Alternative structures for typographic design based on dance forms

by

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A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF FINE ARTS

Major: Graphic Design

Program of Study Committee:
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Iowa State University

Ames, Iowa

2003

Graduate College
Iowa State University

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Signatures have been redacted for privacy

DEDICATION

This earth was graciously given a pretty little sky in which a beautiful sunshine comes out every day; a blue moon comes out every night, and the most magnificent star was recently born. To my beloved nieces, Margarita, Claudia and Adriana, and the light of my life, my son Aramis.

Esta tierra ha sido bendecida con un cielito lindo en donde el rayito mas bello de sol sale cada día, una luna azul sale cada noche, y la estrella mas brillante fué añadida recientemente. Para mis adoradas sobrinas, Margarita, Claudia y Adriana, y la luz de mi vida, mi hijo Aramis.

TABLE OF CONTENTS

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INTRODUCTION

A successful typographic design work can make words sing or dance
on the page and shape of objects beauty out of language. (Yen, 1995, p. 49)

This thesis explores dance forms as an alternative structure for typographic

design. The source for this interest was found in the Museum of Modern Art

(MOMA) in New York, January 2000. The MOMA was holding an exhibition of 20th

century art titled *Modernstarts: People, places, things.* Among the masterpieces in

exhibition was an abstract painting depicting a Russian dancer (Figure 1). This

painting was the result of explorations based on line and plane interactions as

shown in the sketches also in exhibition (Figure 2). The display of the painting, along

with its creative process, provoked the following research questions: What if dance

forms were abstracted into lines and planes, and typography was applied to them?

What kind of typographic exploration could surface when dance forms are used as

an underlying structure?

Since the beginnings of civilization, movement has been a means of

expression and communication and has been visually recorded using symbols,

letters, marks and words – that is, movement as image. As civilizations developed,

movement evolved into dance, and dance evolved into a three-dimensional art form.

Simultaneously, an interest emerged in permanently recording these dances – that

is, movement as data. These two aspects of movement (movement as art and data)

share a common origin with typography, which began as marks and drawings made

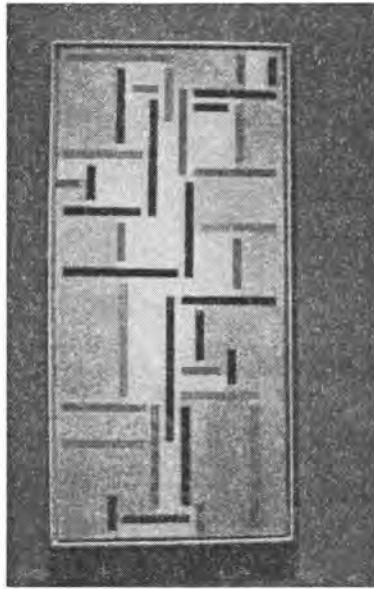in caves by early societies for the purpose of transmitting information.

Figure 1 Image of Theo (Christian Emil Marie Küooer) van Doesburg's painting *Rhythm of a Russian Dance.* Oil on canvas. 1918
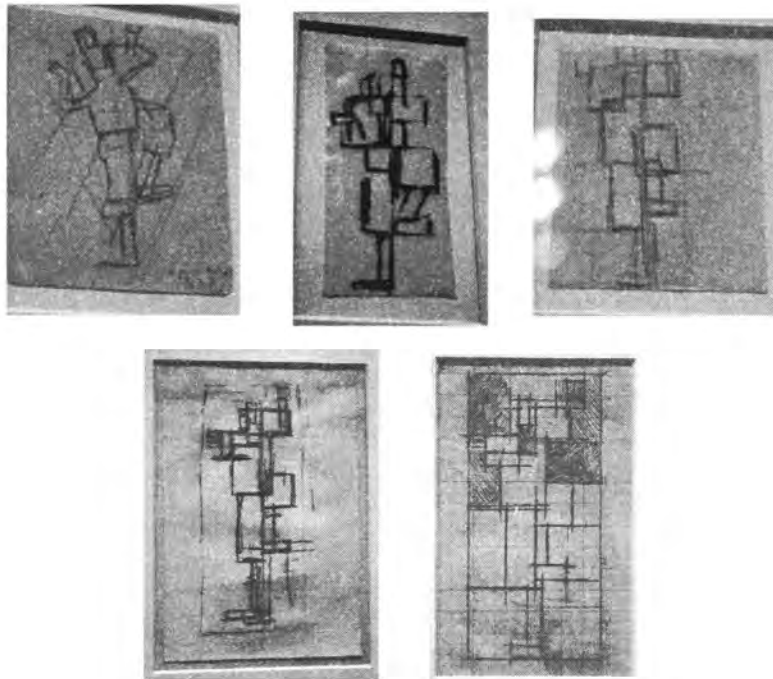

Figure 2 Image of Theo (Christian Emil Marie Küooer) van Doesburg's sketches for *Rhythm of a Russian Dance.* Oil on canvas. 1918

As a dancer and a typographer, I have been intrigued by the parallels between dance and typographic design. For instance, both dance and typography make use of design principles such as repetition, direction, anomaly, and contrast, among others, to create interesting forms. As a dancer, I perceive that the expressive qualities in dance forms can enhance typographic design. As a typographer, I perceive that dance and typography are related with regard to contrast of form and counter-forms. For example, the interaction of the bodies in partnered dance creates structures that take many forms: dominant vs. subdominant, passive vs. aggressive, loud vs. quiet, initiator vs. responder, and others. These interactions are also found in typographic variables and are commonly used as a conceptual framework. For instance, size and weight relationships in letter-forms, words, sentences, and paragraphs, in interaction with their surrounding spaces, create forms of dominance vs. sub-dominance, soft vs. aggressive, loud vs. quiet and others. In addition, the use of typographic variables within grid structures also conveys similar contrasts to those found in dance - for example, isolation vs. intimacy, tension vs. harmony, through the use of design principles such as repetition, direction, and similarity. Therefore, in this thesis, I use dance structures to examine dynamic typographic interactions that emphasize form and counter-form relationships. Amplifying the relationship between typography and dance has the potential to create new avenues for typographic design that could be applied to both print and electronic media.

This thesis explores the three-dimensional forms the dance creates in space and translates them into a two-dimensional structure for typographic design. I chose the fox trot and Argentine tango dances selected for this study because of the dramatic contrasts in the interaction between partners. Both dances are about the

dancers' relationship in some cases a power exchange and in others a mutual collaboration. This collaborative relationship between the dancers creates forms that are strong, determined, sharp, and intentional.

In Chapter 2, I present a general overview of historical and contemporary visual systems known as dance notation, a visual language developed for the purpose of recording dance, and opinions about its usefulness. These visual systems are of interest because they are graphic expressions based on dance forms. In addition, I provide an overview of the fox trot and Argentine tango as different dance structures. In Chapter 3, I present the parallel principles of dance and typography, the process of transforming three dimensional fox trot and Argentine tango dance forms into two dimensional structures, the process of utilizing these dance structures as typographic grids for text, and the different avenues for text application. In Chapter 4, I present the final thoughts, and conclusions based on the explorations in Chapter 3 and future avenues for this study.

CHAPTER II

LITERATURE REVIEW

Early visual systems of communications

Movement is, according to Moore (1988) one of humankind's primary

systems of communication:

> Movements that were repeated often enough, in the same location and
> in the same context of events, began to acquire communal meaning. In
> this way, movement became the first form of symbolic communication
> known to humankind. (p. 75)

A probable example of this primary communication system is the organizational

body movement seen in a rock painting from the Middle Stone Age period. A

painting, located in the Gasulla Gorge, is described by Gardner (1991) as consisting

of five warriors with the "customary exaggeration of movement, a rhythmic

repetition of basic shape, and a general sacrifice of naturalistic appearance to

narrative and to unity of action" (p. 36). Gardner also notes that "the widely spread

legs communicate a leaping stride, perhaps a march to battle or a ritual dance"

(Figure 3).

Gardner's example provides visual evidence of recorded organizational

movement. His view is supported by Phil Meggs (1998) who states in his book, *A

history of graphic design*, that the pictures made in stones or in caves by early societies

"were made for survival and were created for utilitarian purposes" (p. 5). Further

evidence is provided by Richard Kraus (1991); in his book, *History of dance in art and

education*, he claims the purpose of these pictures by quoting Tore Harkansson:

"often art portrays dances and rituals which are part of initiation..." (p. 32).

Figure 3 Image of a ritual dance found at Gasulla Gorge (Gardner, 1991, p. 37)

As early societies mastered the use of tools, pictures made of marks evolved into a sophisticated visual language known as writing:

> The development of writing and visible language had its origins in simple pictures, for a close connection exists between the drawing of pictures and the marking of writing. Both are natural ways of communicating ideas, and early people used pictures as an elementary way to record and transmit information (Meggs 1998, p.4).

The use of pictures as an elementary way to transmit information is the basis for dance notation, a visual system that attempts to communicate movement in an accurate manner to preserve the dance for future use. Because this study explores dance forms as a source for an alternative structure to typographic design, dance notation is important as a background information because it is the first attempt of a graphic abstraction of three dimensional movement to a two dimensional plane. The

next section defines dance notation, illustrates several notation systems, and outlines the view of two dance professionals regarding such systems.

Beginnings and Development of Dance Notation

Dance, as movement, is symbolic communication based on visual, physical, and emotional expression, which creates forms in any given space. These dance forms may be forms of beauty, despair, ugliness, power, violence, submission, passion, sexuality, friendship, etc. Dance communicates concepts, ideas, notions, feelings, and emotions abstracted into space and communicated through movements, which are ephemeral.

Dance and the spoken word share similarities in permanence and abstraction. In his book, *Typography: Macro and micro aesthetics*, Kunz (1998) comments, "Spoken language is ephemeral and intangible, it disappears as soon as it is uttered" (p. 8). Similarly, dance disappears as soon as the movement is executed. This ephemeral quality of movement in a dance is the source of the desire to lock these forms in time and space. Systems known as dance notation were developed to capture the movement of a dance in written form for reference and, more recently, for the purpose of protecting the rights of a choreographer. Ann Guest (1984), in *Dance notation*, defines dance notation:

> ...the translation of four-dimensional movement (time being the fourth dimension) into signs written in two-dimensional paper. Dance notation is to dance what music notation is to music, and the written word to drama. (p. xiv)

Early dance notation is found in books that appeared in the Italian Renaissance, when dance became a mode of social expression of hierarchy and status. As social dances came to reflect nobility, the dance master became central in

teaching and preserving these dances in written form. According to Taburot (1967), these written forms were based on the use of letterforms to indicate the name of the sequence. For instance, *R* stood for reverence (bow), *S* for simple (step forward and close), *D* for double (three steps forward and close), *B* for bronte (swaying step), and a lower case *r* for reprise (backward). Other dance notation approaches followed, and each method attempted to be more effective and inclusive than its predecessor. These notation approaches include musical staff, aerial view, stick figures, numbers, words, abstract symbols, pictures, and, most recently, videos.

Table 2 offers a general overview of the different categories of visual systems recording dances, their authors, and their main contribution (compiled from Ann Guest (1984), *Dance notation)*. As it is evident in Table 2, dance notation has been attempted from different perspectives, ranging from words to figures and abstract forms. Table 2 also shows what I consider the two main issues involved in dance notation:

1. The need for dancers and choreographers to record and preserve dance as information

2. The isolation of movement as data

Table 2 Historical review of the origin of selected categories of dance notation

| Category	Year	Author	Contribution
Musical Staff	1891	Vladimir Ivanovich Stepanov	Use the anatomical structure of body
		Margaret Morris	Idea of central axis; strokes as directional elements
		Pierre Conté	Use of numbers
		Antonio Chiesa	Use of bass cleff, sharps and flats
	1935	Revd. Remy Zadra	Abstract symbols, large charts
		Alwin Nikolais	Music notes
	1964	Charles McGraw	Use of notes on lines and spaces
		Jia Rukaja	Took audience point of view; incorporated timing
Stick figures	1831	E.A. Théleur	Abstract symbols for basic movements; the first alphabet system
	1852	Arthur Saint Léon	Notion of time and value; audience's point of view; turning of upper body
	1887	Friedrich Albert Zorn	Indication or perspective
	1954	Srbul Lissitzian & l. Paul Misslitz	Use of color to identify left and right
	1956	Letitia Jay	Provides a choice to view the movement
Aerial View	1660	Raoul Auger Feuillet Pierre Beauchamp	Systematization of the five positions of the feet and the regulation of the formal arm motion
Aerial view & Musical staff	1920's	Rudolph Laban	Use of center line; block shapes Variations on length of symbols Use of symmetry Incorporates four elements in one symbol; direction, level, time and part of the body
Stick figures & Musical staff	1939	Rudolph Benesh	Matrix system figure is imagined; hops, seed of writing movement
	1973	Valerie Sutton	Perspective
Words & Musical staff	1588	Thoinot Arbeau	Reading from bottom; detailed descriptions of dance and number of steps
Numbers	1940's	Noa Eshkol	Symbols with numbers to indicate direction in degrees
Words	1946	Richard Drake Saunders	Integration of musical staff with word and letterforms to indicate body and direction
	1955	Eugene Loring & DJ Canna	Spoken language combined with signs. Vertical staff, provides a column for each body part
Feet pattern, Pictures, &Videos	1912	Arthur Murray	Dance lessons by mail, developed foot prints
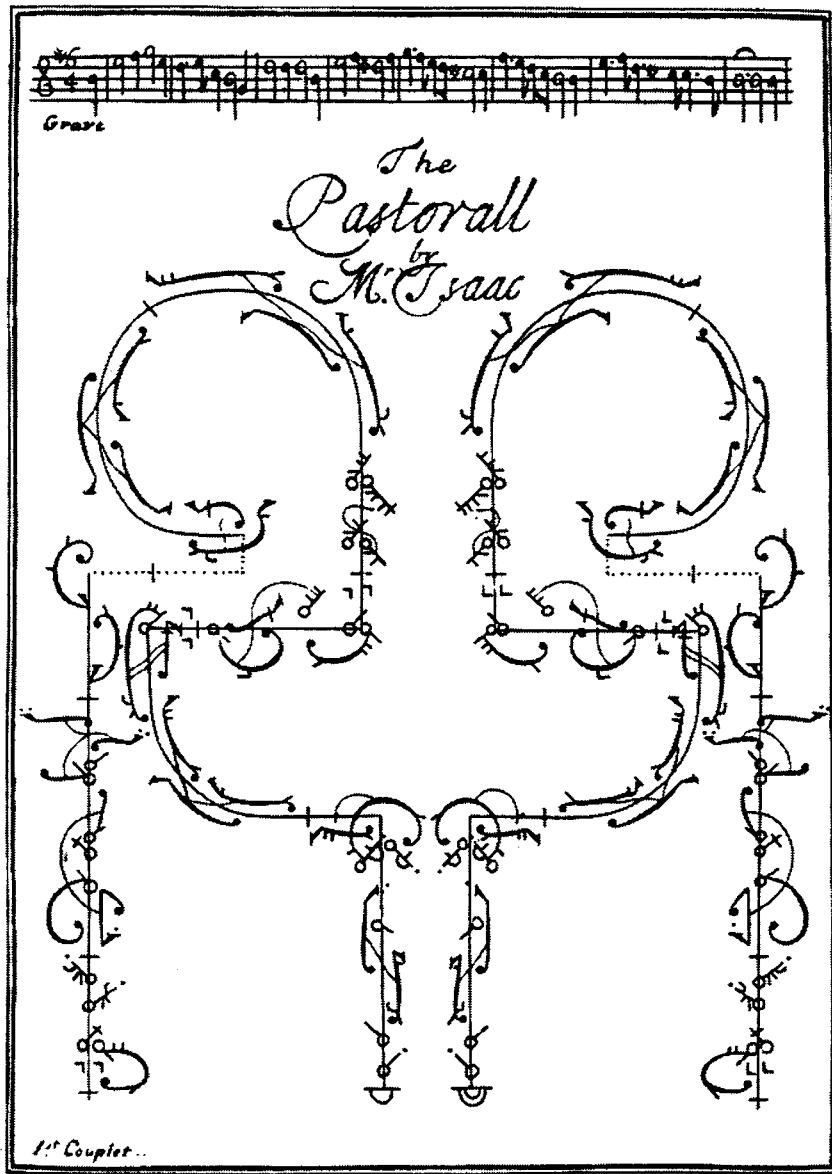
Figure 4 Example of Raoul Auger Feuillet's dance notation system for court dances, 1660's.
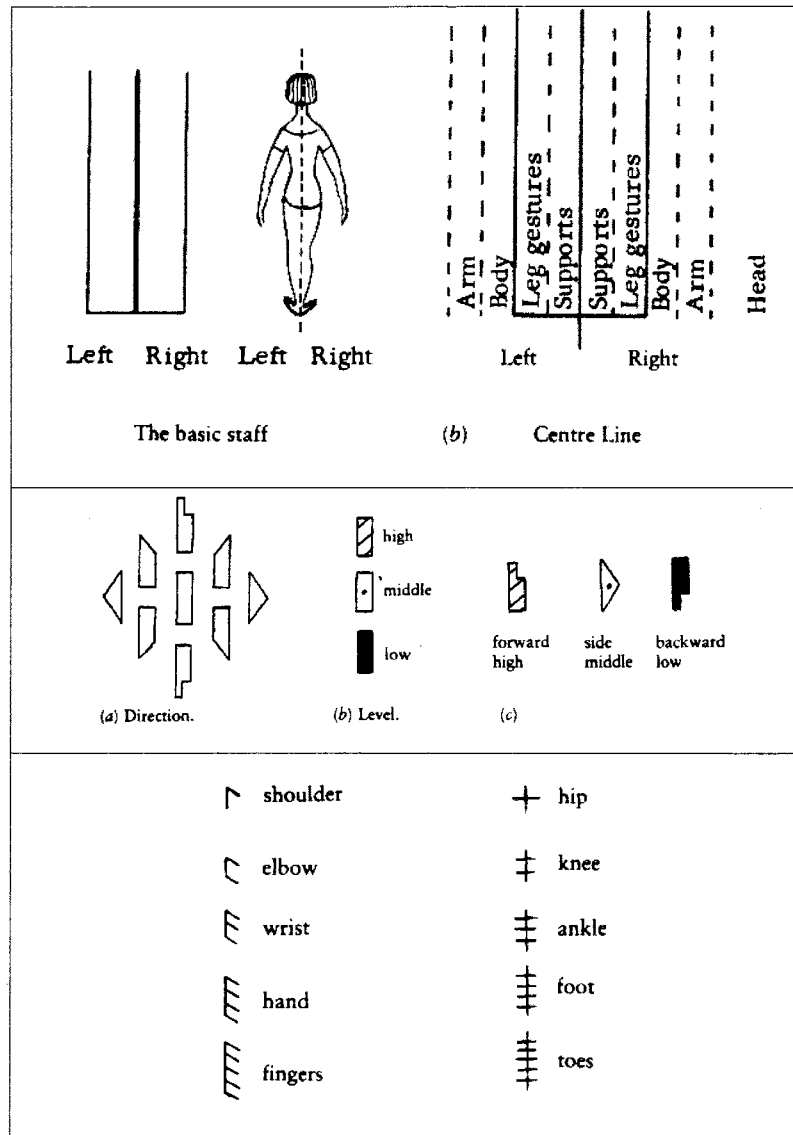
Figure 5 Examples of Rudolph Laban's notation system or Labanotation

The first purpose of dance notation—the need for dancers and choreographers to record and preserve dance as information—is uncontested; simply put, most in the field of dance would agree that dances need to be recorded. Such records of dance can be used for future reference in introductory and advanced study and rehearsals for performance. However, although most would agree that

recording dance movement is useful, disagreement exists about how such
movement should be recorded. Dance professionals differ on which system of dance
notation to use or even whether dance notation should be used.

