigation. The key change would be to select three music sequences with very clear and distinctive emotive qualities. The following chapter will continue testing the emotive properties of typography building upon what as learnt from Chapter 3.

IV.   Original Research (2)

IV. **1．** Original Research (1) review & refinement

The findings from PRO-2 project, as discussed in Chapter 3, provided an indication of how music and typographic elements are associated. The main findings included the impact of instrumental effects; the personification of letterforms by assigning various characteristics; and the semantic content of the words triggering subjective experiences and imaginations. From the process and outcomes of PRO-2 project, several issues were raised that needed further investigation and also adjustments in the methodology. Thus Chapter 4 intends to explore these issues as shown below in greater depth.

First of all, the three music sequences selected for the experiment conducted in Chapter 3 leaned more towards the instrumental and structural aspects of music but conveyed less range and contrast in the music's emotional expression. Hence the researcher took extra consideration in music choices for Chapter 4 experiment by selecting three new sequences that expressed bolder distinctions in the music's emotional qualities.

Secondly, due to the music's strong instrumental nature in Chapter 3, this affected the design of the three typographic compositions. From the interview results, as well as the researcher's self critique, the researcher realized the compositions anchored too much on personal interpretation and instrumental details of the music, yet did not build enough emotional tension. Therefore the typographic pieces for this chapter concentrated on creating clearer emotional expressions with less focus on the instrumental nature of the music.

Thirdly, the method of matching one piece of music to one type composition in Chapter 3 imposed more restraints for participants. Because each piece of composition was designed specifically to reflect a single music sequence, it was observed during the experiment that the participants shifted their notice towards the minor details supporting the dominant letterforms in hope to achieve accurate matching results. This meant the researcher's original purpose of focusing on the letterforms and the overall composition was somewhat distracted. Thus in Chapter 4, the alternative approach to this issue was to separate the range of typefaces and compositions into two categories, reduce the supporting elements in the compositions, and also use ranking procedure instead of one-to-one matching method. This way the participants felt less pressured and were allowed more freedom in their decision making.

Lastly, each typographic design in Chapter 3 consisted of the original titles of the music sequences. As discussed in the chapter conclusion, some participants' interpretations were affected by the semantic meaning of the text as opposed to observing the pure forms of the letterforms. Thus in Chapter 4, the researcher omitted all semantic contents in the typographic designs. This was achieved by randomly selecting and combining alphabets, ensuring that the combinations did not form any semantic content that could be read and understood by the participants.

IV.2. Aim
To explore how individual characteristic of typefaces, typographic compositions, and a combination of different typefaces in various compositions can express the emotive qualities of music.

IV.3. Hypothesis

That the distinctive features of different typefaces / letterforms and typographic compositions can associate and express different emotive values of music. Moreover, the combination of both aspects of typography would better enhance the emotional connection as opposed to only having one single aspect.

IV.4. Methodology

Part I. Music selection & creating the typographic compositions

Three music sequences (20~30 sec each) were selected. By the researcher's own judgment, the three sequences expressed three distinct emotions – *happiness, sadness,* and *frustration.* Three sets of typographic pieces were created by the researcher. Each set of design was aimed to test a different variable:

Set 1 was aimed to test the impact of different typefaces. This set contained six pieces of design with six different typefaces / letterforms shown on each piece. The composition of the designs were kept consistent in order to focus on the pure form of the typefaces. In these six typeface pieces, two pieces were chosen or hand-rendered by the researcher to reflect the feeling of happiness, two pieces to reflect sadness, and the remaining two pieces to express a sense of frustration.

Set 2 was aimed to test the impact of different compositions. This set contained six pieces of design with six variations of typographic compositions. The typefaces of the designs were kept consistent in order to focus on the compositional aspect of the design. In these six compositional pieces, two pieces were designed by the researcher to reflect the happiness, two pieces to reflect sadness, while the remaining two designs to express a

sense of frustration.

Set 3 was aimed to test the impact of combining the different typefaces / letterforms (as shown in Set 1) with the compositions (as shown in Set 2) to explore whether the combination of both variables could enhance the overall emotive effect. Each typeface in Set 1 was mixed with each compositional design in Set 2. Hence a total of thirty-six pieces of design were prepared to cater for all possible outcomes gathered from Set 1 and Set 2 tests.

Analysis of typographic designs used for Set 1 and Set 2 tests

Each test contains a set of six pieces of typographic designs i.e. six typeface/letterform designs for Set 1 and six composition designs for Set 2. As for Set 3 test, it contains thirty-six designs that combine all the possible mixes from the typeface/letterform and composition pieces shown in Set 1 & 2 tests. Please refer to Appendix for all the thirty-six designs. Below are the typographic designs with the researcher's explanations. The researcher produced two pieces of typographic designs for each song, which aim to express the emotive qualities of the music from different perspectives. Each set will also contain one piece of design with a neutral or less apparent emotive value. This could allow a wider and more subjective interpretation from participants, and also act as neutral piece for the researcher to compare and analyze the results against the other pieces.

Typeface / Letterform designs and descriptions:

Fig. 4-1. Typeface A

This is a hand-drawn letterform created by the researcher. It intends to match with the music sequence 1 –the happy and energetic song. Hence the soft, organic curves as well as circular forms were incorporated to suggest the happy, fun and lively mood expressed by the music.

Fig. 4-2. Typeface B

This is a hand-drawn letterform by the researcher. It intends to match with music sequence 2 – the sad, lonely song. The sketchy, fragile and uncertain outline strokes reflect the weak, sorrow mood of the song. The open shapes and partially broken edges reinforce loneliness and broken-hearted feel.

Fig. 4-3. Typeface C

This typeface – *Broken Ghost*, designed by Gyom Séguin, is selected to reflect music sequence 3 – the angry, frustrated song. The boldness of the typeface expresses the power and anger of the singer, while the supporting lines and elements around the typeface enhances the feel of confusion, anxiety and the sense of frustration.

Typeface / Letterform designs and descriptions: (continued)

Fig. 4-4. Typeface D

This typeface – *Pump Demi Bold LET: 1:0*, from ITC - International Typeface Corp is selected to reflect music sequence 1 –the happy and energetic song. It also contains much circular structure, but also contains straight and geometric structures. The overall feel for the researcher still appears to be fun and light-hearted.

Fig. 4-5. Typeface E

This is a hand-drawn letterform by the researcher. It intends to match with music sequence 3 –the angry, frustrated song. As a direct contrast to letterform A, it is made out of sharp corners and uneven edges. The scratched effect is likened to a frustrated person scribbling hard on the paper to release the inner anger, pain and frustration.

Fig. 4-6. Typeface F

This typeface – *Cataneo BT*, designed by Richard Lipton and Jacqueline Sakwa is selected to reflect music sequence 2 – the sad, lonely song. The level of impact is much less that letterform B, yet compared to other designs, it conveyed a slower, lonely, and feminine look. This typeface could also function as a neutral typeface, which was open for a wider range of interpretations.

Composition designs and descriptions:

Fig. 4-7. Composition A

This composition is designed to reflect music sequence 3 –the angry, frustrated song. Through the contrasting scales of the typefaces and conflicting angles, the researcher intends to show anger, sense of loss and conflicting thoughts of mind. The large letterforms which stretch beyond the border of the design imply the sense of wanting to break out.
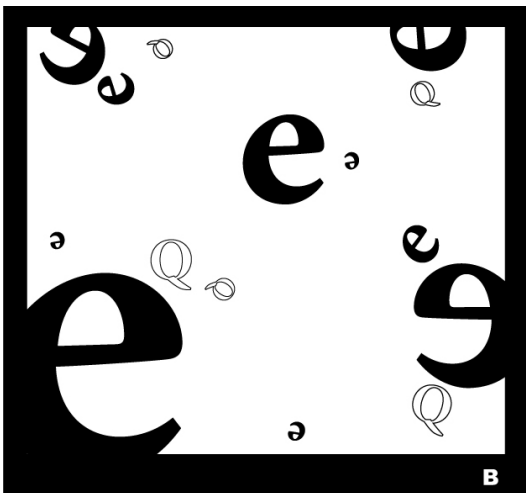
Fig. 4-8. Composition B

This composition is designed to reflect music sequence 1 –the happy and energetic song. Using the circular nature and the repetition of the alphabet 'e' and 'Q', the goal is to achieve a relaxing and light-hearted feel. From the researcher's subjective opinion, it is the less effective design compared to composition D of the composition set. Hence this composition could function as a neutral piece.
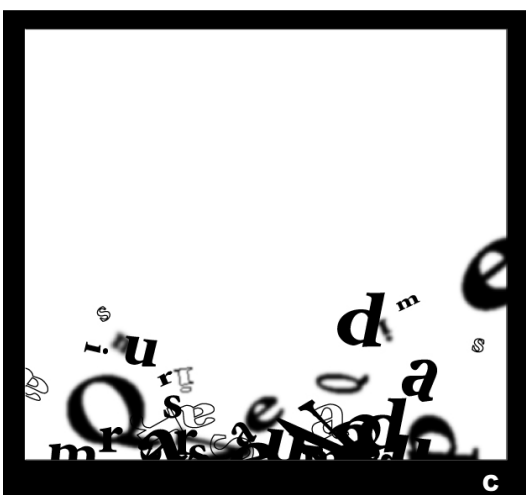
Fig. 4-9. Composition C

This composition intends to express music sequence 2 –the sad, lonely song. The main features in the design include the blurred lettered, the change of horizontal proportion of the letters (a flatter look), and the low placement of the letterforms to imply a low, heavy mood. The use of space suggests loneliness, and the lack of energy and the lack of feeling loved or belonged.

Composition designs and descriptions: (continued)
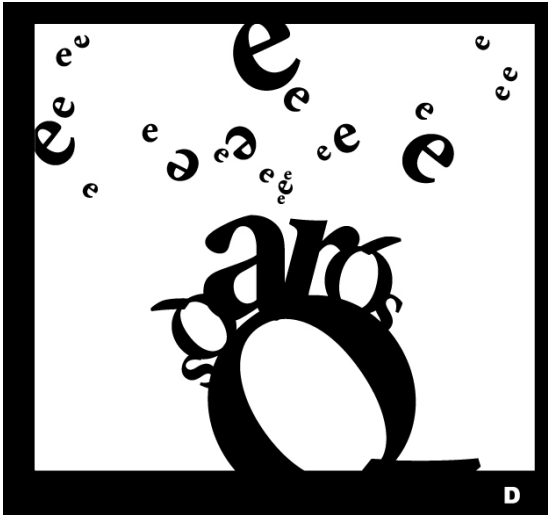
Fig. 4-10. Composition D

This composition is designed to reflect music sequence 1 – the happy and energetic song. The 'Q' group of letterforms at the bottom implies there's the happening of a festive event with a crowd of participants. The dispersing of the letter 'e' reflects the movement and rhythm of the music beat, and a lively and bubbly atmosphere.

Fig. 4-11. Composition E

This composition intends to express music sequence 2 –the sad, lonely song. The emotion is in the design is implied by the use of small letterforms, with some in outline only. The outlined letters could associate with emptiness, fragility and loneliness. The dropping down of the letters could indicate tears dropping, the disappearance and sense of loss.

Fig. 4-12. Composition F

This composition intends to express music sequence 3 –the angry, frustrated song. The researcher intends to achieve the sense of frustration and confusion by the principle of overlapping, which consists of both filled and outlined letters. There is a slight diminishing of letter sizes towards the centre of the composition, which could imply the loss of thoughts falling through a funnel of frustration and confusion.

Part II. Interviews Procedures

A total of 30 participants were involved in the exercise with both genders from the age group of 18~55. Half of the chosen participants had a background in graphic design (primarily Bachelor of Computer Graphic Design students) while the other half of the group was non-designers. The purpose of the two groups was to provide possible contrasts and comparison between typographic interpretations between designers and non-designers. 13 interviews were conducted in the undergraduate and postgraduate computer graphic design laboratories at the University of Waikato; 17 interviews were conducted at the participants' homes. The duration for each interview was approximately 20~30 minutes.

Step 1: Music listening & emotive responses

The first music sequence was played to the participants, who were instructed to pay attention to what emotions they felt the music was expressing. After they finished listening, which sometimes required repeating several times, they were asked to describe all of the feelings and emotions that they identified in the music.

Step 2: Typeface / Letterform test (Set 1)

The first set of designs was displayed to the participants in random order. The participants were asked to rank the designs in order of which best fit the music, with the first choice being the design which they considered to be the best piece that could express the emotions conveyed by the music sequence while the last piece being the least suitable expression of the musical emotions.

Step 3: Brief explanation of top and bottom choices

When the participants confirmed their final ranking, they were to provide a brief explanation for their first and last choice in their ranking, particularly on how did the two typeface pieces best or least express and relate to the emotional qualities of the music.

Step 4: Composition test (Set 2)

Still on the first music sequence, the second set of visual designs was displayed to the participants. They were again asked to rank the designs in order, with the first choice being the design which they considered to be the best piece that could express the emotions conveyed by the music sequence while the last piece being the least suitable expression of the musical emotions. A brief explanation of their first choice and last choice was again given from the participants.

Step 5: Combination of typeface + composition test (Set 3)

Step 5A – Typeface stable composition variable

The researcher displayed a set of six designs that contained the participants' *top typeface choice* from Set 1, which had been applied to the *six different compositions* seen in Set 2. The aim was to test whether compositional change could affect emotive impact.

Step 5B – Composition variable typeface stable

The other alternative for Set 3 test was the reversal of the two variables. This involved showing a set of six designs that contained the participants' *top compositional choice* from Set 2, which had been applied to the *six different typefaces* from Set 1. The aim was to test whether typeface change could alter the emotive value associated with the music.

Step 1 to Step 4 was carried out for all of the three music sequences. Step 5 was varied for the purpose of measuring different variables. Music sequence 1 undertook Step 5A, music sequence 2 undertook Step 5B. In order to obtain balanced data, for music sequence 3, half of the participants took 5A test while the other half took 5B test. There was an even mix of designers and non-designers for each of the 5A and 5B test.

IV.5. Results

Results collected from the interviews are presented in the order of the three songs. Firstly, all the emotive terms used by the participants in describing the feelings and emotions they experienced from the song are collated in a table. Some of the synonymous terms are categorized into the same groupings. A tally for the frequency of each grouping or each term is shown directly on the right column.

[Song 1]

Description of feelings & emotions from the song

Emotive responses from the song	Tally
Happy / Cheerful	22
Celebration / Party / Festive / Dance	20
Passionate	14
Summer / Tropical / South American	11
Energized	7
Fun	7
Excitement	6
Active	4
Lively	2
Positive	1
Upbeat	1
Vibrant	1
Bright	1
Dynamic	1
Bold	1
Warm	1

Table 4.1 Emotive responses from Song 1

Table 4.1 suggests that the majority of the participants found Song 1 to be a happy and cheerful song, as these two terms were the most frequent answers, with a total of 22

times. Another major category was the festive, celebrative, party or dancing feel, which was mentioned 20 times. This was followed by the sense of passion expressed by the song. In addition, a third of the participants identified the song as summery, tropical or South American style song. Hence bringing out the festive, passionate and cheerful mood as mentioned above. Other emotive responses from the song include the feel of energy, excitement, fun and liveliness.

Song 1: Set 1 Test Result – Typeface / Letterform Test

Typeface / Letterform Design	Number of respondents selecting the piece as their top choice	%
A	27	90%
D	3	10%

Table 4.2 Top choices of typefaces / letterform designs for Song 1

Only two typeface designs were apparent as participants' top choice. 90% of the participants selected Typeface A as the typeface that best reflected the emotions expressed in Song 1, while 10% of the participants selected Typeface D as the best reflection of the song.

Description of how the top choice best reflected the musical emotions

Typeface A

Participants' explanation of choosing typeface A can be summarized in four key points.

1. Round, curvy, circular features of the type form

Nine participants responded that the twirls and roundness of the typeface expressed a sense of fun, liveliness and movement. Eight participants mentioned the curvy nature of the typeface took away the sense of hardness and harshness. Five participants related the

circular characteristics of the typeface to festive, party feel, while three participants pointed out that the curviness conveyed a relaxed and easy-going mood.

2. The contrasting and varying thickness of the strokes

Five participants stated that the varying and contrasting widths of the typeface expressed energy and dynamics of the song. Four participants reflected that the strokes of the typeface displayed a sense of freedom. Two participants mentioned that the varying thickness expressed confidence and had a lively look.

3. Hand-drawn effect gives a sense of fun, freedom and cheerful feel

Three participants responded that the hand-drawn effect corresponds with the free-spirited mood of the song, while two participants said the informal look of the hand-drawn typeface created a cheerful and friendly feel.

4. The overall light-hearted feel of the typeface

Six participants reflected that the cute, fun, unserious, free-spirited character of the typeface best convey the cheerful mood of the music. Two participants described the typeface as having a light, bouncy look.

Typeface D

Two participants pointed out that the softness of the curves and its rounded nature of the typeface best matched the flow of the song. One participant explained that the boldness of the typeface created a sense of rhythm and an active feel.

Song 1: Set 2 Test Result – Composition Test

Composition Design	Number of respondents selecting the piece as their top choice	%
D	20	67%
F	6	20%
E	2	7%
A	1	3%
B	1	3%

Table 4.3 Top composition designs for Song 1

Five designs were apparent as participants' top choice. Composition D held the highest percentage of 67%, followed by design F of 20%. 7% of the participants chose design E. Designs A and B each had 3%.

Description of how the top choice best reflected the musical emotions

Composition D

Participants' explanation of Composition D can be summarized in three main areas.

1. The floating and dispersing of the "e" in the design

Four participants stated that the placement of the e's which float on the top half of the composition depicts a happy and positive feeling. Three participants mentioned about the dispersing e's conveys a sense of freedom and passion as experienced in the song. Two participants said the repetitive use of the letter "e" generated movement in the composition. One participant visualized the floating e's as the high beats of the trumpet heard in the song which expressed happiness. One participant saw the e's as if they were smiling.

2. The "Q" group of letters creating a central, anchoring focal point

Five participants explained that the "Q" group of letterforms gives a clear and bold emphasis to the composition. Three participants envisaged the group of letterforms as if they were dancing together, while one participant likened the composition to a joyful scene at a parade.

3. Overall atmosphere of the composition

Besides noticing the detail elements in the design, participants commented on the composition as a whole. Six participants reflected that the bubbly feel and the clarity in the overall composition conveyed a happy, light-hearted and positive emotion. Three participants made note of the use of white space, indicating that the spreading out of the content created a comfortable feel. Two participants said the overall design gave a clean, informal and positive affect.

Composition F

Four participants chose this design as their top option because of the sense of movement in the composition, creating liveliness, energetic and vibrant mood, and considered it to be the best one that expressed the festive mood of the music. Two participants associated the messy and unordinary look of the composition to the multi-layering of instruments and the beat of the song.

Composition E

The two participants who selected Composition E both responded that they envisioned a picture of a crowded scene. Hence the uprising lettering best described the atmosphere felt from the music.

Composition A

The participant stated that the boldness and large scales of the letterforms best depicted the passion and vividness of the song.

Composition B

The participant likened the composition as a group of friends dancing together, thus the scattered spacing expressed a sense of rhythm, energy and playfulness.

Song 1: Set 3 Test Result – Typeface / letterform stable composition variable

For Song 1, Set 3 was testing the impact of varying compositions with a fixed typeface. Hence from the top typeface choice in Set 1 test, it was applied to the six composition designs as presented in Set 2 test. The participant was to select the best combination.

Typographic Design (Typeface-Composition)	Number of respondents selecting the piece as their top choice	%
A-F	14	47%
A-D	6	20%
A-A	5	17%
D-F	2	7%
A-C	1	3%
A-B	1	3%
D-B	1	3%

Table 4.4 Top choices of 'typeface stable composition variable' designs for song 1

Table 4.4 shows the top choices of designs with fixed typeface / letterform applied to the six compositions. Under the column 'Typographic Design', the left alphabets indicate the participants' top typeface / letterform choices; the right alphabets are the composition designs. Thus each pair of alphabets indicates the combination of typeface and composition design.

Description of how the top choice best reflected the musical emotions

A-F (Typeface A in Composition F)
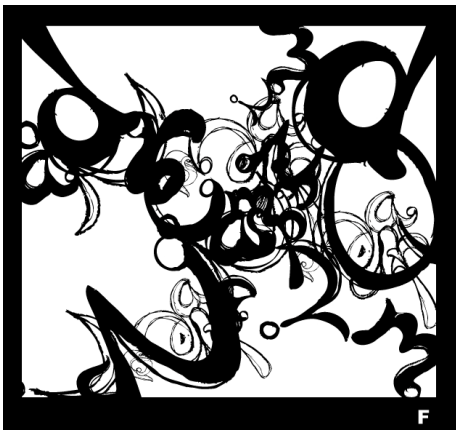
Fig. 4-13. Typeface A in Composition F

Nine participants responded that with Typeface A applied to composition F, it created a fusion of beats and a cheerful atmosphere with lots happening, which illustrated the festive feel of the song. Three participants gave similar explanation as their composition test in Set 2. Two participants stated that the application of Typeface A into the composition, the harshness was reduced and added in more emotion. Overall, they felt it gave the impression of "having a lot to it". One participant commented that the composition created a zoom-in effect. A sense of direction and energy came from four corners of the composition, reflecting the festive feel of the music.

A-D (Typeface A in Composition D)
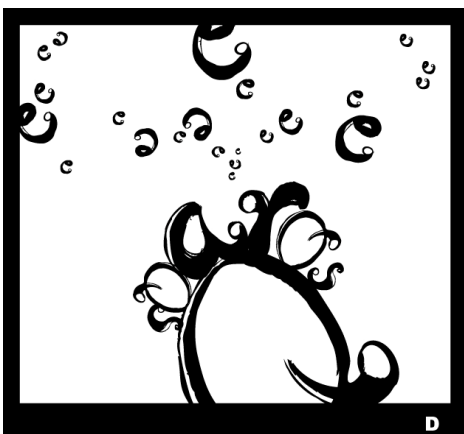
Fig. 4-14. Typeface A in Composition D

Five participants stated that their justification for this choice was the same as in Set 2 test. Three participants felt that typeface A reinforced the effect, strengthening the impact of the composition as compared with Set 2 test. They thought the letters look more relaxed and showed freedom. The circular part found at the tail of the big "Q" made the composition a lot softer and happier. Two participants reflected that this piece conveyed a feel of motion, pace and an uplifting mood. They felt typeface A was a key factor in producing this mood.

A-A (Typeface A in Composition A)

Fig. 4-15. Typeface A in Composition A

All of the five participants explained that the contrast between the bold (black) parts of the letterforms with the thin strokes and the surrounding white space created a unique pattern in the composition. This expressed the motion and dynamics of the song.

D-F (Typeface D in Composition F)

Fig. 4-16. Typeface D in Composition F

The two participants who made this choice both had the same description as explained

in their Set 2 test.

A-C (Typeface A in Composition C)

Fig. 4-17. Typeface A in Composition C

The participant visualized the floating letterforms looked happy and jumpy, like

butterflies flying over grass. But overall, the justification was similar to the main points

described in Set 2 test.

A-B (Typeface A in Composition B)

Fig. 4-18. Typeface A in Composition B

The participant who chose this combination explained that the spread-out feel of the composition can let the viewer focus on the characteristics of the letterforms, such as its fatness and roundness.

D-B (Typeface D in Composition B)
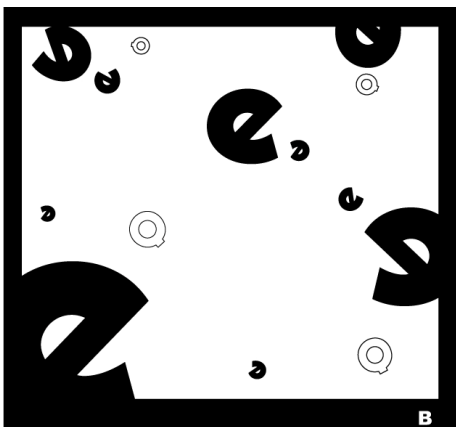
Fig. 4-19. Typeface D in Composition B

The participant explained that the key factor was the placements of individual letters. The impact was further supported by the shape and form of the letters. This participant also commented that all of the six compositions conveyed much more energy as heard from the song, compared to the standard composition samples in Set 2 test.

[Song 2]

Description of feelings & emotions from the song

Emotive responses from the song	Tally
Sad, Sorrow	19
Lonely	16
Soft / Delicate / Placid	8
Emotional	5
Peaceful / Calm	5
a bit sad (not very sad)	4
Despair	3
Hopeless	3
Depressing	3
Heart broken	3
Hollow (empty room), sense of loss	3
Sense of pleading (longing)	2
Dreamy	1
Wistful	1
Tired	1
Boring	1

Table 4.5 Emotive responses from Song 2

From Table 4.5, the most evident emotions expressed by Song 2 were sadness and sorrow, with a total of 19 times. Another four participants made a note that the song depicted sadness, but only on a minor level. In other words, they felt the song was "just a bit sad", not to the level of total grief or sorrow. Loneliness was the second prevalent emotion identified by the participants, with a total of 16 times. The next group of emotional terms used to describe the song included soft, delicate and placid, as mentioned eight times. Other supporting terms answered were the sense of despair, hopelessness, depression, hear-broken and hollowness.

Song 2: Set 1 Test Result – Typeface / Letterform Test

Typeface / Letterform Design	Number of respondents selecting the piece as their top choice	%
B	20	67%
F	5	17%
C	4	13%
E	1	3%

Table 4.6 Top choices of typefaces / letterform designs for Song 2

Four typeface designs were found from participants' top choice. 67% of the participants considered Typeface B as the best typeface to match the emotional expression of the music. 17% of the participants selected design F, 13% selected design C, and 3% chose Typeface E.

Description of how the top choice best reflected the musical emotions

Typeface B

16 participants described that the sketchy and uncertain nature of the lines created a frail and fainting look, which could be closely related to the sadness, heart-broke feel of the song. Seven participants observed the broken edges and the emptiness of the letterform, which conveyed the lonely, sorrow mood of the music.

Typeface F

All five participants thought the formal and ordinary look of the typeface best matched the sorrow and the slow tempo of the music, and also commented that the other five typeface designs all expressed stronger levels of characteristics that seemed to have exceeded the emotional level of the music.