Notation systems are all based on visual forms denoting movement. Dance
notation is also of interest because as a visual system of communication it is based
on movement isolation. Movement isolation as a means of expression is rooted in
the belief that movement was probably the first system of symbolic communication
(Moore, 1988, p. 75). This view is supported by marks and pictures found in rock
and cave paintings that seem to be examples of recorded movement (see Figure 3).
Based on movement isolation, dance notation attempts to communicate movement
accurately and in a manner free from other considerations such as energy, effort,
personal qualities, and color. Guest (1984) explains:

> Recorded music, tape and discs have not obviated the need for printed
> music...the...performer prefers to read his part from the printed page,
> to get instructions about what he is to play from the clearly stated
> symbols on the sheet. (p. 8)

Guest (1984) compares dance notation to a musical staff in which the notes are
isolated to create a whole composition. Therefore, in dance notation, the symbols
represent an attempt to isolate each movement in a dance so that, when arranged in
sequence and/or symmetrically, they describe the dance as a composition.
Guest explains notation as: "...any serious system of movement notation avoids
words because they are a strong deterrent to international communication" (p. 4).

Movement isolation and symbol recognition are critical points for dance
professionals who prefer video recording of dances, precisely because dance
notation does not provide information on elements like effort, energy, intention,

time, color, tone, and personal expression. Such elements are found in the context of

the dance and are provided by video or film. Thus, although advocates of dance

notation maintain that "Few dancers prefer film if they have access to notation"

(Guest, 1984, p. 9), several dance professionals apparently disagree. Critics such as

Theiss (2000) and Kristein (cited in Tufte, 1990) object to notation for several reasons.

One common objection is notation's apparent inability to capture the symbolic

meaning of dance forms, which might include the cultural context, the emotional

state of the dancers, and the level of the dancers' effort and interaction. For example,

in his book, *Envisioning information*, Edward Tufte (1990) quotes choreographer

Lincoln Kristein of the New York City Ballet:

> A desire to avoid oblivion is the natural possession of any artist. It is
> intensified in the dancer, who is far more under the threat of time than
> others. The invention of systems to preserve dance-steps has, since the
> early eighteenth century, shared a startling similarity. All these books
> contain interesting prefatory remarks on the structure of dancing. The
> graphs presented vary in fullness from the mere bird's-eye scratch-
> track of Feuillet, to the more musical and inclusive stenochoreography
> of Saint-Léon and Stepanov, but all are logically conceived and
> invitingly rendered, each equipped with provocative diagrams
> calculated to fascinate the speculative processes of a chess champion.
> And from a practical point of view, for work in determining the
> essential nature of old dances with any objective authority, they are all
> equally worthless. (p. 119)

Kristein 's opposition reinforces the argument that these historical examples,

although beautiful and provocative, really do not help those who are trying to learn

the dances. As an experienced professional in the dance community, Kristein

observes that one inadequacy of notation is the complexity, which undermines the

value in determining "the essential nature" of a dance:

The systems, each of which may hold some slight improvement over its predecessor, are so difficult to decipher, even to initial mastery of their alphabet, that when students approach the problem of putting letters together, or finally fitting the phrases to music, they feel triumphant if they can decipher even a single short solo enchaînement. (p. 119)

Other dance professionals, like Kristein, find notation ineffective for communicating movement and question the preference for notation over film. The president of Arthur Murray Dance Schools, George Theiss is one example of a professional who doubts the usefulness of dance notation. In an e-mail interview, (2000), he indicated his preference to film or video over the well-known notation system of footprints, which Arthur Murray developed in the 1920s and has proved to be an effective marketing tool for teaching dance by correspondence. Theiss explains how eventually, video and film replaced the footprints:

...visual and oral videotapes [are] a method of training and a method of study to learn for the students who are unable to attend classes [;] we feel it's expedited training and is the modern method of learning to dance where no training is available. Footprints on the floor [are] cumbersome, boring and a slow way to learn even the limited number of patterns of the dance, and give no expression of the body nor timing of the music and other factors necessary in learning to dance. (personal communication)

Theiss' position addresses concerns about dance notation that have already been mentioned, such as quality of steps, amount of time needed to learn and understand, and lack of indication of body expression. Both Kristein and Theiss raise crucial issues regarding dance notation. On the one hand, Kristein finds dance notation time consuming and useless; on the other hand, Theiss finds dance notation (in this case, footprints) dry and detached from information that gives life to a dance. Theiss' and Kristein's concerns stimulated the formulation of several

questions that capture some of the central issues about the communication of movement and its context and qualities during performance:

1. Is movement data?

2. Can movement be encoded as data?

3. Can dance movement be isolated from its context and still communicate how to move?

4. Is symbol recognition enough to allow one to understand a movement and execute it in the context of a dance?

5. Does dance notation fully communicate the movement of the dance?

6. Does notation communicate to a general audience?

The next section addresses these questions and Tufte's (1990) criteria for effective forms of graphic displays such as dance notation.

Movement as Data

Although dance notation offers the disadvantage of a lengthy interpretation process, it is the first system of abstraction of three-dimensional movement to a two-dimensional plane in a graphic manner. Thus, dance notation is a reference to the use of dance forms as an alternative structure for typographic design.

In dance notation, movement is treated as data. The abstraction process, repeated in a symmetrical manner, becomes a complex visual language that relies on the abstraction of a movement or a series of movements into small symbols (units or multiples) in a graphic manner. As a result, the process of interpreting dance notation is lengthy and difficult. Considering the level of complexity of dance notation, the following questions need to be considered:

1. Is movement data?

If movement *is* data, then context does not need to be included because the where, how, and when would not matter. However, if movement is *not* data, then the information that notation omits is necessary to differentiate, for example, between walking on the street and walking as part of a dance performance. The belief that movement is data suggests that movement does not need contextual information to be understood; therefore, it suggests that movement is a universal language.

Moore (1988) expands on the discussion of movement as language by identifying three metaphors: universal, foreign, and private code.

- *Movement as a universal language:* This metaphor implies that all humankind "regardless of race, creed, or color" (Moore, 1988, p. 107) understands physical action and that movement, thus, transcends spoken and written languages so that no special training and/or contextual information is needed to decipher movement.
- *Movement as a foreign language:* This metaphor implies that to understand movement we need to understand the context, culture, and background in which it occurs. According to Moore (1988), movement is culture specific.
- *Movement as a private code:* This metaphor implies that movement is a unique and personal expression that can be understood only in intimate relationships (Moore, 1988).

These three metaphors affirm that movement is more than data. If movement is exclusively universal, the use of dance notation would be sufficient in movement communication. However, Moore seem to share the hypothesis that movement

entails more than the mechanical operation of our bodies in space and time and that it carries with it cultural, social, and personal information encoded in the way we move. Moore claims that the levels of meaning in movement expression overlap, providing a rich and textural pattern of information.

2. Can movement be encoded as data?

Movement can be encoded as data when movement is isolated and reduced to its most simple and basic role. The dance notation systems in Table 2 indicate that a description of movement is possible, but each system difficult and complex. The abstraction of movement to the small multiple, or to a small unit, reduces a movement to its basic and most simple form of execution, with a loss of other information, such as whether that movement was fluid or rigid, or even the dancer's particular method of executing the movement.

3. Can dance movement be isolated from its context and still communicate how to move?

If movement is isolated from its context, then the dancer's skill in performing the dance would be irrelevant. The dancer's ability to communicate an emotion or quality of movement better than others would also be irrelevant. The emotional tone of a dance is communicated through qualities such as body posture, proximity, and personal expression. These qualities become part of the context of a dance and become a criteria for the choreographer to select one dancer over another.

4. Is symbol recognition enough to understand a movement and execute it in the context of a dance?

Certain symbols (e.g., icons for restaurants, restrooms, hospitals, and gas stations) stimulate nearly immediate recognition. In a dance, however, the information depends on time and context that cannot be conveyed by the dance notation symbols alone. The time and context of a dance make it resemble a storyline in that a dance has a beginning, a climax, and an ending and the story-like structure creates forms that have meanings that vary from person to person. Valerie Williams (1998), a professional dancer and choreographer, sees the importance of the narrative structure and says that dance is like a story and that movements or gestures need to be read and understood within the context of the entire dance. Because the symbols used in dance notation are small and fixed, they encode only specific and crucial information, and strip the dance from its story and context.

Rather than viewing dance as a story, Moore sees movement as more of a painting or a graphic composition and states "movement has much more in common with a painting than with a sentence" (p. 121). In other words, the comprehension and understanding of movement, instead of being represented by a linear relationship between movement and meaning, is layered. I believe that the experience of decoding movement is similar to looking at a painting or graphic composition. One first sees the information as a whole, then judges that information against the context, circumstances, familiarity, and personal knowledge, and then one finally reaches a conclusion about its meaning. Moore agree: "The more instantaneous, global, and complex a nonverbal impression, the more likely that movement is functioning, not like language, but like visual art" (p. 121). Thus,

movement can be interpreted as data, but such interpretation restricts and isolates

that movement from the contextual information that makes the patterned movement

in a dance rich and complex.

5. Does dance notation fully communicate the movement of the dance?

Dance notation does communicate the essential mechanics of a dance, but,

similar to music notation, it cannot communicate its emotive qualities because dance

notation abstracts the dance to its simplest forms of movement. As shown in Table 2,

every system of dance notation involves a new set of variables of information and

unique perspectives. One of these variables, according to Tufte (1983), is the use of

what he calls small multiples as the "design of choice" arranged in a symmetrical

structure (p. 114). The majority of the systems of dance notation are based on

symmetrical structure because they are based on a symmetric human body. Thus,

when the symbols are arranged, they are usually presented left to right or top to

bottom. In addition, Tufte presents a list of design strategies for recording dance

movements:

> [These strategies] encompass many of the usual (nearly universal,
> nearly invisible) display techniques: small multiples, close text-figure
> integration, parallel sequences, details and panorama, a polyphony of
> layering and separation, data compression into content-focused
> dimensions, and avoidance of redundancy. (p. 114)

The strategies are then considered in relation to Tufte's criteria of graphical

excellence in data displays. According to Tufte (1983), graphical excellence in data

displays should

- Show the data
- Induce the viewer to think about the substance rather than about the
  methodology, graphic design, the technology of graphic production
  or something else
- Avoid distorting what the data have to say

- Present many numbers in a small space
- Make large data sets coherent
- Encourage the eye to compare different pieces of data
- Reveal the data at several levels of detail, from a broad overview to the fine structure
- Serve a reasonably clear purpose: description, exploration, tabulation, or decoration
- Be closely integrated with the statistical and verbal descriptions of a data set. (p. 13)

As shown in Table 2, the level of complexity achieved in the visual systems of notation, although intriguing, does not make it possible to meet these criteria. Although dance notation attempts to be inclusive, as Kristein (cited in Tufte, 1990) explained, it leaves the dancer with an alphabet to be "deciphered" and applied and fails to meet Tufte's second criterion: "to induce the viewer to think about the substance rather than about something else" (p.13). The effort required to decode a system engages requires the dancer or the viewer to decipher the methodology, graphic design, or another feature.

When dance notation is considered as a system that gathers data, other problems arise as well, such as accessibility, legibility, and immediacy. The notation systems show data, but they may distort what the data have to say. In some instances, the level of abstraction goes so far that any relationship between symbol and information (movement) is lost. The relationship between the actual movement and the symbol used to represent it is arbitrary; therefore, the relationship has to be learned, which is another factor that hinders the process of decoding.

6. Does notation communicate to a general audience?

Dance, as movement, is symbolic communication expressed in a personal manner. It changes according to the many variables involved, such as ability, effort, inspiration, and spontaneity. Although dances need to be recorded for preservation

and reference, dance notation may also be used for personal reference as a reminder

of the dancer's steps or as a set of notes to help memorize the dance. As movement,

dance is symbolic communication (Moore & Yamamoto, 1988, p. 70), and thus the

attribution of meaning varies from person to person. Judith Lynne Hanna (cited in

Kraus, 1991) addresses this variation in meaning:

> ...dance is a whole complex of communication symbols, a vehicle for
> conceptualization. It may be a paralanguage, a semiotic system, like
> articulate speech, made up of signifiers that refer to things other than
> themselves... Obviously, dance does not communicate in the same
> way to everyone. Within a culture, differential understandings of
> symbols may be based on, and sometimes be exclusive to the dancer's
> age, sex, association, occupation, political status groups, and so on. (p.
> 18).

Although written language, like the rock and cave paintings, locks ephemeral

forms of communication in time and space (Kunz, p. 8), the systems developed to

communicate dance as data do not communicate the beauty of the forms created

through the body in space. Dance notation becomes a complex system that records

the mechanics of movement and becomes a language deciphered only by those who

have been trained. Thus, dance notation does not offer visual nuances created by

accents, emotions, energy, and qualities of movement.

As symbolic communication, dance forms and structures acquire different

meanings in relation to their context. These qualities are lost when attempts are

made to encode the movement of a dance as data. Perhaps these forms and

structures in typographic design could enhance typographic meaning and

expression of the dance forms while maintaining the expressive qualities. The next

section is an overview of the ways in which movement and dance have been a

source of expression in visual communication. The artists and designers discussed in

the next section considered the question of whether movement should be treated metaphorically or literally on a two-dimensional, flat surface. Some of these design movements are Cubism and Futurism, the works of Lazlo Moholy-Nagy and El Lissitzky (cited in Mansbach 1980) as well as other contemporary examples.

Movement and Dance as Image in Visual Communications

Dance notation, as a visual system is the abstraction of movement and/or dance forms from three-dimensional forms to two-dimensional graphics that convey information. Dance notation attempts to interpret movement as a mechanical and systematic visual language, providing a precedent to look as dance forms from basic visual elements, such as lines and planes. Thus, the study of dance notation is relevant for this study because it represents background information to the use of dance forms as an alternative structure for typographic design.

Movement in visual systems has been studied from two perspectives: movement as data and movement as image. Although both approaches share a common origin, marks and drawings made in caves by early societies, the two approaches have different objectives. In the approach of movement as data, the purpose is to communicate a mechanical operation of the body as it progresses in time and space. In the approach of movement as image, the purpose is to enhance the visual experience of reading and observation while communicating ideas and/or concepts to an audience. Thus, both approaches offer valuables insights to this study; movement as data influences me to look at dance forms as structures and abstract them into the most basic visual elements; lines and planes. Movement as

image influences me to look at dance forms as structures that will enhance

typographic design because of the dances dynamic qualities.

The study of movement as image began in the 1860's as "the isolation of sense

data - colours, lines, tones, and eventually movement... (Popper, 1968, p.7)" in the

works of art movements such as Impressionism, Cubism, and Futurism. Artists such

as Moholy-Nagy and Lissitzky faced the following question: "Should movement be

actually (kinetically) present in art or need it only be implicitly

(pictorially/psychologically) stated?" (Mansbach, 1980, p.53). These concerns were

resolved when the artists agreed that "movement should enter the picture plane as

an optical (and not as literal) phenomenon by means of the oblique (fourth

dimension) [diagonal] or through the perceptual movement of transparent

(superimposed) forms" (Mansbach, 1980, p.53). The introduction of the diagonal to

the picture plane became important because it is a metaphor for the movement and

dynamism evoked by changes in science and society. Moholy Nagy and Lissitzky

believed that the integration of movement as image through the use of the diagonal

was "the metaphor for the dynamic spirit of the new age of man" (Mansbach, 49)

and that use of the diagonal made art an affirmation of the new objective energy

forces found in the machine. Thus, the arts "would have to embrace movement in

some form in order to be modern, relevant, and truly creative"(Mansbach, 1980,

p.43-47).

The next section explores the work of artists and art movements concerned

with movement as image and discusses their interpretations on a flat surface. These

interpretations are important for the investigation of alternative structures for

typographic design because they utilize a series of visual variables in the treatment of space and form.

Interpretations of Movement as Image in Typographic Structures

Movement as image has been interpreted indirectly through visual effects in the use and treatment of elements such as space, planes, form, points of view, color, and typography, including typography's structures. In typographic design and composition, structures are thought to enhance meaning and facilitate understanding. Alternative structures break or extend accepted visual standards in order to challenge the reader, awaken the reader to social changes, or simply to explore diverse possible relationships between the spoken word and the written word. Robert Bringhurst (1996) describes the relationship between the spoken word and the written word when he states "Typography is a link... the craft of endowing human language with a durable visual form"(p.18).

Typography, as stated by Bringhurst (1996), is a link between the verbal and the visual, that is, a link between thought and speech in the form of a series of carefully arranged letters to convey meaning literally or symbolically. To convey meaning symbolically is to explore typography as a vehicle for expressing qualities such as form and movement in the space. In a typographic composition, the two main variables are type and space because they establish form and counter-form relationships (form refers as the written or visible marks on a space whereas counter-form refers to the space surrounding a marked space). These main variables may be clustered or dispersed according to the designer's intention to guide the viewer's journey. For instance, one typographic variable, letters, can be arranged

next to each other, so that they sacrifice individuality to contribute to a whole, the word and its meaning. Words make up sentences and sentences make up paragraphs, which, in turn, are blocks of text. Paragraphs are blocks of shapes in themselves interacting with the space and are often arranged according to a predetermined structure by the designer.

Typographic structures are often predetermined, but they may also be the result of a combination of content, the designer's intentions, and explorations of the space. A logical approach to a discussion of interpretations of movement as image in typographic structures would start with Cubism because of its treatment of space. Space is a constantly changing element in the canvas and the spectator's interaction in Cubist compositions. Cubism integrates multiple points of view in the study of subject matter through juxtaposition of elements and diagonals. Futurism follows because, for the Futurists, movement means change. The Futurists express their belief in change through not only the principles they stood for, but also through the treatment of the elements and the media they chose for communicating those principles. The discussion of Cubism and Futurism is followed by a brief discussion of two designers that applied some of the explorations of the Cubists and the Futurists. The discussion continues with International Style and Post modernism, exploring what typographic expression meant for each movement and how each definition affected typographic structures.

Cubism and Space

In Cubism, an object is abstracted to its basic geometric shapes, while the spectator's point of view is the focus of the exploration of movement as image. As

the spectator moves through the space, the perception of an object changes and its

shape seems to acquire altered forms according to the spectator's point of view. The

spectator moves and the object transforms itself in their eyes. As a result, Cubism

broke away from the linear relationship between spectator and space represented by

one point perspective in a picture plane of the Renaissance. Cubists maintained that

"reality has many definitions, and that therefore objects in space—and indeed space

itself---have no fixed form or absolute form" (Arntson, 1998, p. 181). This Cubist

thought is consistent with an exploration of structures for typographic design. If

space has no fixed form, a structure that takes place in a two-dimensional

composition can be challenged in many ways. In the example of Cubism, the

possibilities of interpreting objects and space are explored from multiple points of

views on the picture plane. As a result, the image appears to be distorted, since it

was presented from all the possible angles at which the spectator could be exploring

an object. The effect of distortion was achieved through super imposing,

juxtaposing, and layering of planes, colors, and shape. In addition, the objects were

abstracted to pure forms, such as cylinder or sphere, and were presented from

multiple points of view (Meggs, 1998, p.232).

The integration of multiple points of view and abstraction of an object to its

pure forms and color opened new avenues for typographic exploration and use of

the grid. For instance, the works of Fernand Léger show not only the abstraction of

objects to pure forms but also the integration of experiences as information

organized through color and planes. Meggs confirms that in Léger's painting *The*

City, "perceptions of the colors, shapes, posters, and architecture of the urban

environment—glimpses and fragments of information—are assembled into a composition of brightly colored planes" (1998, p.233).

The idea of experience as information was also explored through typography in Cubist paintings. However, in many instances, typography was also used as a representation of the physical reality of the canvas, a flat surface. Because letterforms are flat shapes in space, they are used as "autonomous signs" and as "a physical fact" of their reality in the canvas (Arntson, 1998, p.194). Thus, letterforms in Cubism transcended their utilitarian purpose as agents of information. They became a symbol, a conceptual representation of a thought, an experience, an intention, and even an emotion actively engaging in the redefinition of the space in the canvas. Typography in Cubism intended to evoke an experience and to enhance the relationship between pictorial space and meaning.

Futurism

Futurist art and typography are important to this study for three reasons. First, Futurism, like Cubism, broke away from the linear relationship between spectator and space, but Futurism went a step farther. Futurist artists, who wanted to place the spectator at the center of the picture, (Arntson, 1998, p. 218) viewed the past and its institutions as a way of keeping the spectator in a passive state. For the Futurists, the new order was an industrial society characterized by the speed of the machine, and speed was the sign of a modern world that needed "a rebellion against the cultural torpor into which Italy had sunk in the 19th century" (Arntson, 1998, p. 218). Futurism attacked Italian aristocratic society, calling for change, energy, and progress promoting "the artistic expression of motion, metamorphosis and the simultaneity of vision itself" (Arntson, 1998, p.217).

Second, Futurism explored the possibilities of motion as image. The subject matter in Futurist compositions is not only the movement of an object but also the seeming metamorphosis of this object while the object is moving. An example of this visual interest can be observed in Giacomo Balla's painting *Dynamism of a Dog on a Leash*, (Figure 6) in which the dog appears to have more than four legs. Futurists argued that a horse in motion has more than four legs; it has twenty because the repetition of forms shows motion in sequence. Therefore, a moving object appears to be distorted and unnatural because motion appears to have a physical effect on the object.

Third, Futurists transferred the ideas of beauty of the machine, energy, and motion to typography. In Futurists' writings, they treated typography in an unconventional manner; they "defied correct syntax and grammar" (Meggs, 1998, p.235). Furthermore, Marinetti, the founder of the Futurist movement, called for "typographic revolution" against classical tradition. The result was dynamic and interesting layouts produced by copying and pasting word by word and/or letter by letter. The intention of copying and pasting elements on the page was to liberate words from the conventional horizontal and vertical structures. Futurists sought to communicate messages of change and revolution, not only through language, but also through breaking away from the conventions that governed the language structurally. The Futurist compositions were non-linear because, as they sought to communicate a concept through a word, the Futurists also sought to communicate its emotion and meaning audibly and visually simultaneously. Thus, typography became an avenue for expression, as Meggs (1998, p.235) states, a "concrete and expressive visual form." Words were placed on a composition according to their

meaning and the emotions associated with the subject matter. Using extreme size changes, typographers tried to emulate sound and energy.

Figure 6 Image of Giacomo Balla's *Dynamism of a Dog on a Leash*

These transformations in typography meant that typography had to change according to the sounds in the environment. Typography became a visual expression of sounds, of the speed of the machine, and of energy. As a result, the compositions relied on a system of contrasts and flowing structures away from the vertical/horizontal structures that make typography look as if it were moving or

floating. Other artists and designers, two notable examples of whom were Moholy Nagy and El Lissitzky, further expanded on these typographic qualities. They applied these visual explorations to typographic compositions to create new avenues for typographic expression.

Moholy-Nagy

Influenced by Cubism and Futurism, Moholy-Nagy equated a single point perspective with passive familiarity with the medium. Convinced that the arts should reflect the changes in science and technology, he sought to free the spectator from a nature-controlled world, in favor of a human-controlled world, and to move the spectator into a more significant, interactive, and engaging relationship. He used Cubism's techniques, such as the birds-eye view and superimposing layers. The superimposition of layers and planes would force the spectator to look around the piece, creating a distortion of the object which he calls "vision in motion." He claims that the viewer's perception of an object seen from different points of view is also distorted and these distorted perceptions are new to our learned perceptions of reality (Moholy-Nagy, 1947, p. 153).

The camera gave Moholy-Nagy a new avenue to explore perceptions of reality as he sought to portray movement as image through the juxtaposition and distortion of forms. Through experimentation with light and the camera, Moholy-Nagy "reconstitute[s] the relationship between opposites...through distortion" (Mansbach, 1980, p. 58). His experiments included moving the camera in diagonal, horizontal, and vertical directions, as well as filming with mirrors (Mansbach, p. 58). Moholy-Nagy's experiments are important to my study because he demonstrated

that "the typographic word could possess some of the same characteristics used by images, such as movement and occupation of space" (Elam, 1990, p. 4).

On the topic of superimposition, Moholy-Nagy credits Futurism, but he also identifies what he considers an important philosophical difference between Futurism and Cubism. Moholy-Nagy states the difference of Cubism use of motion as follows:

> as a means of better grasp the object in space; futurists are interested in motion for the sake of motion." They wanted "to reveal the interpretations of time and space and to capture the exciting characteristics of the newly invented, fast-speeding airplanes and cars; and they ... worship the look of the machine. (Edgerton, 1987, p. 27).

Moholy-Nagy used both Cubist and Futurist principles in interpreting motion and visually communicating the essential qualities of subject matter through typography. For instance, the poster *Pneumatik*, 1923 (Figure 7), announces a tire, showing the essential qualities of the subject matter, the tire. Through the use of perspective, organic lines leading the eye to a vanishing point and typography receding in the background, the poster shows the type as if perceived by the racecar. In this poster, Moholy-Nagy redefined space and distorted the type, placing it in a diagonal line that recedes in space for the purpose of communicating the dynamic quality of the product. Moholy-Nagy treated movement metaphorically through manipulating the visual elements in a composition, whereas other designers, such as El Lissitzky, experimented with distortion and the diagonal as a grid line.

Figure 7 Image of poster *Pneumatik*, 1923.

El Lissitzky

Work like that of Moholy-Nagy and Lissitzky is important because it shows

movement treated metaphorically to allow its dynamic qualities to be

communicated. Examples of their work show context and information linked to the

idea of movement. Typography is manipulated to move with the planes, giving it power over images "as the primary visual force" (Elam, 1990, p.1). Thus, movement treated in a diagonal or diagonal planes became a natural consideration for typographic treatment to convey meaning.

As a typographer, Lissitzky incorporated the diagonal (space-time continuum) in his book designs while maintaining his beliefs in the social principle of an art accessible to all. According to Meggs, Lissitzky "constructed his designs on dynamic diagonal axis with asymmetrical balancing" (Meggs, 1998, p. 265). An example of his design is the book *The Isms of Art*, in which Lissitzky alternates between three-column horizontal, three-column vertical, and two-column grids. Figure 8 shows how the alternation of column size creates a rhythmical application of text in space-time relationship. The book "was an important step towards the creation of a visual program for organizing information." (Meggs, 1998, p. 265).

Another example of Lissitzky's use of "dynamic diagonal axis" is the poster *USSR Russische Austellung* (Figure 9), which is a clear example of movement treated metaphorically by the introduction of diagonal lines. These lines are implied in the photograph used for the poster and the use of the diagonal is seen in both lines and juxtaposed planes receding in space to create an illusory space. Lissitzky also aligns typography in a diagonal as a means of communicating dynamic and symbolic qualities of the subject matter (Elam, 1990, p. 4). The typography recedes with the planes towards a vanishing point, creating the illusion of three dimensions. This illusion is an important quality since both Moholy-Nagy and Lissitzky had agreed to respect the flatness of their compositions and create the illusion of depth through other means. The poster, *USSR Russische Austellung*, (Figure 9), is an example of the

use of an alternative grid for typographic expression based on the implied lines in the photography.

Figure 8 Image of El Lissitzky's text format *The Isms of Art*, 1924

Figure 9 Image of El Lissitzky' s poster *USSR Russische Austellung*, 1929

International Style

International Style is important to this study because of International Style's

treatment of space, lines, planes, and typography in a flat composition. The

compositions designed in International Style movement are based on basic

geometric forms favoring a functional approach over ornamentation. The structured

geometrical design work that characterizes International Style is based on Cubism's

reduction of the subject to basic geometrical forms. According to Meggs (1998), this

influential characteristic can be seen in the work of Fernand Léger:

> The letterforms in Léger's paintings and graphic work...pointed the way
> toward geometric letterforms. His almost pictographic simplifications of
> the human figure and objects were a major inspiration for modernist
> pictorial graphics. (p. 233)

Meggs (1998, p. 320) discusses the use of structured geometrical designs

further when he states that International Style designers believed in a universal

visual language based on purity of form, as can be seen in their preference for the

geometrical proportions of sans-serif typefaces. The grid or a typographic structure

was also considered an expression of a universal language based on purity of forms,

hence the space on a page was divided mathematically and typography and other

elements were arranged in an asymmetrical manner. Constructing a mathematically

organized grid allowed the designers to be objective agents of information.

International Style as a design movement rejected personal expression in

favor of objective, factual, and universal solutions to design problems.

Ornamentation was rejected in favor of clean, straightforward approaches to

design with the design solution coming from the nature of the problem itself and

not from personal preferences.

Although International Style approaches design in a scientific and objective manner, it provides useful examples of using typography and space in expressive ways. The works of designers Armin Hofmann and Rosemarie Tissi are examples of typography used both in an expressive and playful manner. For instance, the work of Armin Hofmann expresses solutions that come from the nature of the problem while using typography and space in expressive ways. The poster *Giselle* 1959 (Figure 10) contrasts the softness of the dancer and hardness of the geometric typeface. The dancer's image, captured while the dancer was turning, is blurred. The type used for the word "giselle" with its geometric, hard edges could signify the element that stabilizes a spinning dancer, the bar. The type could also be our clear view of the dancer when she is facing the audience, or it could serve as the visual stop viewers need to keep their eyes coming back to the dancer.

Armin Hofmann's design style is based on the principle that contrast creates intriguing and beautiful forms, and, in that sense, Hofmann's work is similar to a dance. Contrasting elements interact together as a unit in rhythmic conversation and each element complements another, creating balance and dynamism. As seen in Figure 8, Hofmann's style contrasts hard-edge lines with curved and soft lines that interact and communicate in space. Meggs (1998) describes Hofmann's use of contrast as follows:

> Hofmann seeks a dynamic harmony where all the parts of a design are unified. He sees the relationship of contrasting elements as the means of breathing life into visual design. These contrasts include light to dark, curved lines to straight lines, form to counter form, and dynamic to static, with resolution achieved when the creator brings the total into an absolute harmony. As with music, painting, or dance, design moves to a higher place of expression when this resolution is accomplished (p. 327).

Figure 10 Image of Armin Hofmann's poster *Giselle*, 1959

Figure 8 is an example of the relationships of form and counter-form based on contrasts (e.g., blurred and soft vs. hard edged and clean). This shows similar interactions that occur in a partnered dance. In partnered dance, one of the dancers moves while the other acts as a support or point of reference. The typography in this poster acts as a point of reference for the dancer's blurred image.

Rosemarie Tissi also took advantage of form and counter-form relationships to use qualities that are more organic and to free the typography

from a strict grid construction. Meggs (1998) states on Tissi's creative approach to the use of forms:

> This studio loosened the boundaries of the International Typographic Style and introduced elements of chance, the development of surprising and inventive forms, and intuitive visual organization into the vocabulary of graphic design. (p. 330)

This playful quality and intuitive visual organization is evident in her poster, *Poster for Merce Cunningham Dance Company*, 1991 (Figure 11). The typographic structure appears to surface from the dancers actions, jumping on the air. Rather than treating the typography in a mathematical grid, Tissi allowed for the forms the dancers are creating in space to become the structural grid. As a result, the typography is curved and appears to be floating in the space because it has been applied to the implied diagonals the dancers are creating. The typography stands for the dancers' path or the trail of the fluid motion of their jump. Thus, the typography dances with the dancers and becomes the motion.

Armin Hofmann and Rosemarie Tissi both expanded on the parameters that International Style had established for typographic expression. In their work, the typography is not a passive element on a two-dimensional composition, but an element that becomes alive to establish an engaging relationship with the viewer. The typography, as we have seen, dances, moves, and floats, inviting viewers to look at it, as if they were looking at a painting layered with colors and shapes. This quality becomes more evident in Post-modernism, the next topic to be discussed which its departs from International Style and influences my study of dance forms as structures for typographic design.
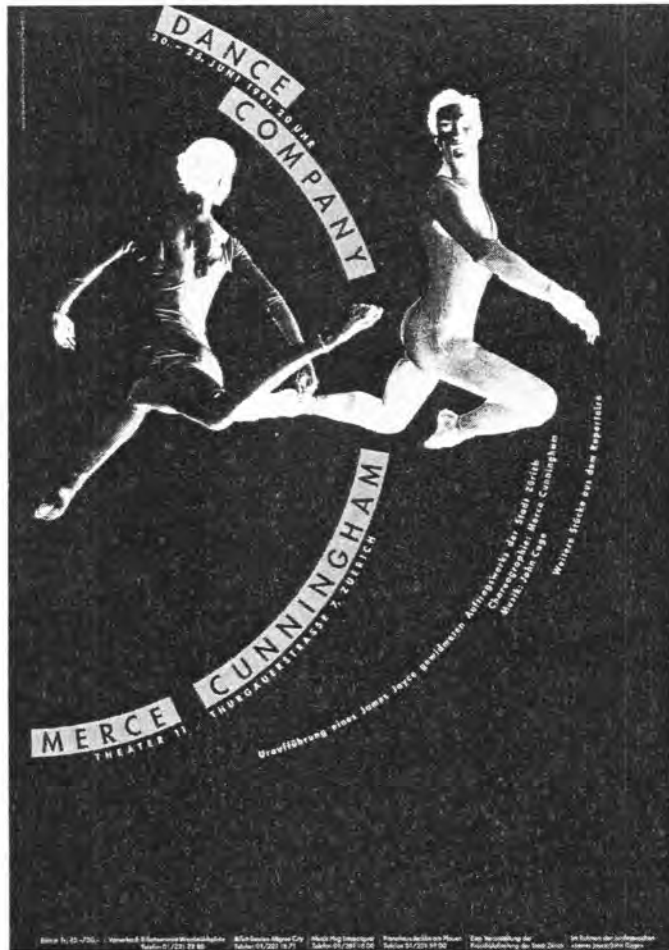
Figure 11 Image of Rosemarie Tissi's *Poster for
Merce Cunningham Dance Company*, 1991

Post-modernism

International Style emphasized clarity, simplicity, and purity of form and

abandoned the vernacular, ornamentation, decoration, and personal expression.

In contrast, Meggs states that Post-modern design "drew upon these resources to

expand the range of design possibilities" (1998, p. 432). Meggs adds that Post-

modern design is "subjective and even eccentric; the designer becomes an artist

performing before an audience" (1998, p. 432).

Post-modern design is important to this study because of its dynamic

qualities are achieved through application of principles of Cubism and Futurism

and advances in computer technology. From Cubism, Post-modern design

borrows the use of multiple points of view and juxtaposition of planes. In

addition, from Futurism, Post-modern design takes the system of contrasts, the

appearance of randomness, and the use of diagonal lines. These design principles

(i.e., multiple points of view, contrast, and use of diagonal lines), when applied

to typography, result in dynamic compositions.

Post-modern compositions are characterized by typography that interacts

with the space as the image on the two-dimensional surface. Unlike International

Style, the typographic structures are in most cases not predetermined. Rather, the

typographic structures are established as the design process grows. An example

of this approach to design is Willi Kunz. Kunz (1998) states that typographic

design can proceed from two types of structures: an optically improvised visual

structure or a predetermined structure (p. 56). Meggs (1998) describes Kunz's

approach as a structure that unfolds in interaction with the message:

> He builds his typographic constellations with concern for the essential
> message, the structure unfolding in response to the information to be
> conveyed. …he believes design must be resolved working with the actual
> typographic materials… (p. 441-442)

The grid or typographic structures are drawn upon diagonal lines in which the

typography moves or dances in the two-dimensional space. The space is treated

as planes that intersect or connect juxtaposing elements that may appear to be

confronting each other. Through the use of contrast, elements appear to be alive

and moving back and forth on the page as exemplified in the work of April

Greiman. Figure 12 and 13 show how diagonal, contrasts, juxtaposing, and overlapping create the sensation of randomness, depth, and movement. The type seems to act like moving clouds because of the use of transparency. Meggs (1998) explains Greiman's use of depth as a combination of elements:

> Greiman achieves a sense of depth in her typographic pages. Overlapping forms, diagonal lines that imply perspective, gestured strokes that move back in space, overlap or move behind geometric elements and floating forms that cast shadows are the means she uses to make forms forward and backward from the surface of the printed page. (p. 439-441)

Typography in Greiman's work becomes an active element as powerful as the images she incorporates. Her work is important for my study because of the evident freedom by which typography is applied to the composition. The work is heavily layered, and the type appears to float on the page. This quality mirrors dance forms in which the dancers, although working with a set of steps, move freely and almost effortlessly. In both disciplines, dance and typography, viewers not only understand the elements for their utilitarian purposes, but by altering their context or our perception, their beauty is highlighted. In Greiman's work, the typography is applied as a complement to the images she uses. Figure 12 shows this approach, which is similar to the work of Hofmann in *Giselle* (Figure 10) in which he combines blurred images with clean type. In a similar fashion, the images in Greiman's work are blurred and/or pixilated; by contrast, the type is clear and clean. Furthermore, Greiman also share similar typographic treatment to Rosemarie Tissi's poster (Figure 11) in which the type is curved and enclosed in boxes. However, Greiman goes a step by farther using repetition and altering the perspective of the typographic forms. Tissi's and Greiman's work

both have the use of an alternative grid in common. In Tissi's work, the

typographic structure came from the dancers, and in Greiman's work, the

typographic structures are carried out from the implied lines of the images she

uses.

Figure 12 Image of April Greiman's poster for
Proposal for Digital Campfires Exhibition Walker Art Center, Minneapolis, 1994.

Figure 13 Image of April Greiman 's poster
Havana Project exhibition, 1996

The use of the diagonal is a characteristic element in Post-modern design,

along with other principles, such as ornamenting, juxtaposing, overlapping, and

intersecting forms and/or type. These principles are expanded even further with

the use of computer software. Advances in computer technology allow designers

to expand the use of alternative structures for typographic expression with

flexibility. Greiman started a trend of digital typographic exploration while still using principles laid out by her predecessors from Cubism, Futurism, and International Style.

Other designers have made use of the principles (form and counter-form, contrast, diagonal lines, juxtaposition, overlapping, layering, blurring, and super-imposition) explored by the designers considered in this study (Lissitzky, Moholy-Nagy, Hofmann, Tissi, and Greiman) while expanding on the use of alternative structures for typographic design. For instance, California Institute of the Arts makes use of an image of water as a typographic (Figure 14). The typography not only merges in the water forms to evoke sensations of freshness, but it also serves as a visual cue for a nontraditional dance performance. The typography is altered and distorted and yet, as it reaches the bottom of the poster, it is clear.