Typeface C

Two participants responded that the thin scribbles around the letterforms reflected the messy, uneasy emotion in the music, whereas the thickness of the letterforms could be associated to the dark, somber mood of the song. One participant commented that the decorative details around the typeface echoed to the feminine quality of the voice in the Song. 1 participant thought the unstable look of the typeface best represented the emotive quality of the music.

Typeface E

The scratchiness of the letterforms reminded the participant of cobwebs. The lack of solidness of the typeface expressed the sadness and loneliness of the song.

Song 2: Set 2 Test Result – Composition Test

Composition Design	Number of respondents selecting the piece as their top choice	%
C	22	74%
E	7	23%
B	1	3%

Table 4.7 Top composition designs for Song 2

Three designs came through as participants' top choice, with Composition C as the highest percentage of 74%, followed by Composition E at20%. 3% of the participants chose Composition B.

Description of how the top choice best reflected the musical emotions

Composition C

The 12 participants who selected this design reflected that the blurred letters conveyed a

sense of sadness, eeriness, uncertainty and fragility. Nine participants pointed out the large proportion of the white space in the composition, which best conveyed the loneliness and emptiness of the singer in the music. Six participants felt the sense of dispersing and drifting away of the letterforms into the space expressed a soft feel compared to the other five pieces, therefore it best described the soft and delicate mood of the song. Five participants made the note that the main content of the composition is clustered at the bottom of the design, which signaled a low, down and heavy mood. Three participants perceived the design as letter falling down from the top to the bottom, entailing a fallen, down emotion. One participant related the outlined letter to the feel of emptiness. One participant answered that the mixture of clear and blurred letters illustrated the mixture of sadness and confusion, while another participant felt the composition best represented the voice of the singer as if she was falling apart or vanishing.

Composition E

Six participants through the composition implied tear dropping, therefore matching the despair emotion of the songs. Two participants interpreted the design as a jumble of ideas, thoughts and feelings, creating a sense of confusion. One participant thought there was a sense of slow motion and quietness to the overall feel. One participant highlighted the diminishing size of letters towards the bottom of the design, commenting that the small letter particularly expressed the feel of insignificance and weakness.

Composition B

The only participant who chose this design thought the even spread of spacing best

expressed the calmness of the song.

Song 2: Set 3 Test Result – Composition stable typeface / letterform variable

For Song 2, Set 3 was testing the impact of varying typefaces applied to fixed compositions. Hence from the top composition choice in Set 2 test, six different typefaces were applied to chosen composition design. The participant was to select the best combination.

Typographic Design (Composition-Typeface)	Number of respondents selecting the piece as their top choice	%
C-A	17	57%
E-A	7	23%
C-D	4	14%
C-B	1	3%
B-D	1	3%

Table 4.8 Top choices of 'composition stable typeface variable' designs for Song 2

Table 4.8 shows the top choices of designs with fixed composition applied to the six typeface/ letterform designs. Under the column 'Typographic Design', the left alphabets indicate the participants' top composition choices; the right alphabets are the typeface / letterform designs. Thus each pair of alphabets indicates the combination of typeface and composition design.

Description of how the top choice best reflected the musical emotions

C-A (Composition C in Typeface A)
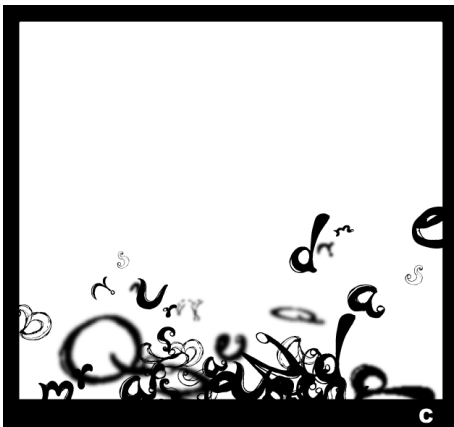
Fig. 4-20. Composition C in Typeface A

From the 22 participants who chose Composition C as their top choice in Set 2 test, 14 of them emphasized the weak and fragile look of the typeface, especially the outlining effect reinforcing the sadness and the feel of vanity. Two participants thought the combination of both aspects was an important factor to achieve the effect. They stated that the hollow lettering reflected the phonetic attribute, as the song only as a single instruments and one vocal; and the use of white space in the composition enhanced the overall mood of the song. One participant responded that typeface was the more effective component in the design, as seen by the open shape of the typeface.

E-A (Composition E in Typeface A)
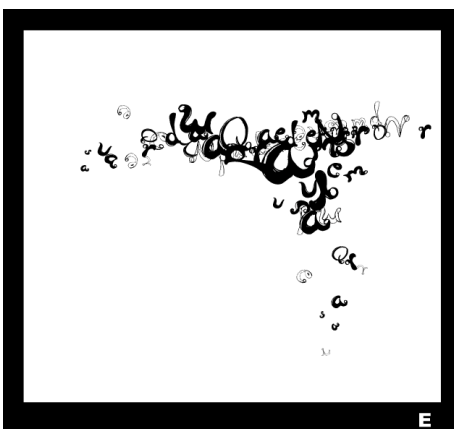
Fig. 4-21. Composition E in Typeface A

From the seven participants who chose Composition E as their top choice in Set 2, six

of them considered the combination of typeface and composition design made the piece stand out from the rest of the designs. These participants decided it was the least energetic piece of design, the hollow typeface echoed the sadness and quietness of the Song. 3 participants indicated that the typeface gave a strong personal touch to the overall design, reflecting the outpour of personal emotions in the song. A participant commented on the tear-drop idea of the composition. This was further supported by the degraded, unsure nature of the typeface, which emphasized the sense of despair.

C-D (Composition C in Typeface D)
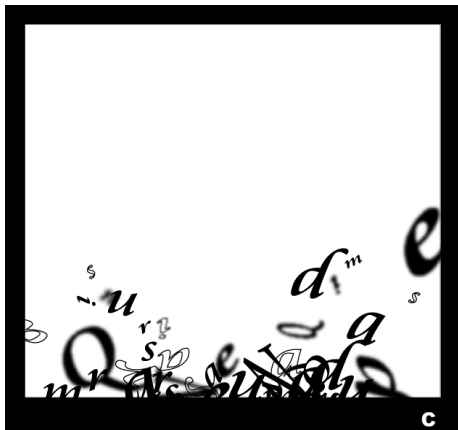
Fig. 4-22. Composition C in Typeface D

Of the 22 participants who chose Composition C as the top cho E ice in Set 2 test, four of the participants responded that the serif font was the feature that best expressed the delicate feel of the music.

C-B (Composition C in Typeface B)
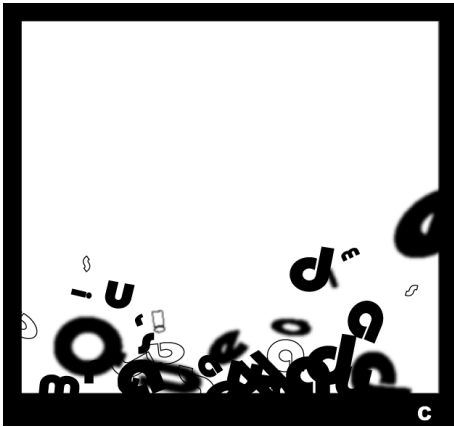
Fig. 4-23. Composition C in Typeface B

The participant who selected this combination firstly stated that the song only expressed a very low level of sadness. Hence the roundness of Typeface B conveyed the slight liveliness of the song. An extra comment was that the hollowness in Typeface A felt too suicidal, yet the song did not convey such an extreme emotion.

B-D (Composition B in Typeface D)
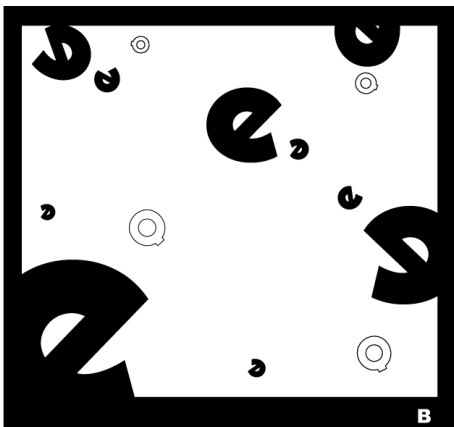
Fig. 4-24. Composition B in Typeface D

The participant thought this combination best portrayed the comfortable, simple and light feel of the song.

[Song 3]

Description of feelings & emotions from the song

Emotive responses from the song	Tally
Anger, angst	24
Frustration, agitation	11
Lots of energy, wanting to break free, release of emotions	9
confusion	8
dark	6
hatred	6
Powerful / chaotic	5
aggressive	4
pressured	3
Hard / strong	3
rebellious	2
Suicidal	1
Less human (robotic)	1
pain	1
revenge	1
resentful	1
unhappy	1

Table 4.9 Emotive responses from Song 3

According to Table 4.9, Anger or angst was the prominent emotion experienced from the song, as it was mentioned 24 times. Subsequently, frustration or agitation was brought up 11 times. Nine participants felt the song was an expression of one wanting to break free, or to release much energy and emotions. Following closely is the sense of confusion, as answered by eight participants. Hatred and darkness were mentioned 6 times each. A smaller number of participants used the terms chaotic, aggressive, pressured, and rebellious to describe how they felt about the song. Other minor responses included the suicidal, painful, revengeful, unhappy and robotic.

Song 3: Set 1 Test Result – Typeface / Letterform Test

Typeface / Letterform Design	Number of respondents selecting the piece as their top choice	%
E	22	73%
C	8	27%

Table 4.10 Top choices of typefaces / letterform designs for Song 3

Table 4.10 shows that only two typeface designs could be identified from participants' top choice. 73% of the participants selected Typeface E as the typeface that best reflected the emotions expressed in Song 1, while 27% of the participants selected Typeface C as the best reflection of the song.

Description of how the top choice best reflected the musical emotions

Typeface E

As mentioned by 18 participants, the roughness of the scratched strokes showed anger, the release of anger, anxiety and frustration in heart. Five participants emphasized that the sharpness and hardness of the edges, especially the spikes, depicted a dangerous feel. Four participants thought this typeface expressed power, energy, and sensitivity of adolescence. There was a clear sense of rebellion. One participant felt that the texture of the scratched lines had a natural human touch, as if one was making marks on the paper as an emotional release.

Typeface C

Five participants indicated that it was a heavy and dark typeface, which echoed the dark mood of the song. Four participants commented on the overall look and feel of the typeface as having an unhappy, abusive and hectic look. These attributes best conveyed the agitation expressed by the music. Three participants said the typeface had a sense of

verging on anger, as well as an explosive look. Two participants felt the typeface showed the urge of wanting to break out. One comment on the typeface was the sense of degradation shown through the multi-layering and messiness of the typeface, implying tension and frustration as heard from the song. One participant replied that boldness of the letters reflected the heaviness of the singer's voice, where as the decorative lines around the typeface reflected to the background music. Another participant explained that the decorative details (the lines and blotches) around the typeface suggested an informal and street-like style, and felt as if it had been in a fight. One participant thought the typeface contained a robotic or inhumane feel.

Song 3: Set 2 Test Result – Composition Test

Composition Design	Number of respondents selecting the piece as their top choice	%
F	19	63%
A	11	37%

Table 4.11 Top composition designs for Song 3

Two designs came through as participants' top choice. 63% of the participant chose Composition F while 37% chose Composition A.

Description of how the top choice best reflected the musical emotions

Composition F

From the 19 participants who selected this composition, nine described that the design showed confusion or a packed mind. The contrast between the bold and outlined letterings could be assimilated to a heart full of anxiety and oppression. Eight participants noted that the cluttered group of letterforms showed stress, anger, chaos and an erratic feel. It was also as if one wanted to break free or suffering from a

headache. Two participants pointed out the use of diagonal structure and the contrasting line qualities, which implied movements in the composition. They could feel a sense of 'shouting out.'

Composition A

The 11 participants who selected this composition design gave similar feedbacks. Firstly the contrasting scales of the letters with the variety of angles expressed conflict, extremeness and messiness through the loss of hierarchy. Secondly the large sizes of letters felt very active and loud, as thought they were shouting in your face with anger and frustration. The overall effect conveyed much strength and also rebellion, ready to break out of the boundary. One participant commented that the lack of breathing space correlated to the loud volume and anger in of the music.

Song 3: Set 3 Test Result

In order to obtain equal results, Set 3 test was divided into two groups for Song 3. Each group contained 15 members. Group 1 repeated the same Set 3 test as seen in Song 1 i.e. typeface stable, composition variable test; Group 2 repeated the same Set 3 test conducted in Song 2 i.e. composition stable, typeface variable test. The results for each group are presented below accordingly.

Group 1 result – typeface/ letterform stable, composition variable

Typographic Design (Typeface-Composition)	Number of respondents selecting the piece as their top choice	%
E-A	6	40%
C-F	4	27%
E-F	3	20%
C-A	2	13%

Table 4.12 Top choices of 'typeface stable composition variable' designs for song 3

Table 4.12 shows the top choices of designs with fixed typeface / letterform applied to the six compositions. Under the column 'Typographic Design', the left alphabets indicate the participants' top typeface / letterform choices; the right alphabets are the composition designs. Thus each pair of alphabets indicates the combination of typeface and composition design. The result indicated that six people (40%) thought Typeface E combined with Composition A was the strongest combination to match the emotive qualities of music, while three people (20%) thought Typeface E in Composition F was the best choice. Four participants (27%) selected Typeface C combined with Composition F, while two participants (13%) chose Typeface C combined with Composition A as their first choice.