Figure 14 Image of CalArts' poster for *Spring Dance Concert*, 1994

A similar source of design is used as an alternative structure in the poster *Gravy Font* (Figure 15). In this poster, the structure for the typography comes from the image of the gravy. In comparison to the California Institute of Arts poster (Figure 12), the typography in the Gravy poster appears to be thicker and heavier. Interestingly, the gravy being poured out from the saucer transforms itself in the "G" while creating a swirling, luscious texture characteristic of gravy.

Figure 15 Image of Margo Chase's poster *Gravy Font Poster*, 1998

Other sources for alternative structures include the forms dancers create

in space. Designers like Rosemarie Tissi have explored the use of dance

photography by freezing the movement and making use of the implied lines in

the composition to apply the typography (Figure 11). In her poster, however, the

dancers are still present as an image.

Designer Jennifer Sterling has also used a dancer as an alternative

structure for typographic design. In her poster *Stephen Petronio Company*, 1998,

for San Francisco Performances Series (Figure 16), she uses the dancer's frozen

motion as a structure to align the typography. However, contrary to Tissi's dancers' images, Sterling's dancer appears to merge in the background. The dancer is balancing his body on one leg, causing it to slightly lean to the left. This creates a diagonal which Sterling takes advantage of to place the performance's title. At the same time, she uses the right side of the poster to place typography from left to right to give a sense of stillness as well. The typography to the right appears to almost wrap the dancer's body and contributes to the sense of stillness by creating visual texture.
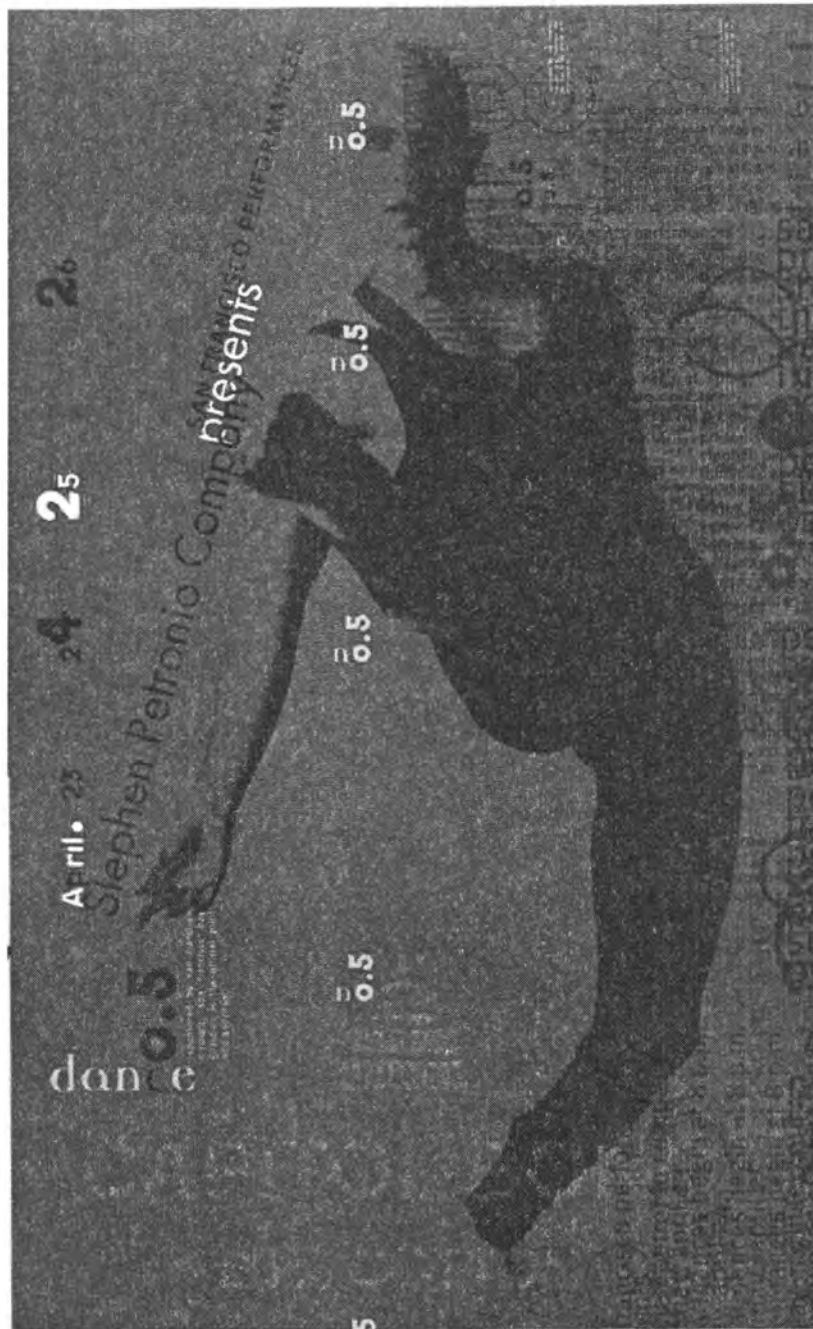
Figure 16 Image of Jennifer Sterling's poster
Stephen Petrorio Company
from the San Francisco Performances Series, 1998.

The studies of movement as data (dance notation) and movement as image are important for this study because both approaches use movement as a source of visual expression and/or communication. Movement as data isolates movement from its context and creates structures that, although beautiful as a system, do not visually communicate the dynamic qualities of a human body in movement. However, the approach of movement as image attempts to communicate the dynamic qualities of things in motion and their context. Thus, typography has been an important aspect of exploring and communicating the essential qualities of things in motion. From Cubism to Post-modernism, typography has been a medium to communicate the dynamism of objects in motion, and the changes that were taking place in society and the visual and conceptual power of a composition. Consequently, the search for new avenues for typographic expression intensifies as we confront new challenges to communicate to a fast growing society.

Therefore, I have considered experimenting further with the use dance forms as an alternative source for typographic design. Armin Hofmann, Rosemarie Tissi, and Jennifer Sterling have used dancers for their typographic compositions in inventive and innovative ways, thus they provided me with an inspiration and a desire to expand on their ideas. For instance, these three designers have used photographs as the alternative structure for typography, but not the actual dance forms. This study attempts to use ballroom dance forms as the underlying structure for typographic design. I believe that just as water and gravy (Figures 14 and 15) may be used as a typographic structure to convey a sense of movement and expression, dance forms may also be used as an alternative structure for typography to convey a sense of the energy and dynamic qualities found in dance.

Ballroom dancing is based on contrasts of form and counter-form relationships that are also expressed in typography. For instance, in ballroom dancing the interaction of the bodies create structures that take many forms such as dominant vs. subdominant, passive vs. aggressive, loud vs. quiet, initiator vs. responder, and complement. These interactions, also found in typography, are commonly used as a conceptual framework. For example, letters, words, sentences and paragraphs, all with space, create form and counter-form relationships similar to those found in dance. Through the use of design principles such as repetition, direction, and similarity, typography creates a visual language that communicates and evokes emotional forms similar to those found in partnered dance.

The selected dances for this study are fox trot and Argentine tango because of their significant differences. Fox trot is a lighter, fluid dance, whereas, Argentine tango is, in a manner of speaking, heavier, and, in some instances, somewhat confrontational. These two dances, when observed, visually create a different language between the partners. The next section presents an overview of these dances, a historical background, and an overview of their differences.

Dance Structures: Fox Trot and Argentine tango

Dance elements and principles include sound, movement, line, pattern, form or structure, space, shape, rhythm, time, spontaneity, and energy (Kraus, 1991, p. 17). For the purposes of this study, the focus is on the principle of structure or form. This principle is looked at from the perspectives of two dances: fox trot and Argentine tango. However, a definition and overview of social or ballroom dancing are needed first.

Ballroom Dancing

Contemporary ballroom or social dancing has resulted from an evolution of several dance forms through history. Between the 14th and 16th centuries, dances belonged to the upper classes and were taught and choreographed by dance masters. These dances were commonly executed as a group in a ballroom. Ballroom dancing, as we know it today, started with the introduction of the waltz after the 19th century (Stephenson and Joseph and Joseph, 1980, p. 13).

Ballroom dances are categorized in two styles: smooth and Latin. Smooth dances refer to those dances in which the feet are pointing straight ahead, weight is taken on the heel, transferred to the ball or half-toe, and then transferred back to the entire foot. The man's right hand is placed on the woman's left shoulder blade and the woman's left hand rests at eye level on man's right arm or shoulder. Both the woman and man's elbows are extended and slightly curved. The focal point for both is over the partner's right shoulder.

In Latin dance style, the feet are turn out slightly, the weight is taken on the inside ball of the foot and transferred outward to the entire flat foot. The arm

placement on the partner's body is the same as the smooth dances. However, the arms are bent at the elbow at approximately 90 degrees. In Latin dances, dancers have more eye contact (an exception is Argentine tango), and the weight is transferred after the step is taken (Rushing and McMillian, 1997, p. 2-3).

Fox trot and Argentine tango could be historically categorized as Haute and Basse Danse respectively. In the Renaissance Court, dances were divided into two broad categories, Basse Danse and Haute Danse (Kraus, 1991, p. 65-66). Haute dances emphasize elevating the body; thus, the dance is characterized by the use of skips, jumps, and a gliding effect. Haute dance seems lighter, the body is taller, and the impression is almost that of floating. Fox trot could be considered a haute dance because its emphasis is in an upward motion. Basse dances are those, in which the feet do not leave the floor, the emphasis is low to the ground much like Argentine tango. Fox trot and Argentine tango are also different in several additional aspects; one of them is their structure. In the fox trot, shoulders and heads are away from each other, while the bodies are connected in the middle, almost forming a "V," or more accurately, an "X." Argentine tango, however, forms an "A". Heads are connected or much closer, almost touching at the cheeks, and shoulders are close, while the partners are slightly separated at the thorax and lower body to provide space for the foot patterns. The two dances are danced in closed position, yet, with opposite emphasis, as the following more detailed description makes clear. Another difference between fox trot and Argentine tango is their background and development. The next section presents a brief overview of both dances.

Fox Trot

The vaudeville actor Harry Fox, who was born in 1882 in Pomona, California, and who was the grandson of George L. Fox, the clown, is credited with inventing the fox trot in 1914. Fox appeared in several shows in New York, teaming up with Yansci Dolly, of the Dolly Sisters. The fox trot originated on the roof of the New York Theatre, known as the Jardin de Dance, where the Dolly Sisters were dancing. The name was given to the dance because as part of Fox's act, he did trotting steps to ragtime music. Consequently, people came to refer to his dance as "Fox's Trot" (Stephenson and Joseph, 1980, p. 33-34). Although the "fox trot" was not originally a partnered dance, it eventually became a partnered dance. The fox trot is a progressive dance that requires smooth and controlled movements along the line of dance. The steps are smooth and gliding. Posture is erect; knees are soft, with no motion above the hips. The slow steps (forward and backwards) are done on the heel, and the quick steps (usually when feet step together) are done with the ball of the foot (Stephenson and Joseph, 1980, p. 91). The couple usually dances in closed position, off center, close at the thorax while the shoulders lean slightly backwards.

The fox trot music is written in 4/4 time, with the primary accent on the first beat and a secondary accent on the third beat. There are two popular rhythms, slow-slow-quick-quick, also known as the magic step, and slow-quick-quick also known as the box (Stephenson and Joseph, 1980, p. 91). The footwork resembles walking.

Argentine tango

The word tango is believed to come from Africa. The Argentine historian Ricardo Rodriguez Molas notes that "in certain African tongues the word tango means closed place, or reserved ground" (Collier, 1995, p. 41). Other theories about the etymology of the word suggest for instance, that it derives from a Portuguese word, which came from the Latin verb "tanguere," meaning, to touch. Eventually the word tango in Argentina acquired the meaning of a place where African slaves gathered to dance.

According to *Critica*, the first Argentine paper of mass circulation, as quoted in the book *Tango!* (Collier, 1995, p. 44), the tango originated in 1877 in Mondongo (a town in the western side of the Monserrat neighborhood in Argentina). It was a sort of an improvised dance that people called "tango" and had the same style and movement of the candombe (a popular dance in Argentinean's African communities consisting of a combination of wild rhythms, improvisation, and semi-athletic movements). Another source, Ventura Lynch, quoted in *Tango!* (Collier, 1995, p.44-45), maintains that this new dance was simply a way of dancing the milonga (mixture of the Habanera and the polka). Thus, the tango seems to be a result of the Habanera, milonga, and the candombe. At first, the tango was done separately or in open position. Later, as other rhythms were introduced, such as the quebradas and the cortes, and the dance structure evolved to closed position.

Once the tango was widely danced, it became entangled with the brothels. However, once the Italian community embraced the tango, it started to be seen in dance halls where professional dancers worked, and it slowly started to lose, although never entirely, its association with the brothel. The Italianization of the

tango meant the addition of other musical instruments and its introduction to

Europe. All of these transformations in social acceptance affected the dance itself. As

a result, tango was then divided into three styles: smooth tangos (forerunner of the

ballroom tango), aggressive tangos, and performance tangos.

In the 1920's, the tango evolved in aesthetics, mainly due to the support of the

tango by the President of Argentina, Marcelo T. de Alvear. Musicians were

encouraged to compete for acceptance and the music of the tango experienced a

transformation (Collier, 1995, p. 119-120). Tango music now was divided into two

schools: the evolutionary (focusing on melody, harmony, and interpretative

qualities) and the traditional (focusing on rhythm and a more danceable quality).

Tango is an evocative dance. In Argentine tango, the man's body is erect; it

does not turn. The tango became a sign of masculinity for the men and it is

customary for males to practice together. Although the tango is believed that to be a

gender-led dance introducing male bravura, female aggression is also an important

quality that makes this dance both a physical and an emotional interaction. The

dance is an embrace because it depends on the friction of the partners' bodies. About

the interlacing of the partners' legs is particular to this dance creating a

complementary relationship of based on symmetry, Collier states:

> The dance is an embrace, a hug of mutual force. The partners exchange
> leadership, they communicate. What are the visual associations of the tango?
> The forms of Art Deco, with which it grew up... It was also the age of
> Futurism, creative freedom and abstraction. (Collier, 1995, p. 182)

Argentine tango is a dance in which no set rhythm is assigned or taught to

the dancers. According to Valerie Williams, the steps are taught neutrally so that the

dancers can make their own application to the tempo of the music. Therefore,

Argentine tango is more of a conversation done at the pace of the music. Argentine tango can be executed in any or all of the three styles: smooth, aggressive and/or performance, because the steps are taught as a vocabulary of movement that can be altered, built upon, moved around, and/or improvised according to the dancers' preferences. The most important aspect of Argentine tango is learning to move with the partner, to use intuition, and feel the weight change and intentions of the partner. A comparative table is offered in this section to glance over the most significant differences of both dances (see Table 3).

Table 3 Historical overview and comparison of Fox trot and Argentine tango

	Fox trot	Argentine tango
Style	Smooth (haute-dances that are light with jumps and skips)	Latin (basse-dances that are low and into the ground)
Background	1914- Actor Harry Fox originated the dance to ragtime music executing trotting steps	Roots: African dances Mixture of *habanera, polka, and candombe* 1877 surfaced as an improvised dance commonly known as *milonga*
Posture	Straight body, leaning away from shoulders Bodies form a "V" or an "X"	Slightly leaning into each other similar to an embrace Bodies form an "A" Parallel shoulders
Body weight	Shifts from heel to ball of the foot	Shifts also, but mainly on the ball of the foot
Arms	Man's right arm on woman's left shoulder Woman's left hand on man's right arm or shoulder Elbows slightly bent	Man's right arm, around woman's back Man's left hand comes close to his body Woman's left hand on man's right shoulder, arm or back of the neck
Feet	Feet face straight ahead	Off centered, turned out slightly Legs interlace
Head	Away from each other, eyes looking past the partner's left ear	Cheek to cheek dance
Rhythm/ Emotional/ Expression	Slow-slow-quick-quick *(Magic rhythm – profile straight line)* Slow-quick-slow-quick *(Box step – drawing a box on the floor)*	Improvised, conversation Changes from slow to quick, from intimate to aggressive and intense Exchange of weight between partners No specific slow/quick 8 count steps; figures made with feet on floor
Attire	Usually pastel, light colors Flowing fabrics, feathers Light color shoes Nude hose	Dark colors, reds, blacks Tighter outfits, skirts with a slit Dark or black shoes Black or mesh hose

Conclusion

Fox trot and Argentine tango are executed with different emphasis (fox trot is less intimate and makes more use of the dancing space, whereas Argentine tango is intimate); as a result, the structural dance forms are different. These structural differences and, subsequently, different communications are the source of my typographic investigation. Furthermore, the structures these dances create in space are compelling because of the energy and dynamism they communicate.

Movement in dance can have different characteristics such as energetic, aggressive, and soft, and these qualities can be communicated through typographic design. The dance forms that occur in space as the result of bodies in motion to fox trot and Argentine tango are the essence of my exploration. As studied in dance notation, movement can be considered as data. However, movement can also be considered image as seen in the typographic examples of Cubism, Futurism, International Style, Post modernism, and contemporary designs. Because typography and dance are facilitators of language, both disciplines communicate messages or ideas to an audience. Like dance, typography also creates forms of beauty, despair, ugliness, power, violence, submission, passion, sexuality, friendship, etc. Kunz (1998) states that typography communicates not only the spoken word, but it also communicates the emotions attributed to, or inherent, in that word:

> Like language, typography is both functional and expressive, serving purposes of utility and beauty. The function of typography is to communicate a message so that it effectively conveys both its intellectual meaning and its emotional feeling. (Kunz, 1998, p. 8)

Since typography communicates both to the intellect and to the emotions, it can communicate objectively the character and quality of a movement while expressing the subjective qualities of that movement.

Typographic principles, such as letter spacing, signify the qualities implied in a movement. As an example, consider the word "slow." If the typographic principle of letter spacing (see Figure 16) is applied to "slow", the visual effect can tell us to move slowly, it could also indicate how slow a slow movement is. If we add the principles of gradation and repetition to letter spacing as seen in Figure 17 we can see how the typographic treatment is enhanced causing the reader to pause even more. Typography provides for the isolation of a movement by providing the descriptive word, but typographic principles also provide the visual expression of those words. Dance structures are the base of the creative and abstract qualities of dance and the use of these structures can enhance typographic design that could open other avenues for designers and typographers. The next chapter discusses the development of the methodology for this study and the visual explorations of the dance structures as a typographic grid.

s l o w

Figure 16 Example of the word slow with exaggerated letter spacing

ss ll oo ww

Figure 17 Example of the word slow with exaggerated letter spacing
combined value changes and repetition

CHAPTER III

METHODOLOGY

As seen in this study, movement has been approached from two perspectives: movement as data and movement as image. In the study of movement as data, the movement is encoded in small symbols that communicate dance steps to an audience. In the study of movement as image, the movement is implicitly stated following several design principles such as repetition, use of the diagonal and others to create the illusion of movement. Past and contemporary typographic explorations have made use of alternative sources to be used as typographic structures to also convey a sense of metaphorical movement in a composition. My study of utilizing dance forms for typographic design takes elements from both approaches:

•From the study of movement as data, dance forms are abstracted into basic design elements (lines, planes, and point structures).
•From the study of movement as image, the abstracted and linear dance forms are then used as structures or grids to be used as carriers of information in typographic or text design.

Because movement in a two-dimensional space is implicitly stated, this study attempts to translate three-dimensional movement into a two-dimensional form with the purpose of abstracting the forms to basic design elements. According to Mansbach (1980, p.53) movement is represented by the use and treatment of design elements:

movement should enter the picture plane as an optical (and not as literal) phenomenon by means of the oblique (fourth dimension) [diagonal] or through the perceptual movement of transparent (superimposed) forms

This chapter discusses the steps I followed to develop the methodology for the use of dance forms as typographic grids or structures. This process follows the ten steps listed below:

1. Commonalities between dance, design and typography
2. Selected dances to study
3. Photographs to identify dance movement in lines and planes
4. Attempts to abstract dance movement into basic design elements (line, point and plane)
5. Use of the abstracted dance forms as typographic structures
6. Selection of text and format to apply to the typographic structures
7. Placement of text to the typographic structures
    Initial attempts
    Two approaches
        1.Large size structures
        2.Small size structures
8. Development of criteria for typographic placement on the structures
9. Use of large size structures in square format
10. Use of small size structures in square format

Commonalities between dance, design and typography

As a discipline, dance is an artistic form of expression: a language based on movement. As a language, dance is movement that communicates in different levels to an audience, while at the same time is regulated by principles and elements used in design and typography. Partnered dance and typographic design create structures of form and counter-form that express emotional qualities, such as dominant vs. subdominant, passive vs. aggressive, loud vs. quiet, initiator vs. responder, and flirtatious vs. modest, all based on visual contrasts. For example, the principle of contrast encompasses many variables, such as size, weight, proximity,

color, shape, direction, and others. Thus, to understand what and how many variables dance, design and typography have in common I utilized a brainstorming session (see Figure 18 and Figure 19). Figure 18 shows common elements listed in columns assigned to dance, design (specifically space and form), and typographic factors. I found several commonalities between dance, space and typography. For example, the variable of space is expressed in several ways in typography, design and dance; open, tight, overlapping, touching, etc. After reviewing the first brainstorming session, I decided to explore what variables the dances selected for this study had in common with design and typography (see Figure 19).

After reviewing the brainstorming maps, it became clear that dance and typography have several variables in common: space, balance, rhythm, direction, and contrast (see Table 4). Table 4 shows, for instance, in both dance and typography, how the space is used as the frame of reference in which the forms are developed. In typography, this space or frame of reference may be referred to as the format. In dance the space is the negative or open space, i.e. the ballroom, stage, etc., in which the dance forms take place activating that space. Another example of common variables, is the variable of direction. In typography, direction is understood as the way an audience reads, for example, left to right, horizontal, vertical, diagonal, and circular. In dance, direction is understood as which way the body moves, for example, clockwise, counterclockwise, spot dance, rotation, circular, diagonal, low, medium, and high. However, both typography and dance have a dominant sense of direction, or a dominant pattern of movement. In ballroom dance, the line of dance moves counterclockwise, whereas in typography, the western reading pattern is from top left to right.

Figure 15 Brainstorming chart of parallels factors between typography, dance, and design elements

Figure 16 Brainstorming chart of parallel factors between typography, fox trot, and Argentine tango and design factors

Table 4 Design, typography and dance factors

Design factors	Typographic factors	Dance factors
Space	Grids (I, 2, 3, & 4 columns, alternative grids) Proximity (open and tight letter spacing) Leading (positive and negative, overlapping, touching, etc)	Narrow vs. wide space Open vs. closed Overlapping Touching Vital space Combinations
Balance	Symmetrical Asymmetrical	Weight (light, medium, heavy, ball of the foot, heel, toe, arms, centered, symmetrical, asymmetrical)
Rhythm	Regular vs. irregular Alternating (short, medium, long, thin, heavy, light) Soft vs. hard Perspective (distortions) Positive and negative leading Repetition (few, random, pattern, etc)	Steps and/or style (light, soft, brush, slow, medium, fragmented, even, uneven, fast, pattern, hops, jumps, hard, stomps, weight change, extending, reaching, slide, pivot, turns, etc)
Direction	Horizontal, vertical, diagonal, reverse, advancing, receding, etc.	Clockwise/counterclockwise Spot dance Rotation Low, middle, high, Slow/fast Opposite/shadow, Extending/reaching Pivot turn/open arm turn
Contrast	Form/counter form Ascenders/descenders Upper/lower case Weight (light, medium, bold, heavy) Positive/negative space Stress (italics, straight, reverse) Calligraphy, cursive Size (small, medium, large) Direction Color Style (serif, san serif, italics, straight, reverse) Width (open/tight)	Direction (clockwise, counterclockwise) Proximity (close, open tight) Weight (ball change, toes, shuffle, shift, high, low, heel) Stress (knees, low, heel) Style (soft, aggressive, abrupt, floating, confrontational, etc)

Selected dances to study

The selected dances for this study are fox trot and Argentine tango. These dances were selected based on their stylistic differences previously mentioned in pages 54-58 (see Table 3). The next section explains how these dances were abstracted into basic design elements.

Photographs to identify dance movement in lines and planes

Figure 2 shows the sketches van Doesburg went through to decode a body in movement into a linear structure that eventually became the painting *Rhythm of a Russian Dance*. For this study, I chose to use photography because it freezes the movement being executed and it provides an accurate and quick visual representation. The photos are the basis for the linear abstractions based on the example shown in Figure 2 (van Doesburg's sketches). Then, the pictures were abstracted into basic design elements: line, plane, and point explorations. These three elements are the basic components of the visual language of which every form is composed. Wong, (1993), states:

> Tackled individually, they appear rather abstract, but together they determine the ultimate appearance and contents of a design. (p.42)

Because the focus of my study is using dance forms as a structure, the abstractions became mostly linear. The three-dimensional forms of the bodies in the photos became a two-dimensional interpretation of movement on paper. The implied and expressed lines and planes of the bodies in the photographs were observed, studied, and traced in different possible solutions.

Attempts to abstract dance movement into basic design elements (line, point and plane)

Tables 5 and 6 show the initial translations of three-dimensional movement to two-dimensional abstraction done in tracing paper and pencil, as a sketch. These first attempts resulted in flat representations of the forms the movement created by the dancers. These sketches were later scanned on the computer to be refined. On analysis I found these first abstractions done in sketch form to be flat and lacking visual interest due to the lack of line and weight contrast based on the variables studied on Table 4 (space, balance, rhythm, contrast, and direction). Thus, these abstractions lacked dynamic qualities that are both parts of dance and typography. Line weight seemed to be a necessary part of building the structures because it offers visual contrast that evokes a sense of body weight and placement. This thought led to more sketch explorations adding line weight and refining the structures. I intend to explore line weight to convey body weight and placement of the legs or arms in the three or four different dance poses.

Table 5 Foxtrot photographs and linear abstractions done on tracing paper and pencil
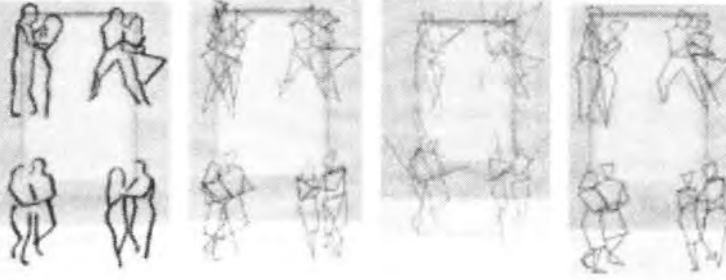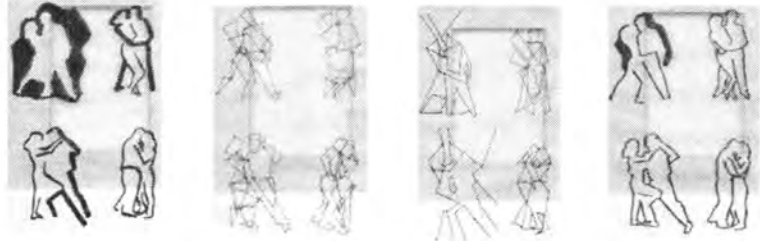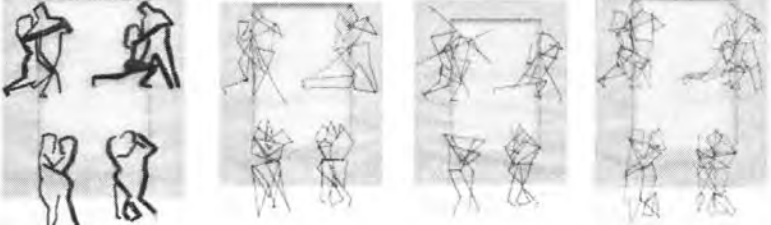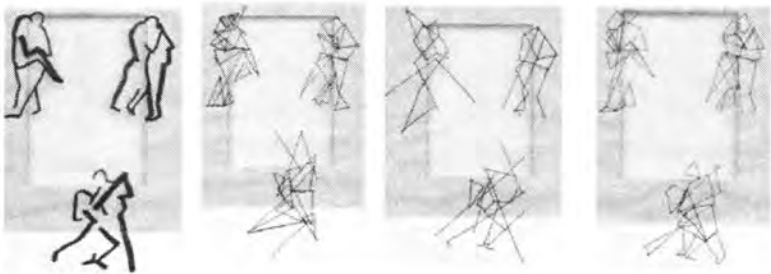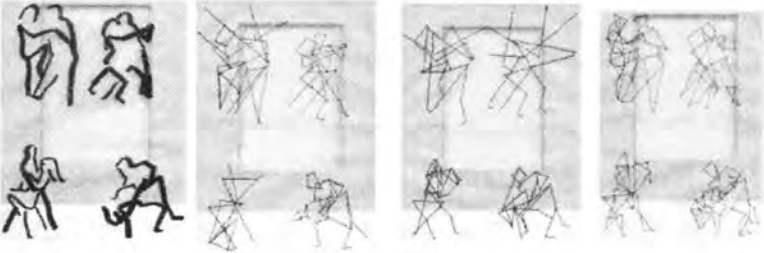
Photography	Line and Plane Interpretation

Table 6 Argentine tango photographs and linear abstractions done on tracing paper and pencil

Photography	Line and Plane Interpretation

The explorations in the computer were done first with Argentine tango poses. Since Argentine tango is a more aggressive dance and requires more decisiveness to be executed, it seemed to offer more opportunities to explore variations altering line weight in the four dance poses. Table 7 illustrates how the two-dimensional translations progressed when line weight changes are added to the dance forms. The lines are mostly diagonal, but some are straight, indicating direction of the body parts, legs, and/or arms. The points on the structures are used mainly for aesthetics, visual contrast or as a complement for line direction. The variation of line weight in the structures offers a sense of value a depth that becomes a visual metaphor of a dialogue. The changes in line weight also create a sense of visual rhythm (light, medium, heavy lines) that represents a reciprocating activity, which is characteristic of partnered dances.

Table 7 Example of progression of two-dimensional translations varying line weight in two of the Argentine tango dance poses

Photographs		Photos were taken while couple dancing. Thus, the movement appears to be frozen allowing to translate the movement into a two dimensional form
Pencil translations in tracing paper		Initial translations were flat due to a lack of variations in line weight. Forms were did not convey a sense of movement and did not communicate the idea of two people dancing or interacting
Translations refined varying line weight utilizing the computer		Variations in line weight add depth and rhythmic qualities conveying an illusion of two people moving. The heavy lines contrasting with the light and medium lines become visually interesting and communicate a sense of reciprocity characteristic of partnered dance.

From the Tables 5 and 6, I selected several dance poses that were characteristic of each dance to vary the line weight and convey a visually dynamic structure utilizing the computer to refine them. Figure 20 shows the first two-dimensional translations of movement. These first translations offered interesting and dynamic interactions of line weight similar to the way the body moves in space because they evoked a sense of depth and emphasis on movement. This method of visual inquiry was applied to the fox trot dance forms selected from Table 4. Figure 21 shows the results of explorations with line weight in Argentine tango dance forms. Figure 22 shows the same treatment applied to fox trot dance forms.
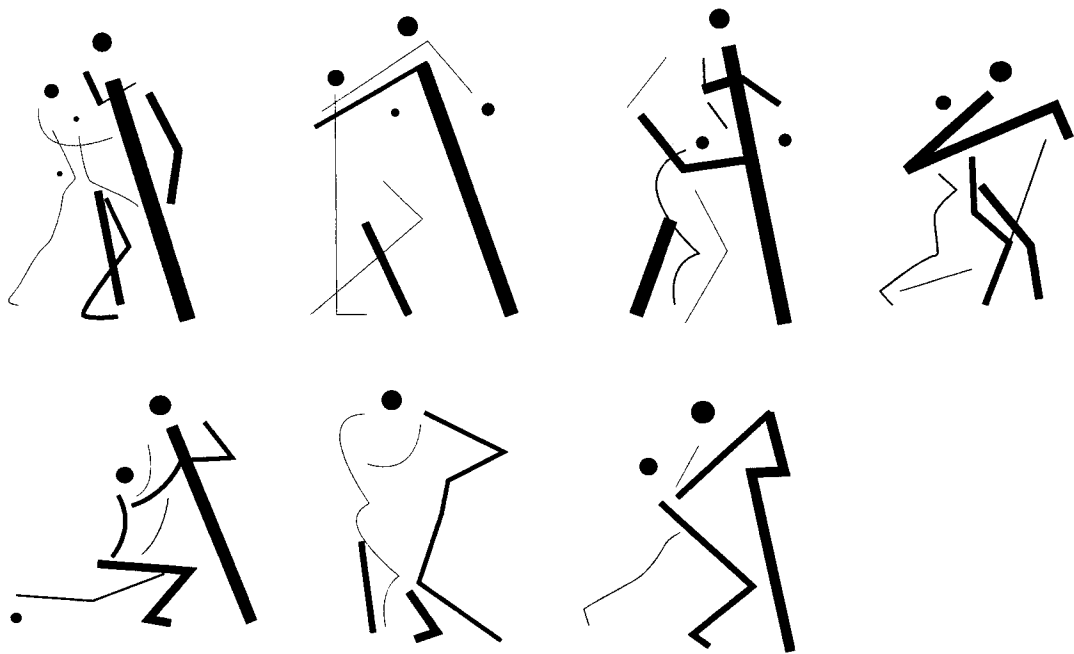
Figure 20 Explorations using line weight contrast in
selected Argentine tango dance poses
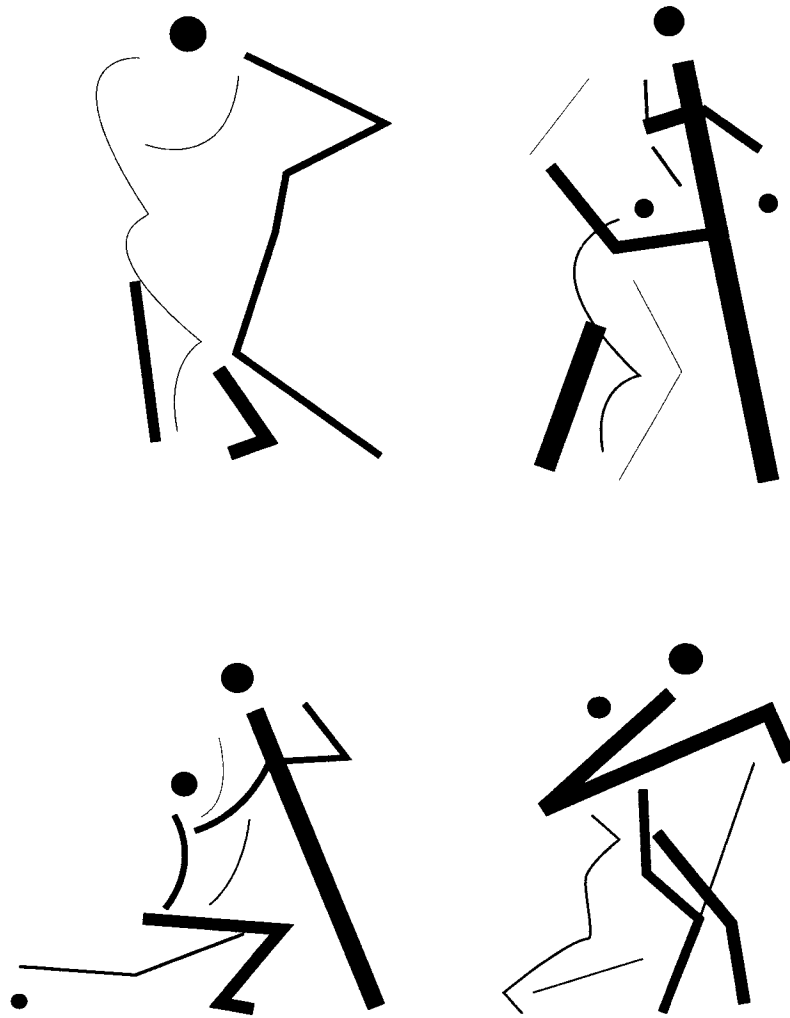
Figure 21 Characteristic forms of Argentine tango
basic movements varying line weight
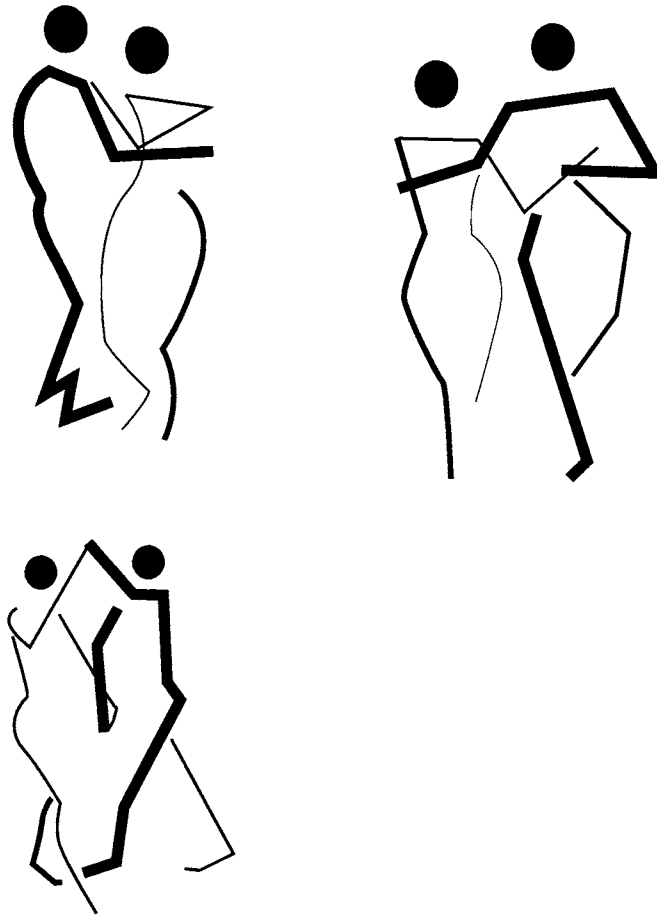
Figure 22 Characteristic forms of fox trot basic
movements varying line weight

Use of the abstracted dance forms as typographic structures

Because the purpose of my study is to use dance forms as an alternative grid

structure for typographic design, typographic exercises were necessary to find out if

utilizing these structures could enhance the reading experience. Since dance forms

communicate different emotions and convey movement, the use of these dance

forms could enrich typographic design in several ways. For example, the use of

dance structures will enrich the use of space in typographic design by departing

from the two, three or four column grid. Instead the dance forms will be the

underlying grids. Thus, the next step is to apply typography to the structures. These typographic exercises used variables like size, space, weight, and proximity. Repetition and contrast were used to create a sense of movement and rhythm. Figure 23 is an example of a fox trot structure being transformed by the application of typography in gradual manner.