Description of how the top choice best reflected the musical emotions

E-A (Typeface E in Composition A)
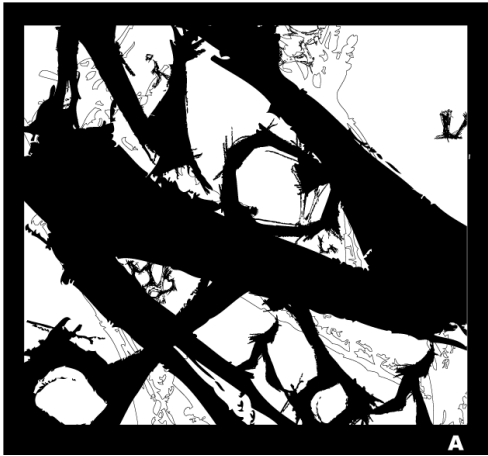
Fig. 4-25. Typeface E in Composition A

Four participants simply replied that this set of combination best portrayed anger and power; the other two participant explained that the design had a strong sense of visual depth and was the one that stood out from the whole set.

C-F (Typeface C in Composition F)

Fig. 4-26. Typeface C in Composition F

From the four respondents, three of them considered their explanation to be quite similar with their Set 2 (composition) test, but pointed out the added boldness and paint splatter effect enhanced the overall impact. One participant felt this combination had the most chaotic and messy feel that expressed the atmosphere of rock concerts.

E-F (Typeface E in Composition F)

Fig. 4-27. Typeface E in Composition F

All four participants implied that the combination of both aspects produced the

strongest impact. The sharp spikes in the typeface intensified the vigorous feel, while the

overall messy look conveyed the idea of being lost in thoughts.

C-A (Typeface C in Composition A)

Fig. 4-28. Typeface C in Composition A

Two of the responses from this design focused on the use of scaling in the composition,

which reinforced the sense of frustration, and appeared to have a stronger verge to

anger compared to Set 2 (composition) test.

Group 2 result - composition stable, typeface / letterform variable

Typographic Design (Composition-Typeface)	Number of respondents selecting the piece as their top choice	%
F-F	5	33%
A-F	4	27%
F-C	3	20%
A-C	2	13%
A-A	1	7%

Table 4.13 Top choices of 'composition stable typeface/letterform variable' designs for song 3

Table 4.13 outlines the percentages of each composition design found in Typefaces F, C and A. Under the column 'Typographic Design', the left alphabets the participants' top composition choices; the right alphabets are the typeface designs. Thus each pair of alphabets indicates the combination of typeface and composition design. Note that there were minor alterations in the alphabet system for Set 3 tests. Therefore please refer to the image relevant to each particular description. The results indicated that five people (33%) considered Composition F combined with Typeface F to be the most effective combination to match the emotive qualities of music, while four people (27%) thought Composition A in Typeface A was the best choice. Three participants (27%) selected Composition F combined with Typeface C; two participants (13%) chose Composition A combined with Typeface C; and one person (7%) chose the combination of Composition A with Typeface A.

Description of how the top choice best reflected the musical emotions

F-F (Composition F in Typeface F)

 Fig. 4-29. Composition F in Typeface F

Three participants responded that the textured look of the overall composition created much energy, corresponding to the roughness of the music. Anger was conveyed through the sharpness of the typeface. One participant thought the impact was achieved through the joined impact of the typeface choice and compositional layout. It even suggested a sense of murder.

A-F (Composition A in Typeface F)
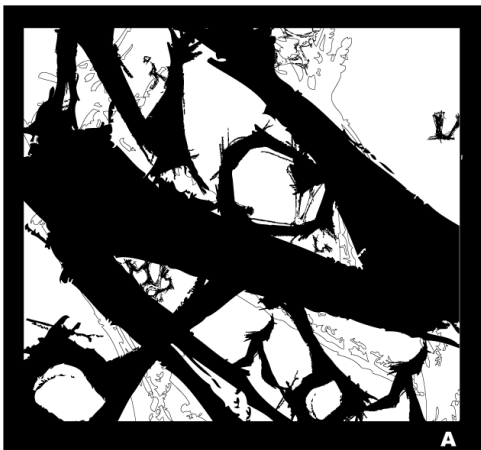
 Fig. 4-30. Composition A in Typeface F

There were four comments that associated the jagged line qualities and prickles to the music quality. Two participants felt that the bloody feel and angst was further brought forth by the combination of both typographic aspects. The design reminded them of

blood splatters on a wall.

F-C (Composition F in Typeface C)

Fig. 4-31. Composition F in Typeface C

The three participants who picked this design described that the boldness of the strokes
and the supporting lines around the letterform depicted the feel of complication and the
desire to break through.

A-C (Composition A in Typeface C)

Fig. 4-32. Composition A in Typeface C

Both participants who chose this design answered that it contained most definite and
rigid edges. There was a strong sense of movement, and also conveyed a sense of
explosion.

A-A (Composition A in Typeface A)

Fig. 4-33. Composition A in Typeface A

The participant suggested the extreme illegibility of the piece best portrayed the confusion expressed by the music

IV.6. Summary of Findings

The goal of this chapter was to explore how emotive qualities of music could be envisaged through static typographic letterforms, typographic compositions and the combination of both aspects. The results can be summarized under two scopes of findings. The first finding aims to discuss which aspect of typography – typeface/letterforms or typographic compositions – had a stronger impact for emotive association. The second scope of finding intends to discuss how participants connected emotive qualities of music to typographic designs. From their supporting descriptions of their top choices in the test, these are summarized under five major points. Lastly the researcher will compare the findings from designers and non-designers.

Discussion of findings 1:

To determine whether an aspect of typography (typeface/letterform or composition) was more significant in emotive associations, or the combination of both aspects was

equally necessary to achieve the best emotive effect, verbal explanations from Set 3 tests were investigated. The reason for using Set 3 test responses is because the designs shown in Set 3 test combined both aspects of typography. Hence the descriptive responses brought forth would be an indication to determine which aspect of typography had a stronger role in participants' decision making. The following table presents the number of comments made on each aspect of typography, and comments on the combination of both aspects for each song, followed by the total count from all three songs:

	Song 1	Song 2	Song 3	*Total*
Comments on typeface and letterform	16	23	11	*50*
Comments on typographic composition	15	0	5	*20*
Comments on the importance of combining both aspects	6	10	18	*34*

Table 4.14 The number of comments on each aspect of typography in all 3 songs

Results in Song 1 showed a close balance of importance for each of the typographic aspect, yet the combination of both aspects did not appear to further enhance the emotive impact. For Song 2, it was an extreme contrast of figures for the two aspects of typography, with 23 comments focusing on typeface or letterform characteristics and zero comments on typographic composition. ten participants considered the combination of both aspects achieved a better emotive effect. For Song 3, it appeared that the combination of both typographic aspects exceeded the impact of having only typographic aspect, with a total of 18 comments. 11 responses centred on letterform attributes, while five considered compositional aspect to stand out more.

Combining the counts from all three songs, there were 50 comments that focused on typeface or letterform details, 20 comments on compositional features, and 34

comments suggested the mingling of both typographic aspects achieved the best emotive impact.

Discussion of findings 2:

The following table presents the quantitative results for the five key issues that contribute to participants' emotive connection between the music sequences and the typographic designs. The figures represent the total count of comments from all three tests of each song, followed by the total count from all three songs:

	Song 1	Song 2	Song 3	*Total*
1. Association to musical / acoustic properties	17	2	3	*22*
2. Connotation through personal memory and imagination	16	8	5	*29*
3. Association of typographic attributes and design principles to emotive values	59	100	67	*226*
4. Direct use of emotive terms and adjectives	19	5	20	*44*
5. Association to human voice and human touch	5	5	16	*26*

Table 4.15 The number of comments for the five key issues that contribute to participants' emotive connection between the music sequences and the typographic designs.

1. Association to musical / acoustic properties

The acoustic properties of music refer to properties and interaction of sound. Examples include pitch, tempo, melody, rhythm and harmony. For some participants, these acoustic properties were one of the initial sources to draw emotional connections. For example, "the floating letterforms seem to visualize the high beats of the trumpets in the song, and it expressed happiness" and "the contrast between the thic9k and thin strokes creates a unique pattern in the composition, and expressed the movement and dynamics

of the music."

2. Connotation through personal memory and imagination

Connotative associations could be identified during both processes – firstly when participants described the emotive expressions of the music, and secondly when relating typographic designs to the music sequences. For example 20 participants felt the beat and atmosphere of Song 1 strongly expressed celebrative, party and festive mood. More specifically, 11 participants envisioned scenes at typical tropical or South American beaches.

After identifying these emotive qualities from the music, they then attached the most relevant typographic characteristics such as "the circular forms in the typeface best express the happy party mood in the music". When observing typographic designs, some participants also used certain imagination or personal memory and events to aid their interpretation and matching processes. For instance in Song 1, one person saw the chosen typographic composition as a joyful scene at a parade, while three people felt the letters were happily dancing together. For Song 2, a participant pointed out that "the scratchiness of Typeface E reminded me of cobwebs, which gives me a feel of emptiness and loneliness." Six participants thought Composition E implied tear dropping, hence it was the most appropriate design to reflect the sadness expressed in the song.

3. Association of typographic attributes and design principles to emotive values

This category contained the largest number of responses. This included all the responses that described the details observed in letterforms, typographic compositions, as well as

the use of design principles, followed by how they connected with the emotions expressed by the music.

In the typeface test, participants frequently commented on the line quality of the strokes, the boldness or hollowness, and various shapes and angles found in the letterforms. For example, nine participants suggested that the twirls, roundness in the letterform expressed fun, liveliness and movement in Song 1. Seven people in Song 2 pointed out the emptiness and broken edges of the letterform conveyed the lonely and sad mood of the music. 18 people in Song 3 commented on the roughness of the scratched strokes depicted anger, anxiety and frustration. In addition, the clarity of the letterform also became a determining factor. This was seen from Composition C for the composition test, where the researcher applied motion blur to several letters. As a result, 13 participants pointed out that these blurred letters were the strongest feature to express the sense of sadness, eeriness, uncertainty, fragility and confusion.

In the composition test, the responses showed that placement of the typographic elements were an influential factor for their decision making. For example, four people commented that in Composition D for Song 1, "the group of the character "e" which floats on the top of the composition implies a happy, positive feeling." Whereas in Composition C for Song 2 test, "the main bulk of letterform is clustered at the bottom, which suggests a low, down and heavy mood".

Furthermore, principles of designs were often mentioned in participants' explanation of their top choices, especially in the composition test. Repetition, contrast, scale, emphasis, movement and the use of space were the major principles found from the descriptions.

In Composition D of Song 1, five people indicated that the "Q" group letterforms created clear and bold emphasis for the design; the repetitive use of "e" created much movement, reflecting the energy and movement of the music. In Song 2, the use of white space in Composition C was a key principle for conveying emotion, as nine responded that "the sense of space reflects the loneliness and emptiness of the singer." In Song 3, five respondents said that frustration was implied by contrasting scales of letterforms, along with the variety of angles in which the letterforms were laid out.

4. Direct use of emotive terms and adjectives

The results also suggested that some participants drew direct emotive connection between the typographic designs and music. These feedbacks used emotive terms and adjectives directly by perceiving the typographic designs as a whole, without emphasizing specific details in the letterforms or compositions.

For example, in Composition D for Song 1, eight people responded that "the overall composition looks clean, positive and informal. The bubbly feel and clarity of the design gives a happy, lively and light-hearted feel." This direct emotive association was particularly evident in composition test of Song 3, as five participants referred to Typeface C as "a heavy and dark typeface", four people commented "the unhappy, abusive, hectic look expresses agitation", while four people thought Typeface E expressed had a rebellious look that conveyed power and energy.

5. Association to human voice and human touch

The three music sequences selected in this experiment all contained at least one dominant vocal part. The voice quality and volume of the singer became another

medium for participants to elicit emotive relationships between the typographic designs and the music. Hand-drawn letterforms were also seen by some participants as the natural expression of human touch.

In Song 2, a participant who selected Typeface C as the top choice reflected that the decorative details of the typeface correlated to the feminine quality of the voice. Three participants responded that Typeface B expressed a strong personal touch, thus it best reflected the outpour of personal emotions in the song. In Composition C of the same song, another participant thought the composition best represented the voice of the singer, which sounded like she was vanishing or falling apart.

The feedback from Song 3 was largely associated to the volume of the singer's voice. Four people suggested that the large letter sizes and the messy look in composition A expressed the loudness and anger of the singer. Three respondents firstly identified the anger expressed in the song then felt that Composition A and F were "shouting in your face". In these instances, the emotional content of the song was directly linked to the human organ – the voice. Depending on the volume of the voice, participants distinguished the emotional release, which found typographic attributes that matched these vocal qualities accordingly.

In addition to human voices, hand-drawn letterforms were also another evidence of human expression and human touch. In typeface A of Song 1, five participants gave the feedback that "the hand-drawn effect creates a cheerful and friendly look, and it feels very free-spirited". In Song 3, 18 participants suggested the roughness of the scratched strokes in Typeface E looked like someone releasing anger, anxiety and frustration by

scratching marks on a wall or scribbling rough pencil marks on paper. One participant implied that these scratched lines expressed a "natural human touch" and were the most powerful marks to depict an emotional release.

Result comparison from designers and non-designers:

Half of the participants involved in this exercise had a background in graphic design, while the other half of the group was non-designers. The researcher assumed that there would be contrasting outcomes in the typographic interpretation; however this was not apparent in the result.

The quantitative results proved little difference between non-designers and those with graphic design backgrounds. For instance, in Set 1 test of Song 1, there were 14 participants with design background that selected Typeface A as their top choice, and 13 non-designers also selected Typeface A as their top choice. Similarly, in Set 1 test of Song 3, there were 13 participants with design background who chose Typeface E, and nine participants without design background also selected Typeface E.

The only noticeable difference between the two groups of participants is their verbal description of the typographic designs. For those with graphic design background, they are more likely to use design terminologies and identify the design principles, whereas non-designers use general terminologies to describe what they observed from the typographic designs. For example, in describing Composition D of Song 1, a non-designer's description was "the cluster of letters in the middle feel like they're dancing together"; and the description from a designer was "the group of letters gives a clear, bold emphasis to the design".

Overall, the findings indicate that there are no major contrasting differences in how designers and non-designers associate typographic designs to music emotions. Both groups of respondents are able to perceive the design with their subjective knowledge and experiences.

IV. 7. Conclusion

From the findings of the pilot study in Chapter 3 of this thesis, further modifications were made to the methodology in this chapter to specifically explore how the two aspects of typography - 1) typeface / letterform design and 2) typographic compositions, and the combination of both aspects, could reflect the emotional qualities expressed by music.

The results from the experiments and interviews conducted in this chapter provided two key scopes of findings. Firstly, it gave an indication on which aspect of typography had more influential impact to elicit emotive connection, or whether the combination of both aspects could obtain the greatest impact. Secondly, the verbal explanations of the top choices from the participants offered insights to the process of emotive connection between were formed between the two medium – music and static typography.

The researcher hypothesized that the combination of both aspects of typography would best express emotive values. Yet the experiment indicated that the characteristics and detailed element in the typefaces and letterforms were the most prevailing features observed by the participants for emotive connotations. This was followed by the combination of both typographic aspects, which could relate better to the emotions expressed by music, or even generate a new or stronger emotive connotation. An

example was shown in Song 2, where one participant responded that Typeface B alone conveyed sadness, but when it was applied to Composition C, it portrayed a suicidal feel. The compositional aspect of typography appeared to be the least influential factor for emotive association between music and typography, as the total number of comments on this aspect was less than half of the comments focused on typefaces and letterforms. However its function should not be neglected, as it still plays an important role in the combination of both typographic aspects. This could imply that the impact of typographic compositions is better enhanced when accompanied by relevant typefaces and letterforms.

The second scope of finding outlines five major points that influenced participants' association between emotive qualities expressed by music and emotive qualities conveyed through typographic attributes. Based on the number of responses totaled in each of the five categories, the order from the most influential factor to the least influential factor is as follows: 1) Association of typographic attributes and design principles to emotive values, 2) Direct use of emotive terms and adjectives, 3) Connotation through personal memory and imagination, 4) Association to human voice and human touch, and 5) Association to musical / acoustic properties.

As presumed by the research, that the distinctive features of different typefaces, letterforms and typographic compositions could associate and express different emotive values of music, the large number of comments on this aspect proved its significance in participants' decision making. From the typeface/letterform exercises, details in the anatomy of type form were observed, such as stroke quality, boldness or hollowness, shapes and angles of the letterforms. These attributes were then associated to various

emotional expressions. For example, hollowness and broken edges implied loneliness and sorrow; smooth and round curves portrayed fun and happiness; sharp corners and rough texture reflected anger and frustration.

From the compositional aspect, the positioning of the typographic content in the design was the key factor. When the contents were placed around the top of the piece, they were associated with more positive emotive connotations; whereas when contents were placed on the lower part of the design, negative connotations such as feeling low and heavy were expressed.

Principles of design were also brought up to support the descriptions and were related to different emotive values. The most common ones included repetition, contrast, scale, emphasis, movement and the use of space. These principles were particularly applicable for the compositional aspect of typography. For example, a frequent feedback for song 2 was that the use of white space best implied the feeling of loneliness.

The second category of feedback was a direct association between emotive values expressed by music and typographic designs. This category differs to the previous one as participants did not identify specific details in the letterforms or compositions, but assigned emotive words or adjectives to express how they perceived the design as a whole. For example, "this typeface has a happy and bubbly feel" or "the unhappy, abusive, hectic look expresses agitation of the singer".

The third category of responses contained personal memory and imagination as channels for emotive connotations. This was apparent when participants were listening

to the music as well as when observing and interpreting the typographic designs. The emotions felt through these personal events, memories and subjective imaginations determined their emotive associations between the typographic designs and the music.

The fourth category of findings was the element of human touch and emotional expression through the human voice. This aspect was a key difference to the selection of music sequences in the pilot study project, where the sequences were of pure instrumental nature. The experiment in this chapter showed the significance in the human voice quality and volume as the most direct and honest expression of emotional release. The various voice qualities became the medium to associate typographic attributes to express the emotions expressed by the vocal. Besides human voice, hand-drawn letterform was another approach for emotive expressions. The line quality, texture, lightness and darkness of the strokes on the paper were natural marks to indicate various levels of emotional release.

The fifth category of responses was the association of typographic characteristics to musical or acoustic properties of music. The findings in this chapter showed much similarity to those found in the pilot study discussed in the previous chapter. Phonetic properties music and interaction sounds were often the foremost components identified by participants. The beats, rhythm, tempo, melody etc were visualized in the typographic designs, which sometimes led to further emotive connotations. In fact these phonetic properties were often the starting point for the emotive interpretation for both the music and the typographic designs. From the researcher's observation in these experiments, some participants were conscious of this step, while the majority of the group was less aware of this process, yet their body language such as nodding their heads or tapping

fingers. This showed that musical properties were still evident in the initial stage emotive interpretation.

V. Conclusion

The objective of this research was to explore the expression and association of emotive qualities through the pure form of static typography. The core findings of this research indicated that emotive values and emotional connections could be achieved through the pure form and individual characteristics of typefaces and letterforms, the arrangement of letterforms into typographic compositions, and also through combining relatable attributes from both aspects of typography to enhance the emotive expression.

Using music as the medium to elicit emotions, the outcome of this research also identified five issues and factors that influenced the process of connecting emotive qualities between music and typography. These issues consist of 1) associating emotive values to typographic attributes and principle of design, 2) direct use of emotive terms and adjectives, 3) emotive connotation through personal memory and imagination, 4) association to human voice and human touch, and 5) association to musical and acoustic properties.

Chapter 2 of this thesis encompassed the review of literature from the three correlating subjects of this research – emotions, typography and music. As shown from the psychological perspective in section II.2.1 of this thesis, our emotions play a critical role in our daily living, affecting the cognitive process of decision making. Holding to this understanding, designers should not neglect the impact of emotional attachments in the field of design. The subjective connection to the subconscious mind could deeply affect the impression and interpretation of the design by its potential audience.

Following the perception of emotions, the visual attributes and visual logic created by pure typographic forms were explored in section II.4 of this thesis. Disregarding the semantic function of typography in linguistic terms, the arbitrariness of typographic forms and experimentation in typographic compositions brought in new perspectives of visual communication. Typefaces can embody a variety of characteristics; the organic nature of hand-lettering can convey human dimensions such as personalities, passion and emotions. As experimented by Futurist and Dadaists, the composition of letterforms incorporating the principles of design and layout can generate phonetic qualities on the static page, which not only broadens the dimensions of visual communication, but also creates a fusion between media and sense.

As outlined in section II.5.1 of Chapter 2 of this thesis, studies (Schwartz, 1985; Goldman, 1995; Huss, 2008) have shown that music is able to evoke varying levels of emotive associations. The emotive experience could result directly from the phonetic properties of music, ranging from the change of keys, melody, rhythm etc, or alternatively, music could draw out personal memories or imaginations, which act as a secondary source for emotive connections.

Analogies between the phonetic properties of music and the aesthetic elements of typography were also found by Frank Armstrong (as cited in Heller, 2004). Loudness of music could be likened to the weight of a glyph; the duration of a musical tone could be implied by the length of a glyph; musical rhythm could correlate to the visual rhythm created by typographic elements such as punctuation marks and contrasting stroke widths. As Bringhurst wrote, "Typography at best is a slow performing art, worthy the same informed appreciation that we sometimes give to musical performances, and

capable of giving nourishment and pleasure in return…like music, it can be used to manipulate behaviour and emotions" (Bringhurst, 1999, p.19-20).

To realize how musical emotions could be reflected through static typography, a formative pilot project was performed as the initial part of the original research methodology as presented in Chapter 3 of this thesis. In this project, it was found that the phonetic attributes of music was the foremost aspect for participants to relate the music to the typographic piece. Participants in this experiment were able to match the phonetic details heard from the music to various detailed elements in the typographic piece, particularly to the dots, lines, punctuations or supporting shapes. Although this matching process was made, it was seldom that the emotive connections were made in this process. The second point found in the project was the use of adjectives or personification to describe the hand-letterings. The majority of the feedback was descriptive characteristics of the letterforms. Further guidance was required for participants to reflect emotive values of the letterforms. The third insight gained from this project was regarding the semantic value of the text. When this aspect is present, the semantic meaning became the basis for emotive connotation. The meaning of the text was interpreted by the participants first before further observation was made to the visual attributes of the letterforms.

Chapter 4 of this thesis presents the second part of the original research, with adjustments made to the research methodology based on issues that arose in the pilot study. The key amendments included reselection of music sequences, dividing the designs into typeface/letterforms tests and compositional tests, omitting all semantic value of the text, and employing ranking method instead of matching method. Findings

from this gave much clearer indication of how emotive qualities could be conveyed through distinct aspects of static typography.

It was shown that the visual attributes, detailed elements, the overall characteristics and impressions observed by the participants in typefaces/letterforms were the dominant components observed for emotive attachment. The compositional aspect of static typography obtained less impact for emotive associations when compared to the typeface/letterform aspect. When both aspects of typography are combined together in a single piece of typographic design, the emotive impact is better enhanced as opposed to having only the compositional aspect; yet it did not appear to be more effective than the individual aspect of typeface/letterforms.

The factors and process that affected participants' decision making could be categorized into five main points. These are outlined in the following paragraphs.

Firstly, emotive connections were made through detailed attributes found in typefaces/letterforms and the application of design principles. The unique anatomy of typefaces/letterforms ranging from the stroke weight, stroke quality, shapes and corners were being identified and related to different emotive values. Similarly, the application of design principles such as the use of focal point or white space, the positioning of typographic elements, or the sense of movement and direction in typographic compositions were attributes brought forth to associate with various emotive expressions.

The second point of finding revealed a direct emotive attachment, where emotive words or adjectives were used straightforwardly to describe the feeling and impression of the typefaces/letterforms and compositions. The visual impact created by the typographic forms were being seen and personified with various qualities as a whole, such as "the typeface has an angry look" or "there's a sense of calmness/confusion in the composition".

The third point of finding drew attention to the significance of personal memories and imaginations as the source to recall and evoke emotions. This process was evident while participants listened to the music sequences and also while they observed the typographic designs. Through these personal memories and imaginative scenes through the mind's eye, emotive connections were formed.

The fourth point of finding related to emotional release and expression through varying qualities of the human voice and evidence of human touch through hand-rendered letterforms. As Armstrong (as cited in Heller, 2004) correlated sound properties to typography characteristics, the loudness or intensity of the tone could be conveyed by the weight or boldness of the glyphs. Noticing the volume and quality of the vocal in the songs as the direct expression of emotional release, the visual attributes of typographic forms were identified to reflect these emotions accordingly. Hand-lettering was another form of expression with the evidence of human touch. From the heaviness or lightness of the strokes, line qualities, hand-rendered letterforms become the most organic and honest method and materiality for emotional expression.

The fifth point of finding predominantly corresponds back to medium of music. This aspect identified the phonetic properties of music, such as tempo, rhythm, melody, etc, as key components for associating to elements in the typographic design. This aspect again reinforced Armstrong's parallel comparison between musical properties and typography, where phonetic qualities such as dynamics or movements were translated to the printed page as visual dynamics or movements portrayed by typographic elements. Through the stage of perceiving these phonetic and visual qualities, emotive associations could then be articulated. For instance, as participants responded "the fast beats of the music are reflected by the movement implied by the letterforms, which creates a festive and happy atmosphere".

The findings from this thesis seems to indicate that the original hypothesis - *static typography can express the emotive qualities of music*, is indeed correct because the individual characteristics of pure anatomy of typographic form can elicit direct emotive responses, draw emotive values from personal experiences and imaginations and express evidence of human qualities. The visual dimensions and implicit potentials of pure typographic forms can therefore engage the audience on an emotive level. However, it is apparent that there will never be a fixed formula concerning the relationship between emotions and typographic forms, and also for the interpretation of musical emotions. As implied in Kurt Lewin's 'Field Theory' (Huss, 2008), emotive experience from music is extremely subjective. Depending on each individual's surroundings and external factors such as past experiences or future hopes, the emotive experience from the same piece of music varies according to different states of mind of the listener. The same notion is applicable to static typography, where personal experiences and imaginations could affect the viewer's emotive associations with the typographic form and compositions.