Dance structure   Application of typography following the structure's contours
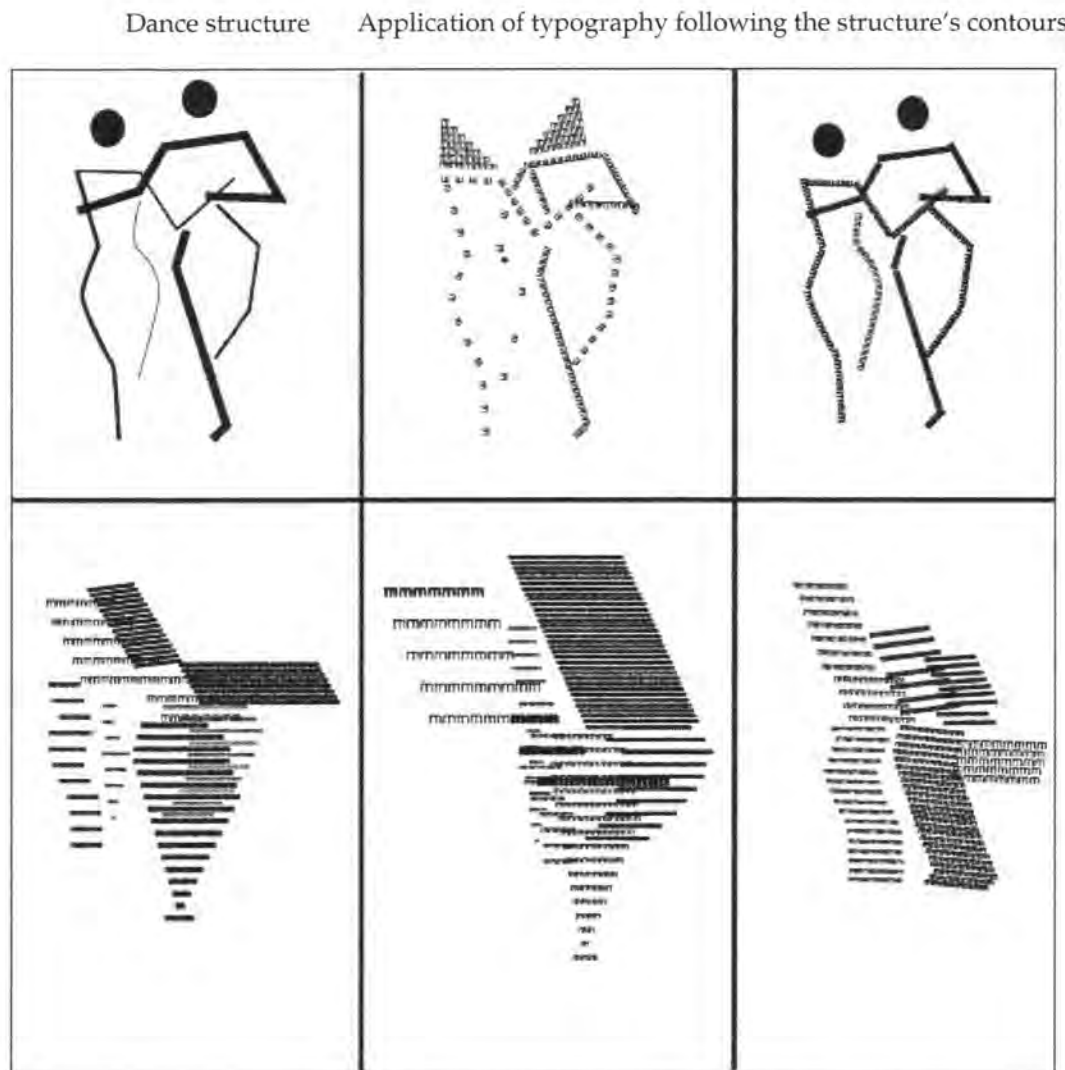
Typography applied to structure keeping structure invisible

Figure 23 Computer translations of fox trot dance forms used
as structures for typographic application

Figure 23 shows a progressive typographic application. The upper half of Figure 23 shows typographic application leaving part of the structure visible and literally utilized. The bottom half of Figure 23 shows the typography being applied to the structure while keeping the structure implied or invisible. The bottom half of Figure 23 has more visual appeal because of the use of overlapping of the type, varying degrees of letter spacing, and the use of different typographic weights (regular, bold, heavy). The bottom half of the figure also shows the structure as an invisible element. Keeping the structure invisible appears to provide a more interesting interaction of text than the upper half of Figure 23, in which the typography was applied following the contours of the structure.

Figure 24 shows the typographic exercises applied to Argentine tango structures. These exercises added dramatic size changes and value. The application of typography in these exercises appeared as attractive as the exercises done with the fox trot structure, but they seemed to lack a sense of cohesiveness.
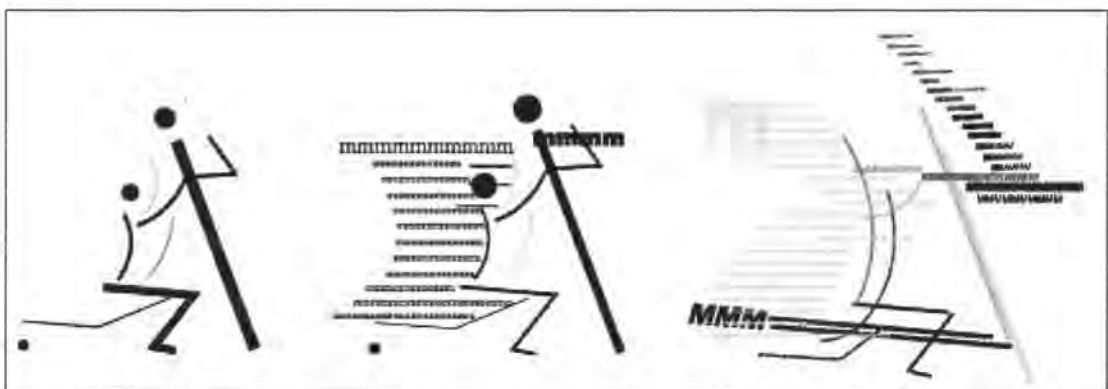
Figure 24 Computer translations of Argentine tango shapes used
as structures for typography

Figure 25 shown below is a comparison between fox trot and Argentine tango structures shown in Figure 23 and 24. To the left of Figure 25 is the fox trot structure and to the right is the Argentine tango structure. The computer exercises shown in the Argentine tango structure although they are interesting and appealing, lack a sense of cohesiveness when compared to the fox trot structure. Therefore, when typography is applied to the structures, it would be important to retain a sense of rhythm and visual unity. After I analyzed these typographic exercises, I wanted to explore with the incorporation of a fragment of a book and/or a play.

Fox trot structure   Argentine tango structure
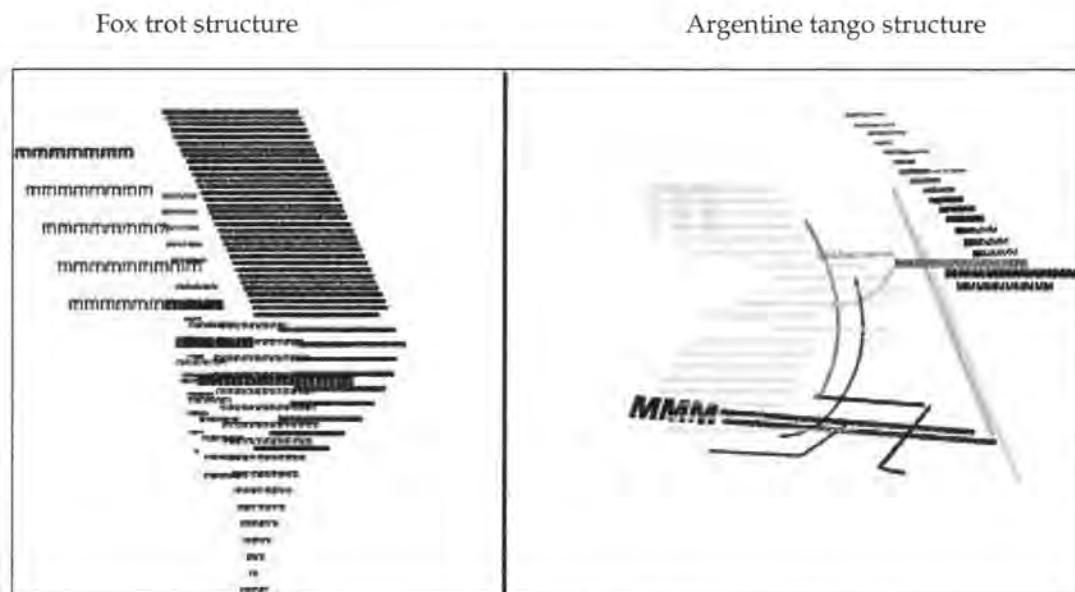
Figure 25 Comparison between fox trot and Argentine tango structures

Selection of text and format to apply to the typographic structures

Because dance is a dialogue, it becomes a metaphor for a relationship. Thus, the selection of text was based on what partnered dance is: a dialogue. Therefore, a play was selected to experiment with actual text. In this case, the opera *Carmen* was

selected because it tells the love story of a man and a woman. The dialogue is enticing and provocative, similar to a dance. The approach of applying typography with the computer was selected to retain the beauty and legibility of the dialogue between the main characters.

The selected section of the opera is a dialogue that takes place in a public square between the main characters: Carmen and Don José when they are alone. Therefore, the square was used as the format to experiment applying text to the dance structures to communicate the qualities of this dialogue.

Placement of Structures in space and typography

Initially in the typographic exercises, the structures were utilized in their entirety both physically and conceptually. An unintended result of abstracting the three-dimensional dance forms to a two dimensional interpretation (Figures 20, 21, 22), is that the dance structures appear to encode visual information about movement, specifically ballroom dance movement. For example, to a dancer, Figure 23 is recognizable as a male in standing position while the female is lunging into him. This is a pose or dance step characteristic of Argentine tango known as the *corté*. Plus, the heaviest lines indicate where the body weight is placed or the part of the body that helps the dancers sustain their balance. Although it is possible to develop the dance structures to a sophisticated notation system, it is not the focus of the study at this point.

| Female | | Male |
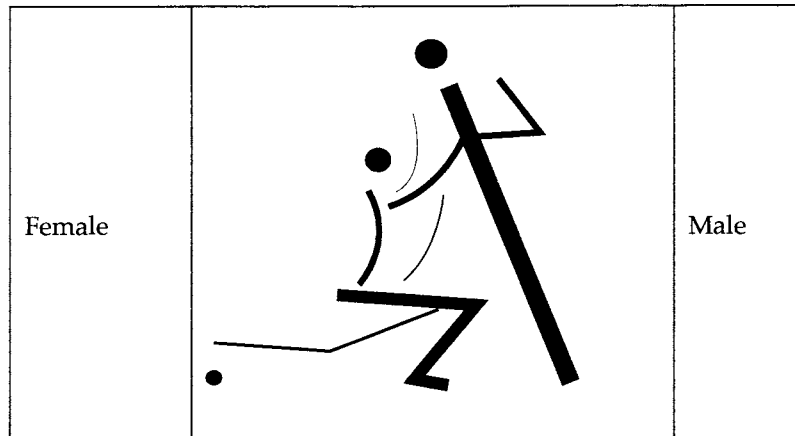
Figure 23 Example of Argentine tango structure abstracted from the photograph of dancers executing the dance step known as *corté*

Placement of text to the typographic structures

Initial attempts

The initial attempts to apply text to the structures were not as successful as I expected due to the fact that as both a dancer and a designer, the structures were encoding information regarding the language of the dances. The typographic application of text resulted in unclear dialogue interaction because the structures needed to be used more as a spatial grid than as encoders of information. Figure 24 shows the tentative placement of both typography and the structures.
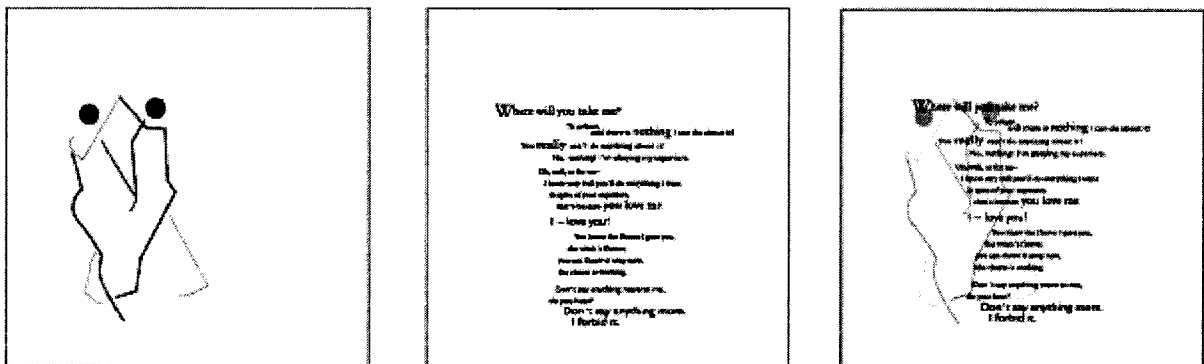
Figure 24 First exploration of selected text from *Carmen* on the dance structure

On analysis, the typographic design on Figure 24 lacked a dynamic use of space, balance, rhythm, direction and balance. Theses are the common variables between dance, typography and design discussed in Table 4. The composition also seemed to need form and counter form interactions that at this point were not yet considered. A decision regarding the meaning of the structures needed to be addressed. Therefore, I decided that visual elements within the structure, such as line weight, and the use and placement of the points, needed to be void of any meaning that could possibly indicate movement information. Thus, the dance structures needed to be emptied from conceptual references to the actual movements and use them only as a spatial grid. As a result, I decided to try enlarging the structures to occupy the entire format disregarding visual attributes that could convey meaning such as line weight. Figure 25 is an example of the use of a dance structure in the entire format.
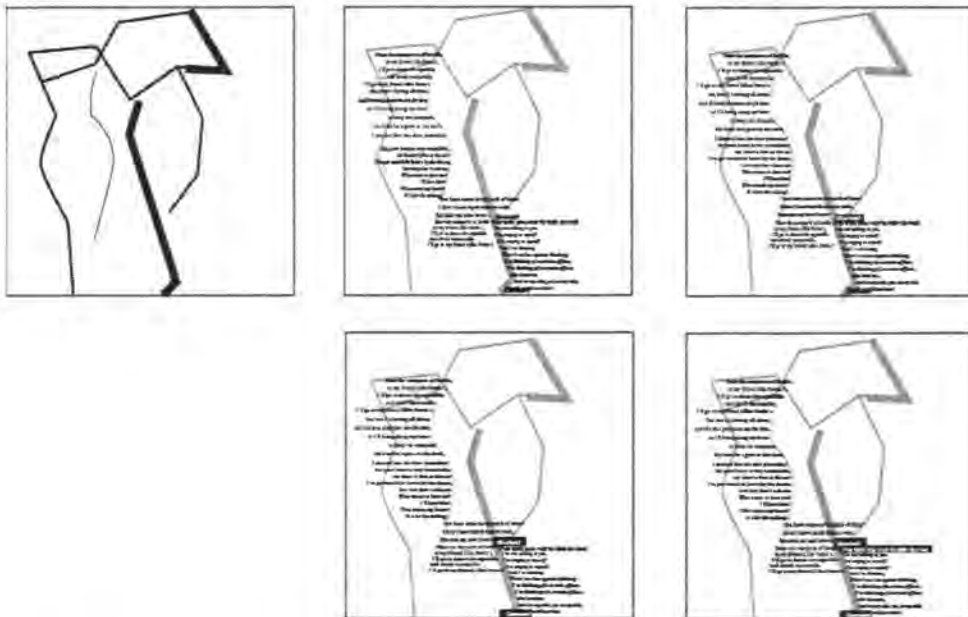
Figure 25 Example of dance structure used in the entire format and text application

On analysis, Figure 25 carries out the dialogue taking place between the characters is enhanced by the dance structure and text placement more provocatively than in the Figure 24. The typographic design and its relationship with the space (positive and negative space and form and counter-form) are dynamic because of the concentration of elements follow a clear visual direction. Furthermore, the dance structure in Figure 25 was emphasized in space by keeping typographic variables to a minimum (one size, one weight change, and two typefaces for the purpose of voice distinction). Figure 26 shows a comparison between the use of the dance structures with typographic variables kept to a minimum to the left and the use of a variety of typographic variables to the right. After observing both typographic exercises, the relationships of form and counter forms became more apparent due to the sensuous forms of the structures when the typographic are kept to a minimum.
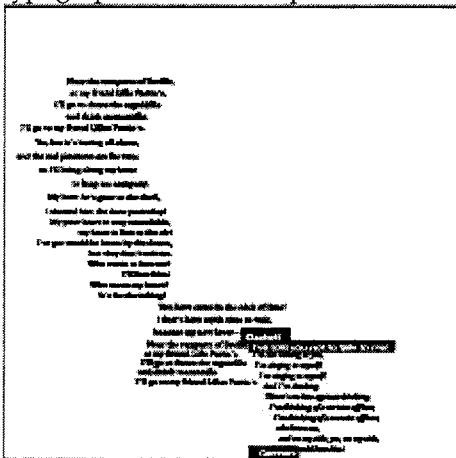
Typographic variables kept to a minimum   Variety of typographic variables explored
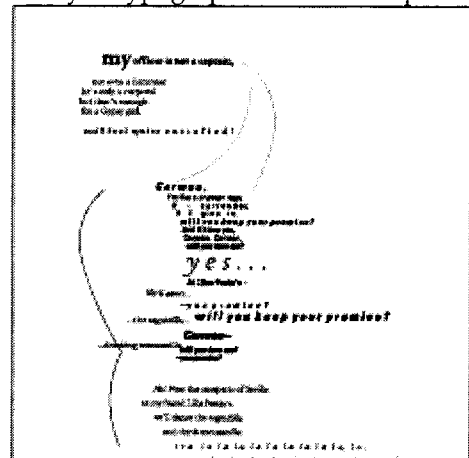
Figure 26 Comparison of the use of limited and varied typographic variables in the dance structures.

The typographic exercises done to this point, prompted two observations: first, the dance structures needed to be utilized isolated from meaning regarding dance steps of both fox trot and Argentine tango. The purpose of the dance structures is to utilize them as typographic grids. Second, the dance structures enhance the typographic design when typographic variables are kept to a minimum (size, weight, and number of typefaces). These two considerations led me to explore placement and size of the dance structures in space.