It is evident that the original research of this thesis leads to further issues and topic areas to be explored and alternative ways of methodology to be experimented. The researcher encourages further research into the field of psychology, especially in terms of visual logic and visual grammar. It is anticipated that clearer understanding between the relationship of typographic forms and the psychology of emotions would be unveiled. Alternative options for methodology could include semantic differential, which could measure the qualitative responses using the range of emotive terms.

VI.   Appendix

VI. 1 .   Chapter 4 interview result sheet

Date: _____   #: _____   M / F

Age Group: ❏ 18~25   ❏ 26~33   ❏ 34~41   ❏ 42~49   ❏ 50~57

Occupation: _____

{ Song 1 }

■ Description of feelings / emotions from the song:

_____

■ Set 1 – *Typeface* test

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1st choice:

_____

_____

_____

■ Set 2 – *Composition* test

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1st choice:

_____

_____

_____

■ Set 3 – 1ˢᵗ *typeface* choice in Set 1
in different compositions

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1ˢᵗ choice:

_____

_____

_____

{ Song 2 }

■ Description of feelings / emotions from the song:

_____

■ Set 1 – *Typeface* test   ■ Set 2 – *Composition* test

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1ˢᵗ choice: **Explanation of 1ˢᵗ choice:**

_____   _____

_____   _____

_____   _____

■ Set 3 – 1ˢᵗ *composition* choice in
Set 2 in different typefaces.

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1ˢᵗ choice:

_____

_____

_____

{ Song 3 }

■ Description of feelings / emotions from the song:

_____

■ Set 1 – *Typeface* test

Rank	Design Piece
1	
2	
3	
4	
5	
6	

■ Set 2 – *Composition* test

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1ˢᵗ choice:

_____

_____

_____

Explanation of 1ˢᵗ choice:

_____

_____

_____

■ Set 3 – 1ˢᵗ **typeface** choice in Set 1
in different compositions

Rank	Design Piece
1	
2	
3	
4	
5	
6	

Explanation of 1ˢᵗ choice:

_____

_____

_____

Fig. 1. – Fig. 4-1, page 64

Fig. 2. – Fig. 4-2, page 64

Fig. 3. – Fig. 4-3, page 64

Fig. 4. – Fig. 4-4, page 65

Fig. 5. – Fig. 4-5, page 65

Fig. 6. – Fig. 4-6, page 65

Fig. 7. – Fig. 4-7, page 66

Fig. 8. – Fig. 4-8, page 66

Fig. 9. – Fig. 4-9, page 66

Fig. 10. – Fig. 4-10, page 67

Fig. 11. – Fig. 4-11, page 67

Fig. 12. – Fig. 4-12, page 67

124

Typeface A in different compositions:

Fig. 13. - Fig. 4-15, page 78
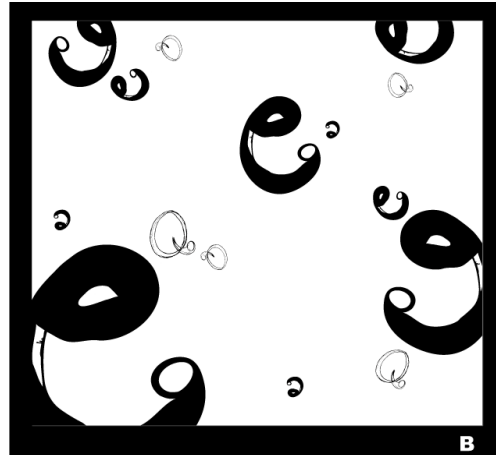
Fig. 14. - Fig. 4-18, page 80
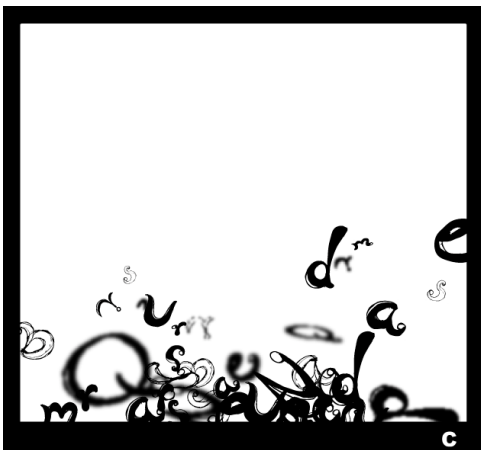
Fig. 15. - Fig. 4-17, page 79
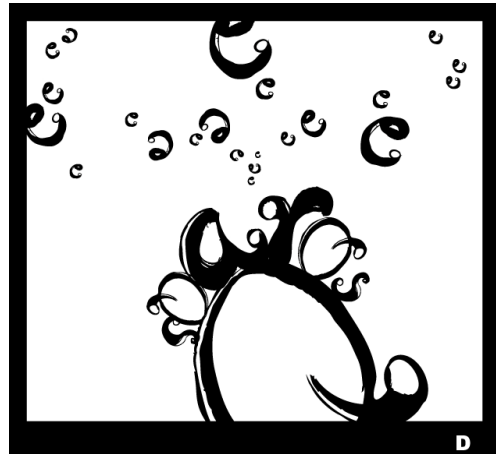
Fig. 16. Fig. 4-14, page 77
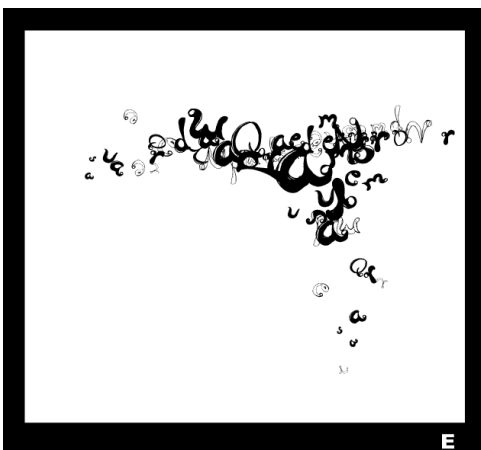
Fig. 17.

Fig. 18. - Fig. 4-13, page 77

Typeface B in different compositions:

Fig. 19.
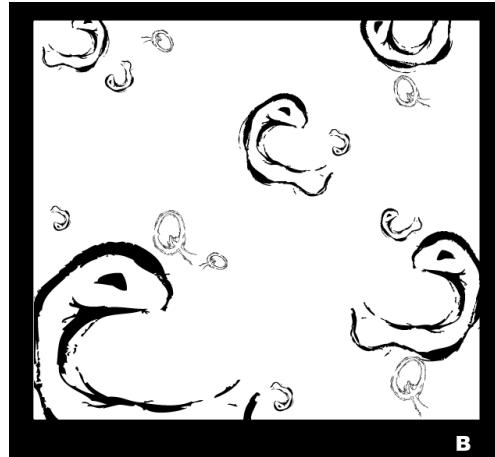
Fig. 20.
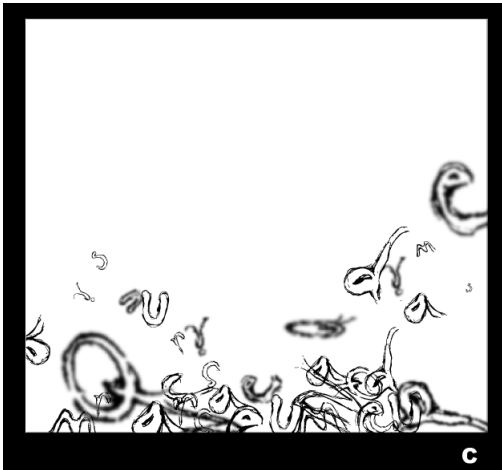
Fig. 21.

Fig. 22.
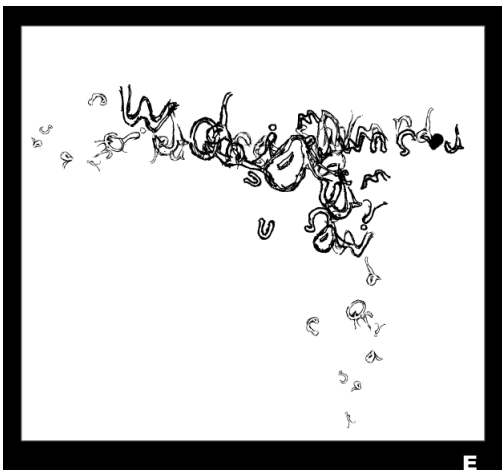
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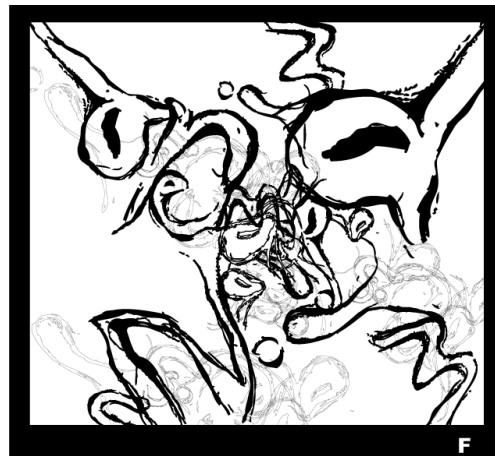
Fig. 24.

Typeface C in different compositions:

Fig. 25. - Fig. 4-28, page 95
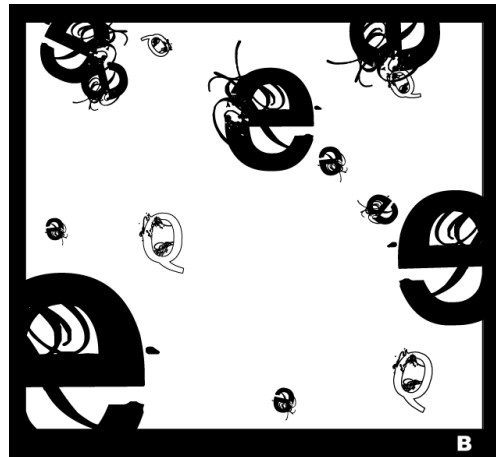
Fig. 26.
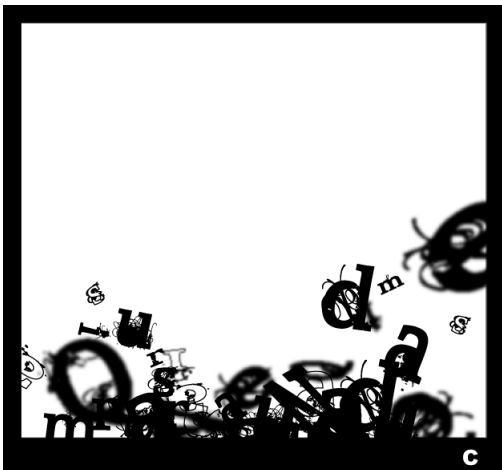
Fig. 27.
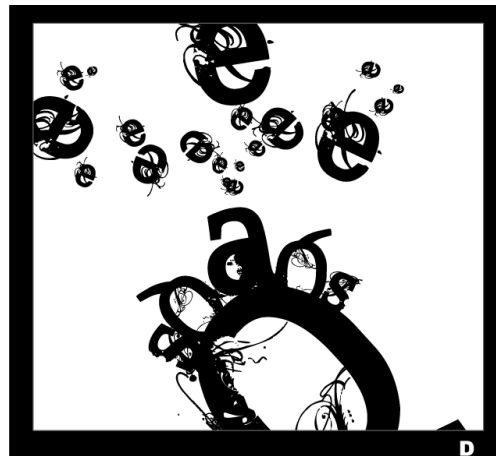
Fig. 28.

Fig. 29.

Fig. 30. - Fig. 4-26, page 94

Typeface D in different compositions:

Fig. 31.

Fig. 32. - Fig. 4-19, page 80

Fig. 33.

Fig. 34.

Fig. 35.

Fig. 36. - Fig. 4-16, page 79

Typeface E in different compositions:
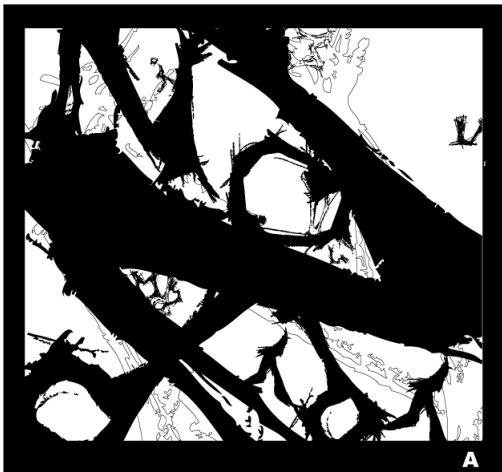
Fig. 37. - Fig. 4-25, page 94
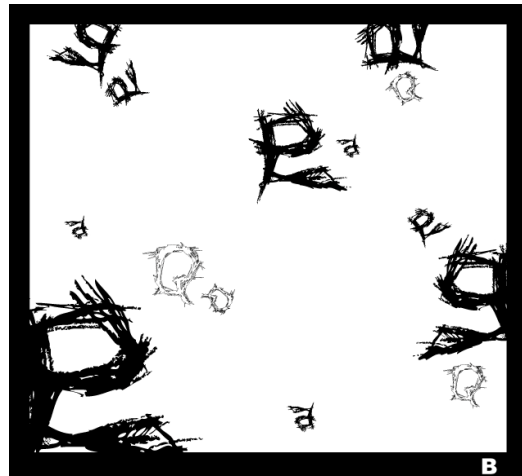
Fig. 38.
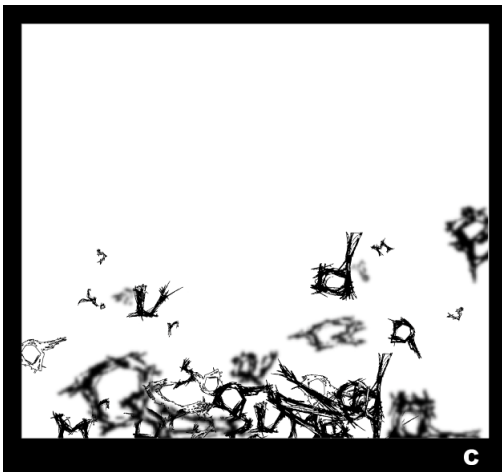
Fig. 39.
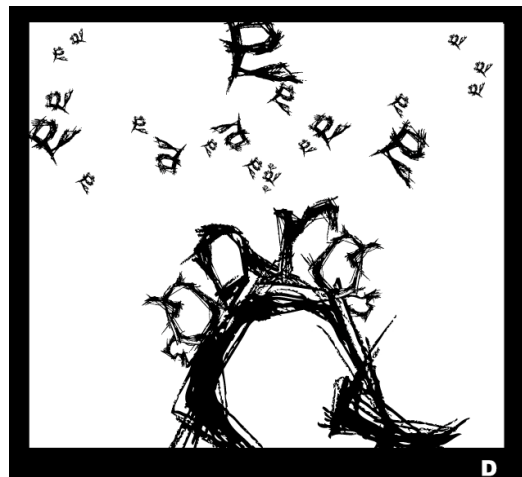
Fig. 40.
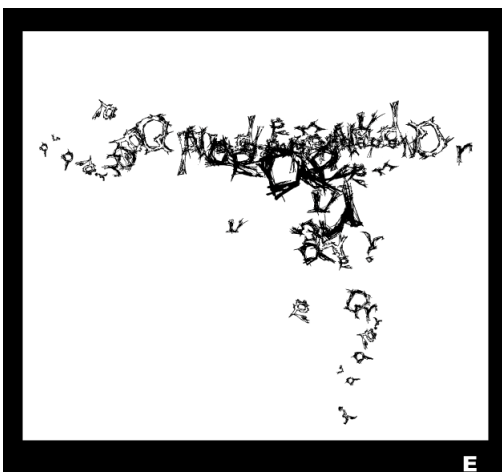
Fig. 41.

Fig. 42. - Fig. 4-27, page 95

Typeface F in different compositions:

Fig. 43.
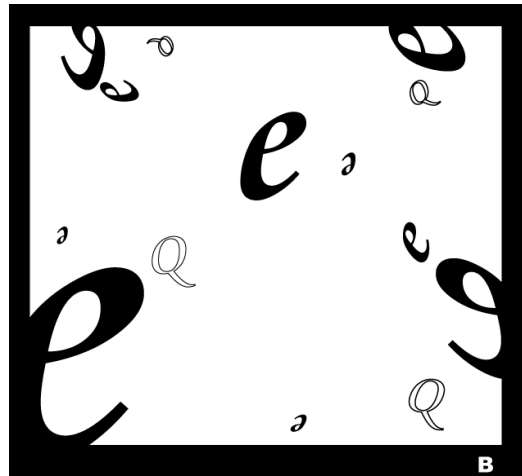
Fig. 44.
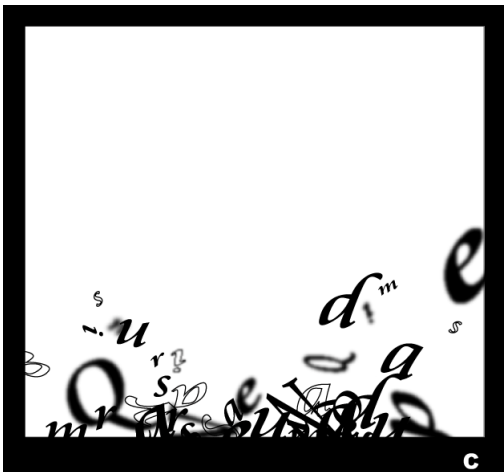
Fig. 45.
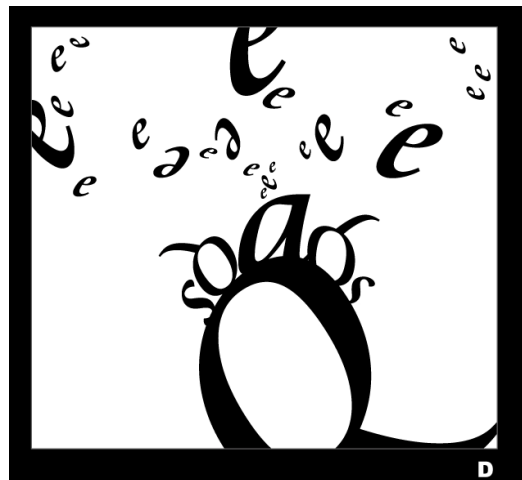
Fig. 46.

Fig. 47.

Fig. 48.

Composition A in different typefaces:

Fig. 49.

Fig. 50. - Fig. 4-33, page 99

Fig. 51. - Fig. 4-32, page 98
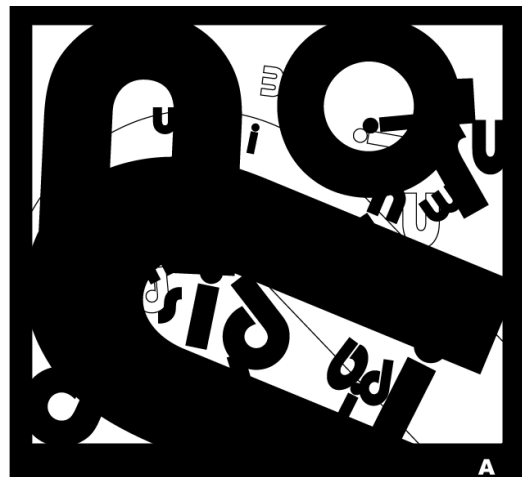
Fig. 52.
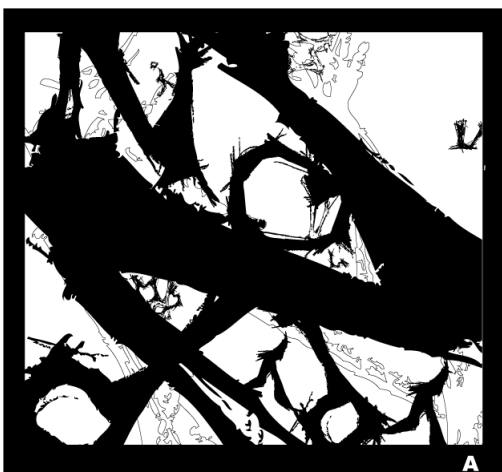
Fig. 53. - Fig. 4-30, page 97
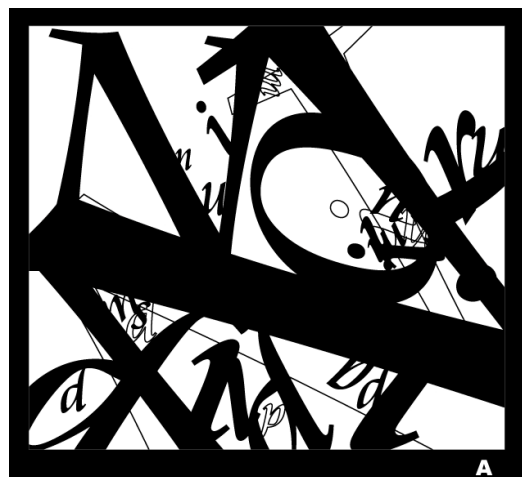
Fig. 54.

Composition B in different typefaces:
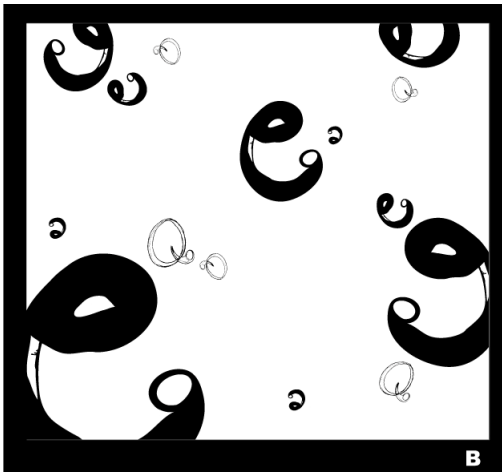
Fig. 55.
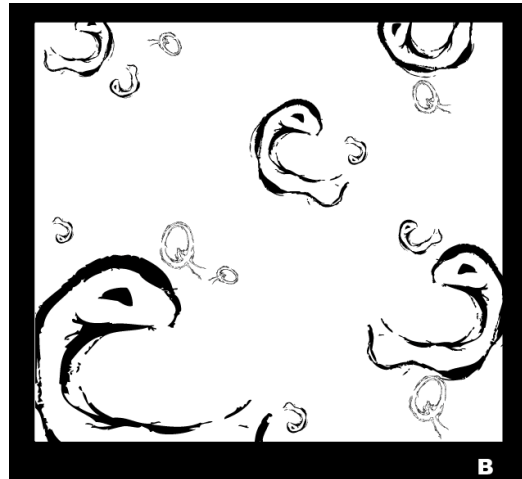
Fig. 56.
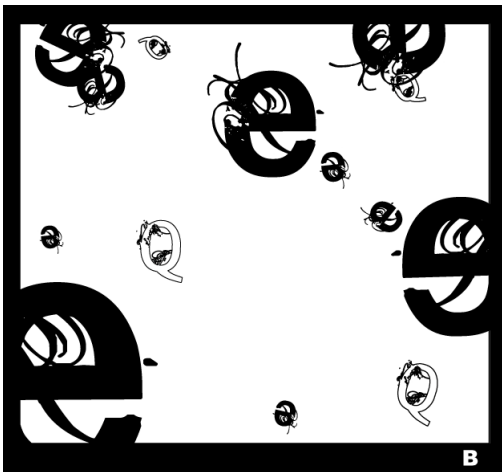
Fig. 57.
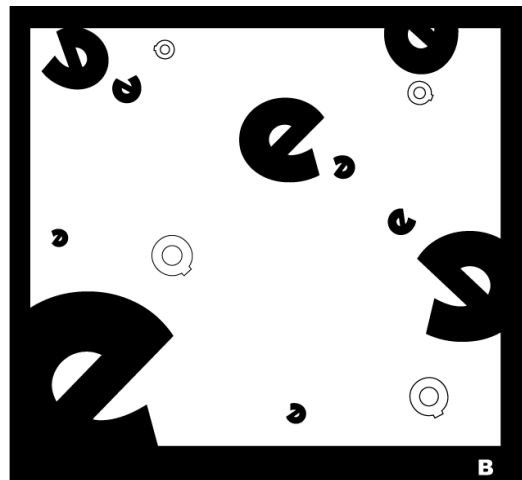
Fig. 58. - Fig. 4-24, page 88
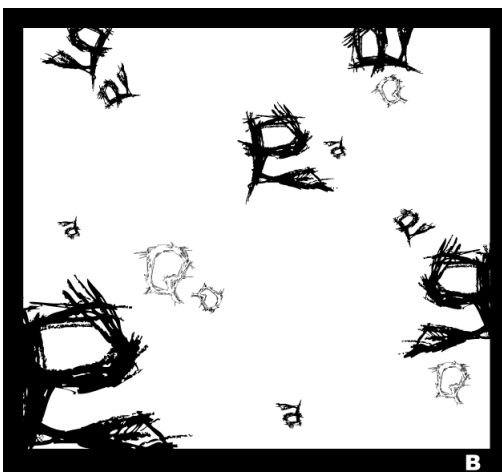
Fig. 59.
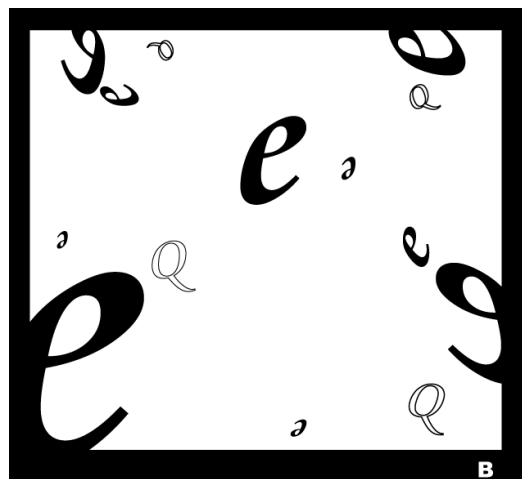
Fig. 60.