Two approaches for placement of the structures

The decision of utilizing the dance structures as spatial grids void from meaning regarding dance steps prompted an exercise exploring a progressive enlargement and placement of the structures shown in Figure 27. The enlargement of the structures led to a question: what if the square format is divided in quadrants? The structure could be placed in bottom left, bottom right, and top right and top left. Starting the dialogue at either bottom left or right and following to the left in a counter clock direction refers to the line of dance in the dance floor. Thus, the square itself could become part of the structures. Figure 28 shows the structure placed in one of the four quadrants.
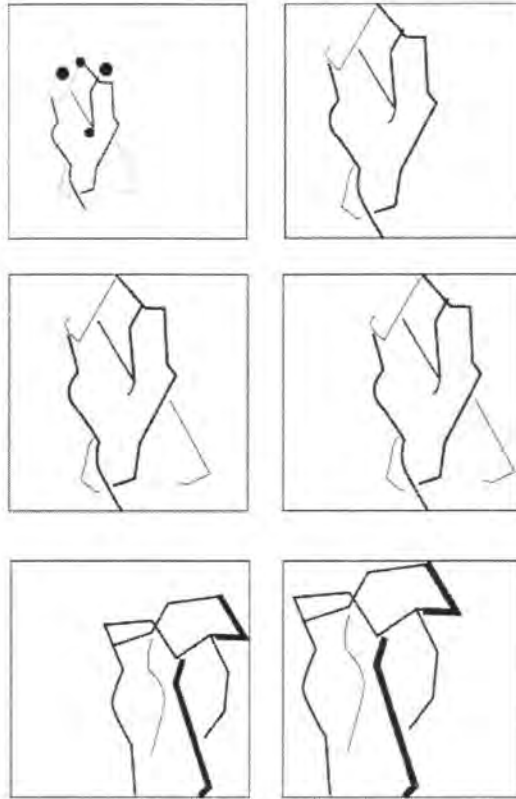
Figure 27 Example of gradual enlargement and placement
changes of the dance structures within the format
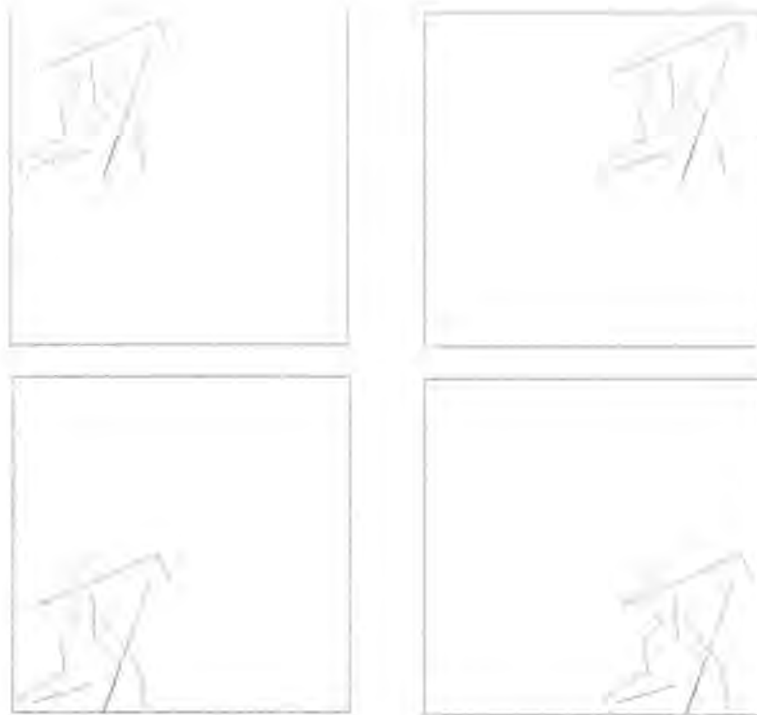
Figure 28 Example of format divided in quadrants and structure placement

Large and small size structures

To summarize, two approaches are being explored concerning structure placement: large, occupying the entire format, and small, dividing the square in quadrants. The division of the square in quadrants for the placement of the structures not only contributes to the interaction of form and counter forms in space, but also provides an objective approach to space organization. By dividing the format into small quadrants, the format metaphorically becomes an active part of the structures and text. Therefore, from the list of variables on Table 4, use of space and direction seemed critical factors for studying these structures as carriers of information. Thus, the size and placement of the structures along with the division

of the format into quadrants will have an effect in the emotional qualities of the dialogue.

Development of criteria for typographic placement on the structures

The typographic exercises along with the placement and size exercises of the structures led me to develop a list of variables to control and simplify the next explorations. From Table 4 a criteria was developed on Table 8 for typographic placement in the structures as well as the typographic variables to be included. The typographic variables of size and weight were controlled to one size and one weight change for the purpose of emphasizing the dance structures and explore their emotional qualities. Controlling the variables of size and weight contributes to the enhancement of form and counter-form relationships the structures create interacting with the format. Since the selected text for this study is a dialogue between a man and a woman, two typefaces were chosen: one sans serif to represent the male voice, and a serif typeface to represent the female voice. These typefaces create visual voice distinction and contrast.

Table 8 Criteria for Typographic Placement on the Structures

Direction	Horizontal emphasis Vertical emphasis Left emphasis Right emphasis Combination
Space/ placement	On positive forms (indicated by lines on the structure) On negative forms (counter spaces) On opposite sides of structures
Typographic factors	Size (limited to one size) Weight (limited to one weight change) Typefaces (two –serif/sans serif)

Use of large size structures in square format

After developing the criteria for typographic placement on the structures, the following questions needed to be addressed; which is the most successful combination of variables to achieve a solution that best enhances the experience of reading the selected text? Which combination of variables best conveys a sense of intimacy of the selected dialogue? Which combination of variables best represents a conversation? Several combinations were attempted, starting with large structures placed on the format to the left, right, and center. Table 9 shows some examples of these explorations.

Table 9 Explorations of typographic placement on large size structures
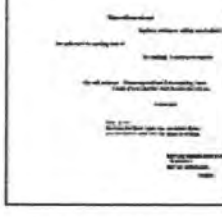
Criteria	Structure	Typographic placement	Type and structure
right side placement of structure inside/outside placement of type vertical emphasis			
left side placement of structure inside/outside placement of type vertical emphasis			
left side placement of structure inside placement of type horizontal/vertical emphasis			
right side placement of structure outside placement of type vertical emphasis			
right side placement of structure outside placement of type horizontal emphasis			

Table 9 Experiments of typographic placement on large size structures (cont.)

Criteria	Structure	Typographic placement	Type and structure
right side placement of structure inside/outside placement of type vertical emphasis			
right side placement of structure inside/outside placement of type horizontal/vertical emphasis			
left side placement of structure inside placement of type vertical emphasis			
center placement of structure inside/outside placement of type vertical emphasis			

On analysis, each combination of variables conveys different the sense of intimacy of the dialogue. The dialogue, in the first set of exercises on Table 9, appeared disrupted by the amount of space given to the structures. In some instances, the negative spaces surrounding the typography acted as a spatial barrier instead of as an element creating visual cohesion, unity and concentration. A determinant factor in using the structures in large scale is the amount of text

assigned to the structure. Figure 25 on page 81, shows a large structure within the format interacting with large amount of text. The result is a pleasant relationship of form and counter form in which the dance structure, due to its sensuous qualities, not only carries the dialogue, but also gives the dialogue a sense of intimacy. Figure 27 shows the how the typographic variables on the structure energize the dialogue giving it characteristics of sensuality, intimacy, energy, and, perhaps, romance by following the contours emphasizing direction leading the eye from one point to the other. However, the form of the structure itself is seductive due to the contrast between the organic and sharp diagonal lines.

Use of small size structures

Because the size of the structure and the amount of text seem to be related, the same typographic variables and placement considerations on Table 8 were attempted in small size structures on the format. As explained earlier, the chosen format for this experimentation is the square because the dialogue takes place in a public square. The square format was then divided into quadrants. This subdivision of space allows the format to metaphorically become part of the dialogue interaction because of the concentration of the text. Table 10 shows several examples of this exploration.

Table 10 Explorations of typographic placement on small size structures
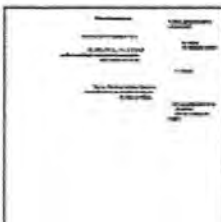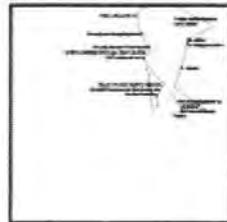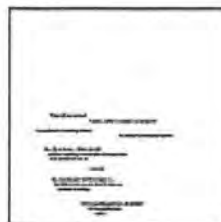
Criteria	Structure	Typographic placement	Type and structure
left bottom structure outside text placement horizontal/vertical emphasis of type			
right bottom structure outside text placement horizontal emphasis of type			
right bottom structure inside text placement vertical emphasis of type			
right top structure outside text placement horizontal emphasis of type no weight change			
left top structure inside/outside text placement horizontal emphasis of type no weight change			
left ttom structure inside/outside text placement horizontal emphasis of type no weight change			

Table 10 Explorations of typographic placement on small size structures

Criteria	Structure	Typographic placement	Type and structure
left bottom structure outside text placement horizontal emphasis of type			
left bottom structure inside/outside text placement vertical emphasis of type			
right top structure inside text placement vertical emphasis of type			
right top structure inside text placement vertical emphasis of type			

Table 10 shows illustrates that placing the structures in quadrants, enhances the relationship of form and counter form of the dance structures making it to be more meaningful than in Table 9. The concentration of elements in either quadrant acquires an inviting and seductive quality because of the negative space. In general, elements appear to be more connected and related to each other. A sense of intimacy is developed, which is characteristic of the selected dialogue and characteristic of the

selected dances. Thus, the dance structures communicate different qualities according to the manner in which the bodies interact with each other. Figure 21 shows that Argentine tango structures have a more aggressive quality than the fox trot structures shown in Figure 22. Fox trot structures appear to be more elegant, posed, quiet, a quietly sensuality, due in part to the vertical emphasis of the dance forms. Argentine tango structures, on the other hand, appear to be more decisive, aggressive, energetic, and, perhaps, daringly sensual due to the closeness, diagonal, and horizontal emphasis of the dance forms.

Table 8 shows the criteria used for text placement in both large and small-scale structures. Tables 9 and 10 show the experiments in both large and small-scale structures combining the variables from Table 8. After these exercises were performed, several observations need to be made regarding the effectiveness and fluidity of the dialogue. Four factors may enhance or hinder the lyric qualities of the text and the structures: size of the structures, placement of the structures, amount of text, and placement of the text (inside, outside of the structure, or combination). Therefore, the issue to consider is when does the dialogue become more effective considering these four factors. After observing Tables 9 and 10, it seemed apparent that the factors of amount and/or placement of text become the most critical factors when using the structures. The inherent qualities of each structure abstracted from the dance forms are strong, sensuous, and seductive to the eye in both large and small scale. Thus, the amount of text and placement of text will either enhance or hinder these qualities. Figure 29 shows a comparison of how a large-scale structure is enhanced when there is sufficient amount of text to interact with both the structure and the negative space, creating interesting form and counter form

relationships. On the right side of Figure 29, the contours of the structure are enhanced by both the amount and placement of the text. On comparison, the image to the left does not successfully convey the dynamic qualities of the structure. The negative space on the left image appears to hinder the contour of the structure by imparting more subtle and quiet qualities. The natural qualities of the structures when used in large scale, as seen on Table 9 seem to be hindered depending on the amount of text. Thus, the negative space in these instances creates a sense of disconnection, isolation, and almost a respectful distance between the voices.
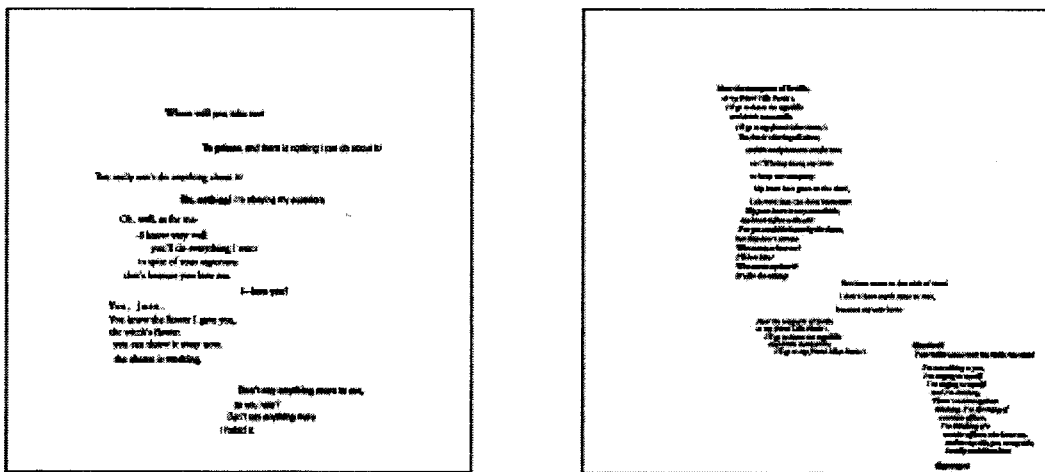
Figure 29 Comparison of two large structures with varying amount of text and placement

Figure 30 shows a comparison of large and small-scale structures with the same amount of text. The concentration of elements that takes place on the small scale structure (right side of the figure) shows the dynamic qualities of not only the dialogue, but also of the dynamic relationship of form and counter form inherent in the structures. As a result, the structure, text, and format create a complementary

relationship. On the left side of Figure 30, the large-scale structure, although still showing a relationship of form and counter form, hinders the complementary quality achieved on the image in the right side of the figure. However, these qualities are more obvious when the amount of text is not proportionate to the size of the structure.
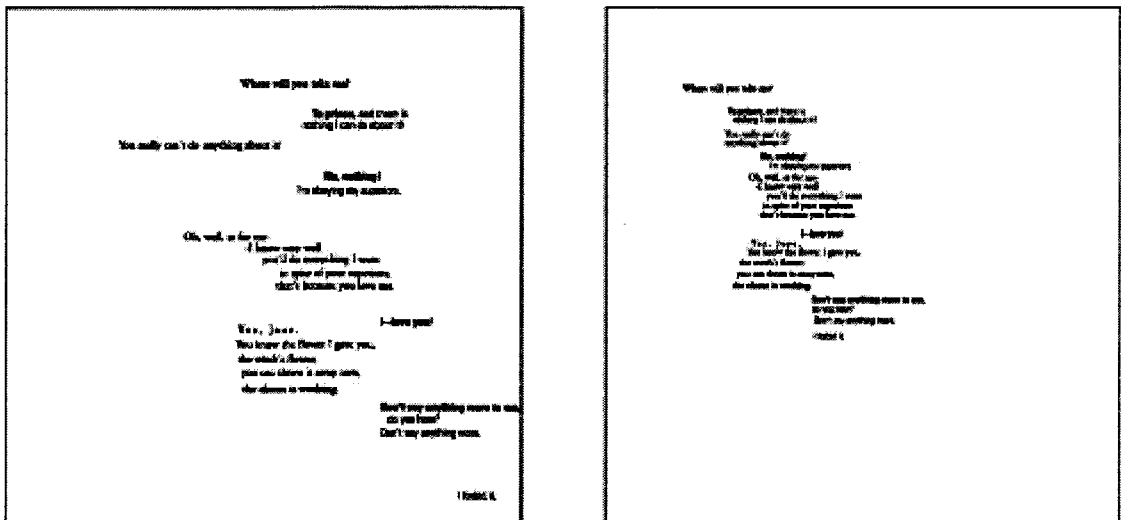
Figure 30 Comparison of a large and small structure with same amount of text

Figure 31 shows a large structure with greater amount of text compared to the small structure on the right side of Figure 30. When the amount of text is proportionate to the size of the structure, the size of the structure becomes a subordinate factor. Both images in Figure 31 possess sensuous and energetic qualities that are reinforced by the amount and placement of the text. Thus, the relationship of form and counter form are enhanced. However, the small structure seems to carry out a more profound sense of intimacy due to the concentration of type on the space. Both the placement of the small structure on the format and the vertical emphasis of the text

create attractive qualities due to the implied shapes the typography creates. On contrast, the large scale, although it possesses attractive qualities and it is inviting to the eye, compromises the reading order due to strong shapes the text is creating. Thus, limiting text placement to the inside of the structures seems to enliven and energize the text while at the same time enhancing the reading experience.
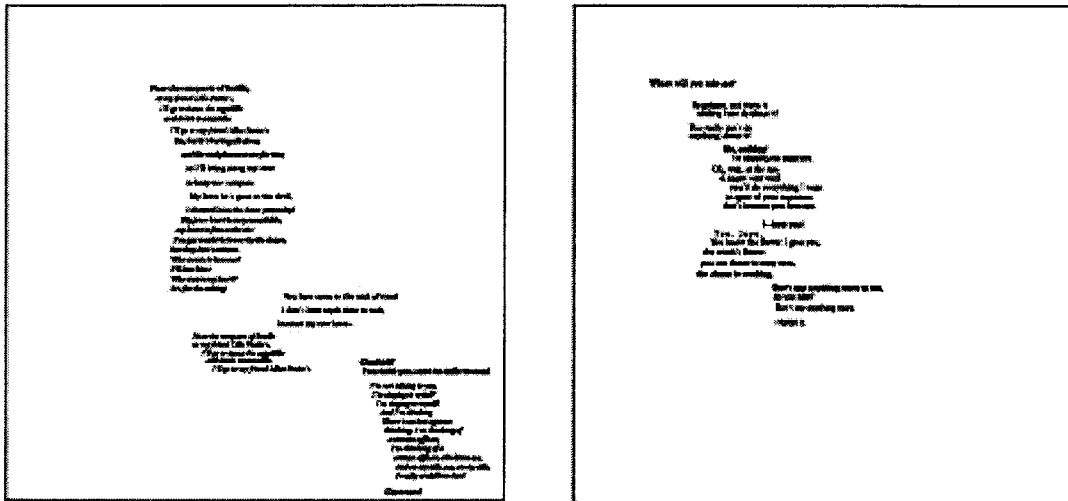
Figure 31 Comparison of a large and small structure with different amount of text (for larger view see Appendix A and B)

In addition, when the structures are large scale, their placement appears to be limited to left, center, and right sides of the format. The placement of the structure within the format has other effects in the text placement. Thus, text placement is determined by the placement of the structures on the format, whether or not the text is going to have a vertical or horizontal emphasis. Tables 9 and 10 show several examples of this interaction. When the structures are placed to either left or right side of the format, the negative space closer to the edge of the format becomes limited, altering the intended emphasis in direction of the text. In some instances, the combination of vertical and horizontal emphasis was necessary due to the

placement of the structure. Certain effects occur when this interaction occur. The part of the dialogue with the horizontal emphasis may appear to be pushing or advancing towards the text with the vertical orientation, creating an interesting sense of tension. On the other hand, in instances in which the text is placed with a vertical emphasis, either on the outside of structure, inside of the structure, or in a combination, a sense of intimate tension develops. When the emphasis of text placement is given to a horizontal direction, in both large and small scale structures, a sense of disconnection and isolation is communicated. The emotional quality is one of estrangement, almost of two voices talking past each other. Thus, the question arises again, which combination of variables becomes the most successful. This question will be addressed and discussed in the chapter, in which the conclusions of this research are addressed.

Conclusion

This chapter explains the development of the typographic grid using dance structures and the typographic considerations that affect the structures. Photographs were taken of a couple dancing to the selected dances for the study with the purpose of abstracting the figures from a three-dimensional movement in a two-dimensional format. These translations were approached from two perspectives: typography applied with the computer and typography applied by hand in a gestural manner. In the interest of pursuing an exploration that could be repeated, I decided to experiment with typography applied with the computer. Many other explorations resulted from computer application, from avoiding applying actual text to integrating a dialogue from the opera *Carmen* based on the fact that dance is a metaphor of a dialogue. With the application of actual text, a tension between typographic variables and the structures developed, and a decision had to be made of whether or not the emphasis was on the structures or on typographic variables.

The dance structures developed through a process of abstraction became almost live figures possessing sensual and inviting qualities. As a result, the structures were allowed to be the carriers of the dialogue, while the typographic variables were kept to a minimum. Because partnered dance is a metaphor for a dialogue, and the dance structures are based on partnered dance, the structures are conveying dynamic qualities of a conversation. Thus, enhancing the structures by limiting typographic variables became a crucial turning point of this exploration. To answer the question of when does the dialogue become more effective, or which structure works best to carry out a dialogue, it is necessary to keep in mind the

critical factors discussed in this section: size of the structures, placement of the structures, amount of text, and placement of text. All these factors will bring different qualities to the text to be applied to the dance structures.