Composition C in different typefaces:
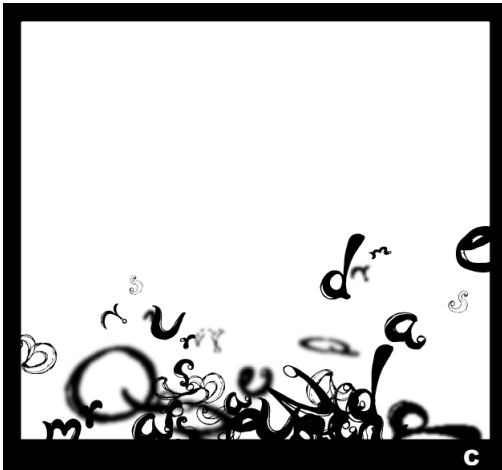
Fig. 61. - Fig. 4-20, page 86
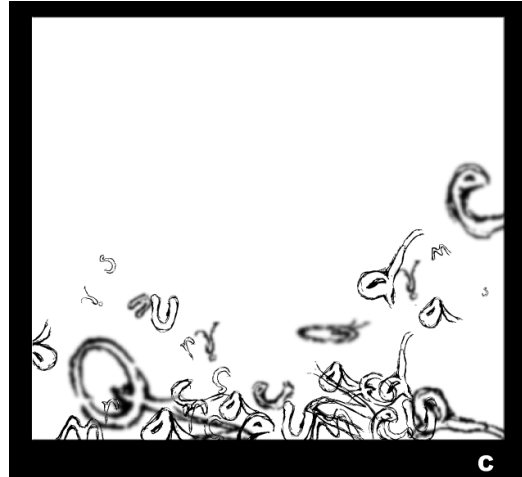
Fig. 62.
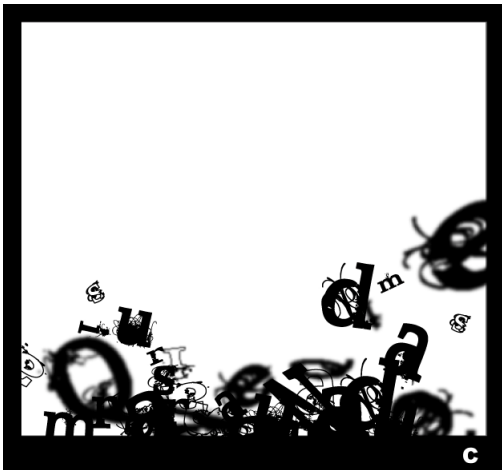
Fig. 63.
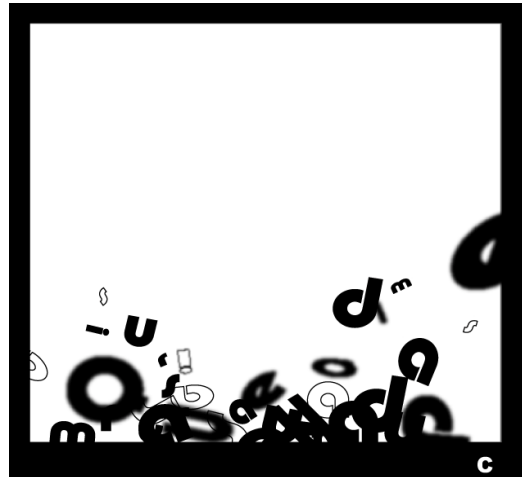
Fig. 64. - Fig. 4-23, page 88
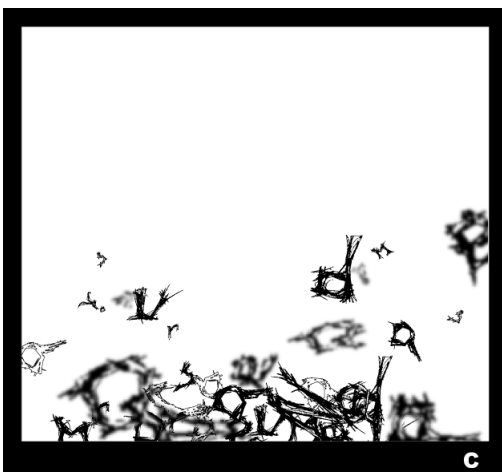
Fig. 65.
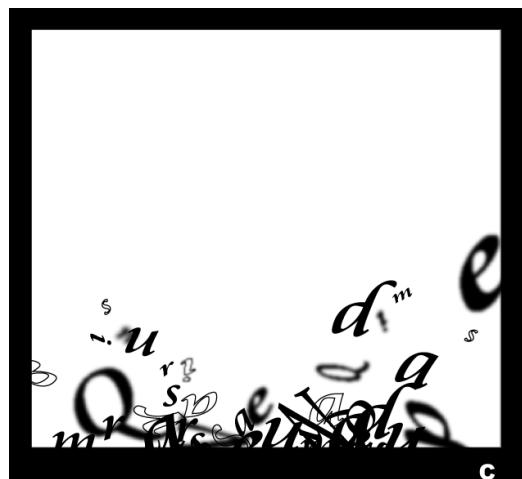
Fig. 66. - Fig. 4-22, page 87

Composition D in different typefaces:
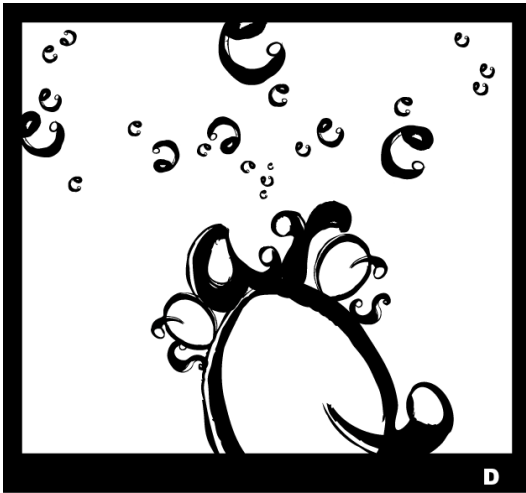
Fig. 67.

Fig. 68.
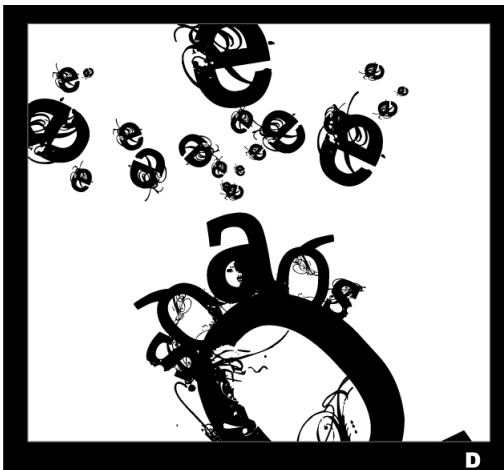
Fig. 69.
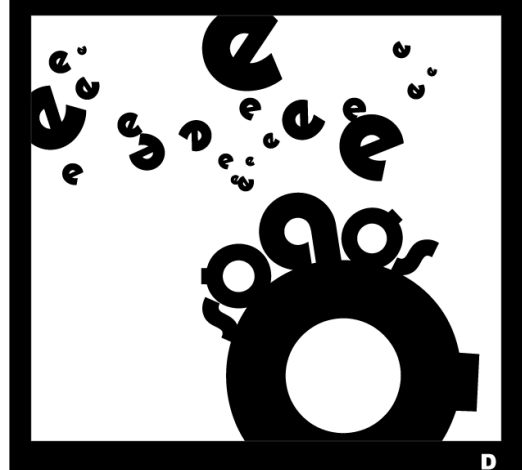
Fig. 70.
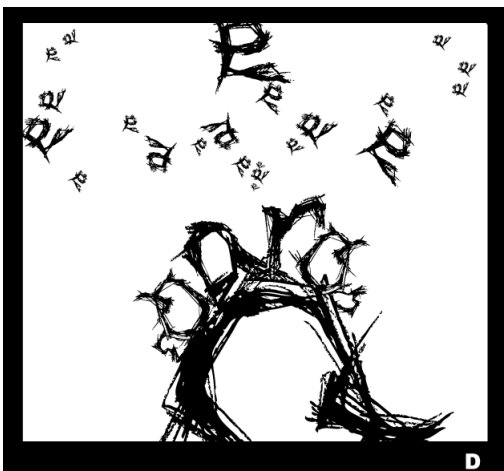
Fig. 71.
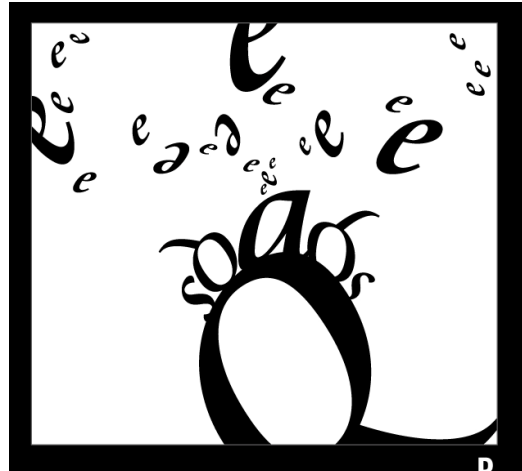
Fig. 72.

Composition E in different typefaces:
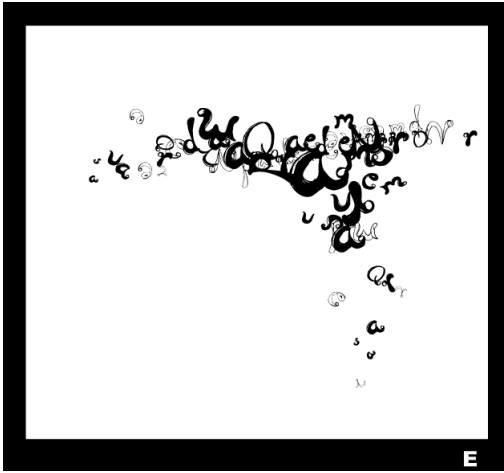
Fig. 73. - Fig. 4-21, page 86
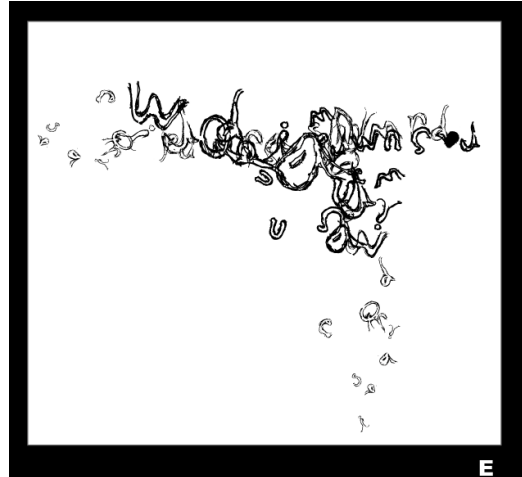
Fig. 74.

Fig. 75.

Fig.76.

Fig. 77.

Fig. 78.

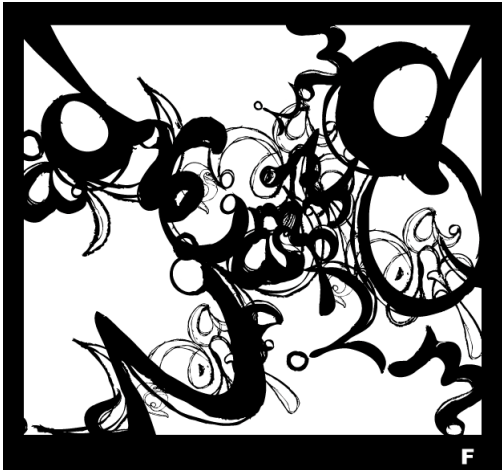**Composition F in different typefaces:**

Fig. 79.
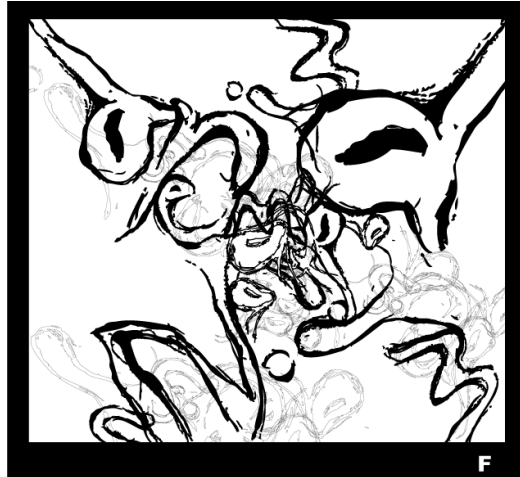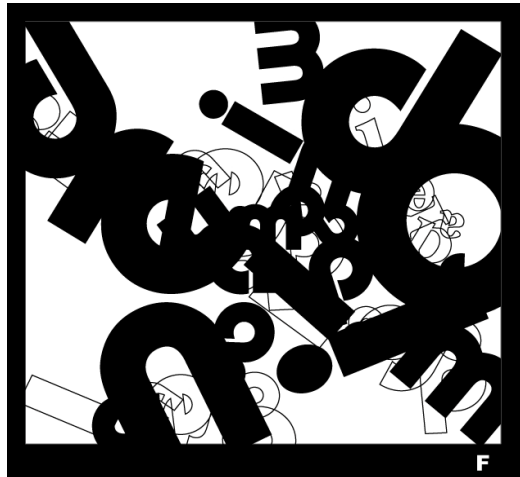

Fig. 80.

Fig. 81. - Fig. 4-31, page 98

Fig. 82.

Fig. 83. - Fig. 4-29, page 97

Fig. 84.

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