Figure 26 illustrates how the incorporation of several typographic variables distracted from the qualities of the structure. The typography then becomes the agent carrying the dialogue instead of the structures. Since this is a study exploring dance structures, it became clear that the typographic variables needed to be kept to a minimum so that structure would be the agent carrying the dialogue. By limiting the typographic variables, the forms of the structures were enhanced, but at the same time, legibility was retained. Because the forms in the dance structures are strong, powerful, and dynamic, a sense of gentleness with the typographic variables is needed for this experimentation.

Fox trot and Argentine tango are different styles of dances, emphasis and their execution on a dance space differs greatly. Through the process of abstraction, the differences the movements create in space are evident. Fox trot dance structures seem to be have a vertical emphasis, where Argentine tango seems to treat the space in a more aggressive manner whether vertical, horizontal, or even diagonal (see Figure 21). As a result, it was assumed that the typographic explorations would look different from each other. However, the differences that have been observed in the typographic explorations are due to the four critical factors mentioned before: size of the structures, placement of the structures, amount of text, and placement of the text more than in the nature of the structure itself. However, it seems appropriate to consider the amount of text and what qualities are inherent to the text to decide one structure over the other. Large amounts of text seem to carry well in the fox trot

structures, where small Argentine tango structures seem to carry small amounts of text better.

This chapter focused on two main aspects of this explorations: the abstraction of three-dimensional movement into a two dimensional representation, and the application of actual text to the structures. The application of actual text to the structures became a determinant factor for this study because of the richness in the quality of the dance structures. The next chapter will discuss and address the results, conclusions, and future implications of this study.

CHAPTER IV

CONCLUSIONS, DISCUSSION AND FUTURE EXPLORATIONS

This thesis explores the three-dimensional forms the dance creates in space and translates them into a two-dimensional structure for typographic design. Therefore, this study examines the dynamic interactions that emphasize form and counter-form relationships using the forms partnered dance create in space to be used as a grid for typographic design. The exploration of dance forms as an alternative structure for typographic design shown in Chapter III has been an enriching experience in different aspects.

First, this study started with an overview of existing visual systems that encode dance movement as data for the purpose of preservation. The usefulness of these systems known as dance notation has been argued extensively in this research while at the same time maintaining and acknowledging their beauty. The study of movement as image, on the other hand, has been exposed in different historical contexts in which several other sources, such as photography, buildings, and water, have been used as an implied typographic grid. The uniqueness of this investigation is the translation of three-dimensional movement through a series of steps, to a two-dimensional representation with no intention of encoding information pertaining to any specific movement within the dances, but as carriers of information. However, figures 20, 21, and 22 show how the linear abstractions of the dance movement indeed became what could be the prototype of a notation system for ballroom dancing. The variation of line weight and the sensuous qualities of the structures seem to have a life of their own and do seem to encode movement information. The

dance structures as observed in figures 20, 21, and 22 almost become pictographs similar to the way our ancestors encoded information on caves as seen in Figure 3. It was for this reason that the dance structures needed to be emptied of any indication of body weight and be treated as even flatter structures in the formats.

Second, in the research of movement as image, the use of dance forms as a typographic grid does not exist, which left the avenues open while requiring constant revision the process to keep it focused on the structures. For that reason, the appropriate typographic treatment was not clear at the beginning. The structures were refined with the use of the computer.

The nature of a dance resembles a story line in that both have a beginning, a climax, and an ending. A possible avenue of future study is to use a sequence of dance structures from beginning to end. Therefore, when typography is applied, the typography evokes bodies in motion coming together. The typographic exercises were pursued in the interest of developing a systematic treatment that could be repeated either with other dances or with any other form of body movement. The method used to start the abstractions was photography because it provides with an accurate representation. Photography has the capability of providing an accurate way of capturing forms, of freezing forms in space.

Dance, partnered dance, is a conversation, a way of non-verbal communication in which the partners communicate to each other in a conceptual and metaphorical manner. Therefore, a segment of the dialogue in the opera *Carmen*, was selected for the final explorations. Several results were expected: first, significant differences in typographic design were expected because the dance structures are based on two different dances with different emphasis. However, as

Figure 29 shows, the apparent differences are due to typographic placement, not necessarily based on the dance structures. As the exploration progressed the differences between the dance structures became less evident.

Another expectation was that using the dance structures based on dynamic dance forms would enhance the reading experience by imparting the text with those dynamic qualities. To the right side of Figure 32 and 33 are examples of what the libretto for the opera *Carmen* looks like. Figure 32 shows a traditional approach to the relationship of text and reader while Figure 33 relies on small paintings acting as icons for voice recognition and use of negative space. The dance structures shown to the left in both figures 32 and 33 show how the dance structures enhance the reading experience imparting the dialogue with dynamic qualities that are part of not only a dialogue but also part of the dances. The sense of intimacy and the qualities of attraction, tension, conversation, enticement conveyed through the use of structures and placement of the text are not achieved in the images of the actual libretto shown in both Figure 32 and 33. The images of the libretto in both Figures 32 and 33 are functional in communicating the dialogue, but they are not expressive of the qualities of this dialogue.
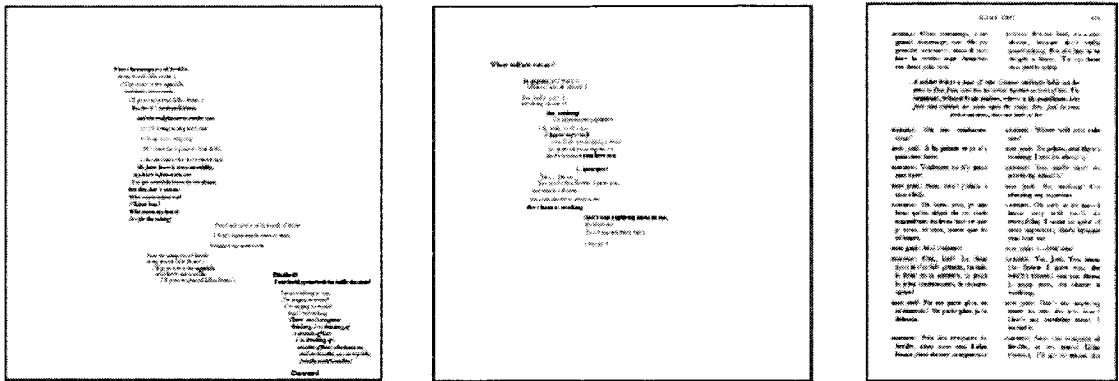
Figure 32 Comparison of dialogue placed in the dance structures
with actual page from libretto *Carmen*
(for larger view see Appendix A and B)
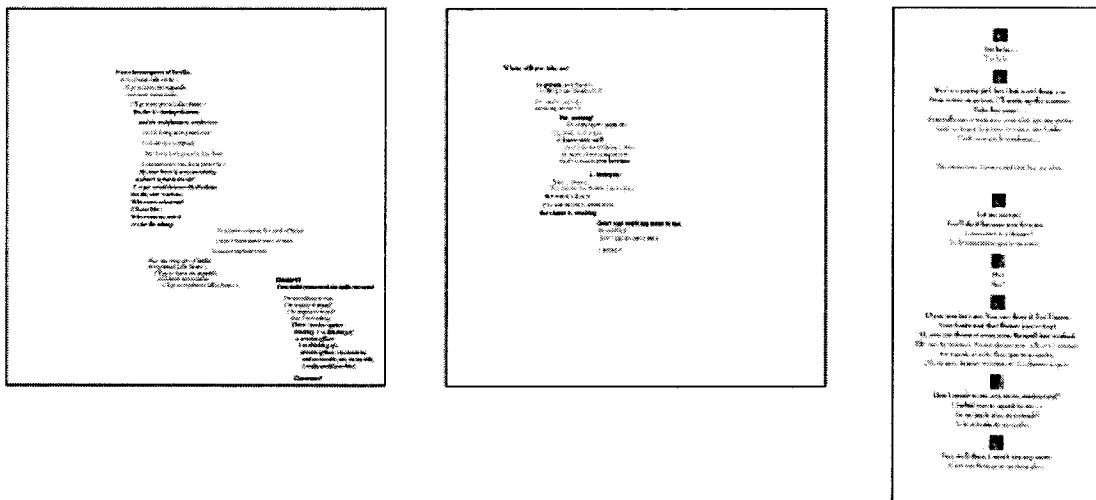
Figure 33 Comparison of dialogue placed in the dance structures
with actual page from libretto *Carmen*
(for larger view see Appendix A and B)

As a result, I believe the expectations of enlivening and energizing a dialogue

using the dance structures have been successfully achieved in these explorations.

The rhythmic qualities of both the structures and the placement of text activate the

dialogue by creating interesting form and counter-form relationships.

However, it is worth mentioning that several factors became critical in the exploration of the dance structures as grid, typographic variables, and text. Several combinations listed in Table 8 were attempted in Tables 9 and 10. I found that the most successful combination of variables for the typographic design utilizing the structures were small structures with a vertical emphasis on text placement. This combination created a sense of intimate tension that other combinations did not convey as seen in the comparison offered in Figure 31. Figure 31 shows a comparison of a small and a large structure with amounts of text proportionate to the size of the structures. Although both structures have a lyric quality, the small structure seems to carry the dialogue in a more intimate manner. Furthermore, limiting the typographic variables to a minimum enhanced the form of the structures by creating a sense of quiet energy that does not seem as evident when more than one typographic variable was utilized, as seen in Figure 26. However, the addition of typographic variables will bring other kinds of emotional qualities to the dialogue and perhaps is an avenue to keep exploring.

Figure 34 is an example of what I consider is the most successful combination of variables from Table 9. This plate contains a definite sense of visual direction due to the concentration of elements leading to a point. The typographic arrangement also shows a pleasant and dynamic interaction of form and counter-form between the typography and its surrounding space. The typographic variables are limited controlling the eye in the typographic design of the text. Weight changes are used sparingly emphasizing a vertical visual direction thus helping contain the eye within the text shapes. The placement of text is also interesting since it has an asymmetric

balance. Also the typographic design due to its sensuous forms makes the text

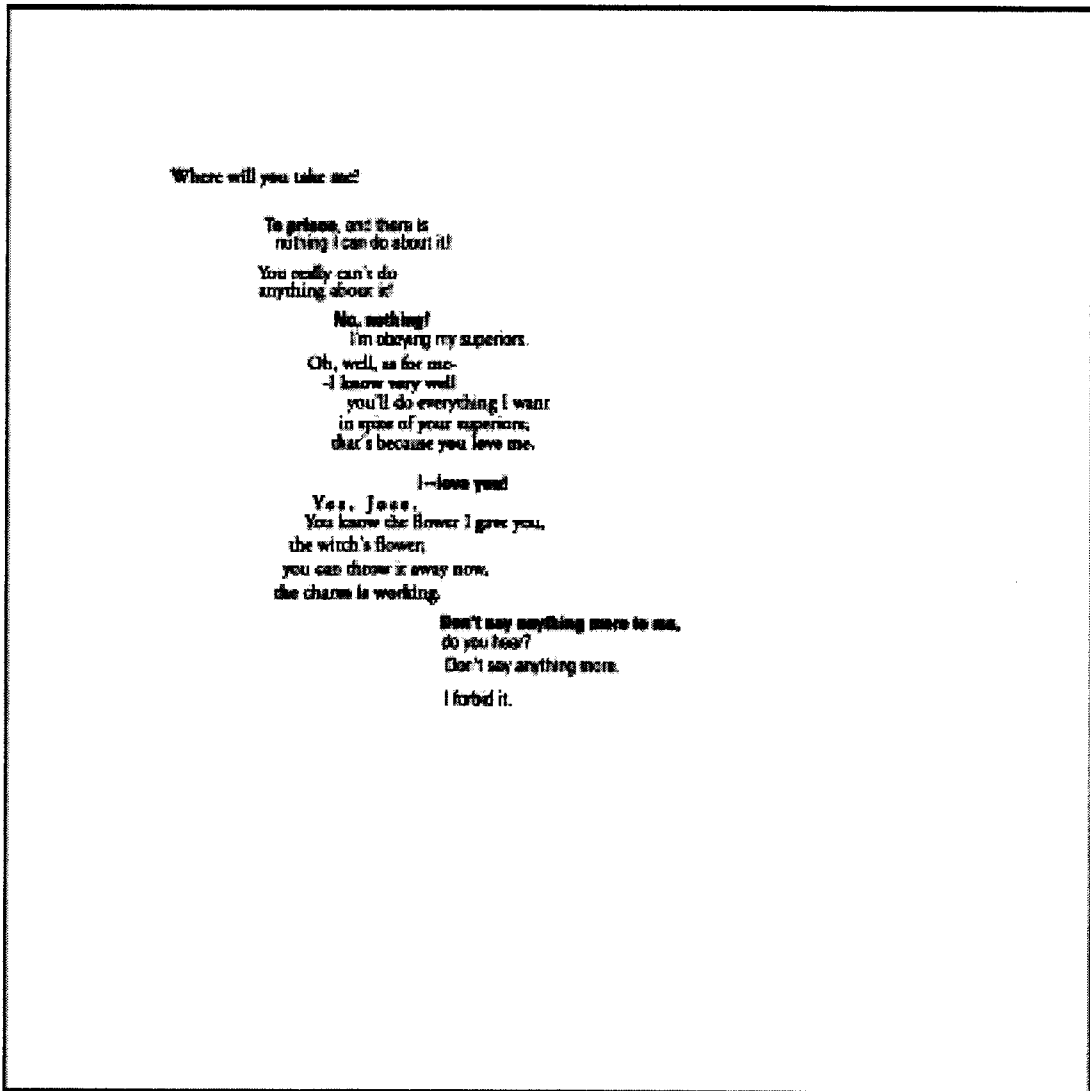memorable and does enhance the lyric qualities of this opera dialogue.

Figure 34   Example of successful combination of typographic variables from Table 9
(for larger view see Appendix B)

Future Explorations

Several possibilities remain open for further study. One possibility is the discovery of the structures appearing as encoders of movement information related to ballroom dance that may be developed in both print and electronic media. The dance structures could be developed in a series of sequential order encoding information of the movements in a dance from beginning to end, and both professional and amateur dancers could test them. Perhaps the dance structures could be animated in interaction with text and a sense of depth is added. Another possible avenue of exploration could be to use these dance notation structures in a virtual space for human interaction for educational or entertainment purposes.

Other possible avenues for future explorations include adding color, images, or typographic variables; changes of format; and using the structures in a book layout or multiple pages. It is clear that the structures communicate qualities inherent to dance forms such as dominant vs. sub-dominant, passive vs. aggressive, and others. Thus, incorporating several of the avenues of explorations may further enhance the dynamic qualities found in the structures.

This study is certainly the beginning of an exploration that could provide designers with new avenues for typographic design. The process of this study had several turning points: the translation of choreographed three-dimensional movement into a two-dimensional representation resembling a visual system that may encode actual movement data; and the realization that keeping typographic variables to a minimum does not compromise legibility when relying on form, but actually enhances the reading experience and communication. Emphasizing the dance structures while quieting typographic variables was a constant struggle since

I had to learn to trust the beauty of the structures. Once I committed to let the dance structures be the carriers of dialogue, the process really became about the inspiration I had at the MOMA after seeing the painting and sketches in Figures 1 and 2. The study had started out with the idea of dance forms translated into lines and planes to use as a typographic grid, and the study ended with sensuous and dynamic dance structures that carry not only beautiful qualities, but also function as carriers of actual text. Perhaps the next step is to develop a series of plates or sequential plates with a dialogue and test their legibility. Another test that would seem appropriate is to test the same methods of this exploration to another kind of choreographed and/or sequential movement for line abstraction and typographic design.

APPENDIX A

Near the ramparts of Seville,
at my friend **Lilla Pastia's,**
I'll go to dance **the seguidilla**
· and drink **manzanilla.**
I'll go to my friend **Lillas Pastia's.**

Yes, but it's boring **all alone,**
and the real pleasures **are for two;**
so I'll bring along **my lover**
to keep me **company.**

My lover he's gone to **the devil,**
I showed him the door **yesterday!**
My poor heart is **very consolable,**
my heart is **free as the air!**
I've got would-be lovers **by the dozen,**
but they **don't suit me.**
Who wants to **love me?**
I'll love him!
Who wants **my heart?**
It's for **the taking!**

You have come in the nick of time!

I don't have mych time to wait,

because my new lover-- **Quiet!**

Near the ramparts of Seville **I've told you not to talk to me!**
at my friend Lilla Pastia's, *I'm not talking to you,*
I'll go to dance the seguidilla *I'm singing to myself!*
and drink manzanilla. *I'm singing to myself!*
I'll go to my friend Lillas Pastia's. *And I'm thinking.*
There's no law against thinking.
I'm thinking of a certain officer,
I'm thinking of a certain officer,
who loves me,
and on my side, yes, on my side,
I really could love him!

Carmen!

APPENDIX B

Where will you take me?

To prison, and there is
nothing I can do about it!

You really can't do
anything about it!

No, nothing!
I'm obeying my superiors.

Oh, well, as for me-
-I know very well
you'll do everything I want
in spite of your superiors;
that's because you love me.

I--love you!
Yes, Jose.
You know the flower I gave you,
the witch's flower;
you can throw it away now,
the charm is working.

Don't say anything more to me,
do you hear?
Don't say anything more.

I forbid it.

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ACKNOWLEDGEMENTS

This thesis is a dream come true. I spent many nights wondering if it was ever going to be finished. I need to thank all of those who saw more in this thesis that I did when I doubted. But first of all, I need to thank the Lord in heaven for providing me with people who were and are enthusiastic about this research, for giving me strength to pull it together when obstacles were in my way, but most of all, for His faithfulness and His grace towards me and giving me the talent to be an artist and a designer.

I want to thank my husband, Tyson for being my number one fan and most loyal admirer. For the patience to be there for me when things got tough, for supporting me when I had doubt and most of all for loving me the way that you do. I want to thank my best friend Angie, who could not be more of a sister to me and because she thinks artists and designers are angels on earth. I also want to thank my Dad, the man who set the standards for me, who even though he passed away, I am constantly reminded of his voice. My special gratitude to my Mother, because when faced with a choice in tough circumstances, she chose my life and I am here because of her strength.

I want to thank my committee for all the help, patience, and support throughout these years. For believing this was worth pursuing, for pushing me to finish and for being there for all kinds of questions. I want to thank my major professor, Roger Baer for his loyal support, friendship and for being a father figure for my family and me. Debra Satterfield for cheerfully becoming part of this

committee later on when Edward Lehner retired. To Rebecca Burnett for the careful editing and her interest in this work.

I want to thank the faculty in the college of Design for being available to answer questions, and for the support they have always offered me, but most of all for the excellent education I have received from them. The first person to believe in the idea behind this thesis was Lisa Fontaine. To Alan Mickelson for countless visits to his office for feedback and for always cheering on my favor. I also want to thank Paula Curran, who taught me a passionate love for typography. I want to thank the Iowa State University community, for the generosity I have found here, the people in the Memorial Union, especially Kathy Svec and Sally Pease, to the Dance program at ISU, especially to Janice Baker and Valerie Williams.

I am deeply grateful for the time I have spent here in ISU, for the people I have met, the friendships and the new family I have found. I hold Ames, Iowa and this university in a special place in my heart. Thank you.