APPLYING NON-LINEAR STORYTELLING FORMS TO MULTIMEDIA DOCUMENTARIES

by

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Abstract

This applied project investigates new interactive visual storytelling techniques by documenting the motion-e project at Arizona State University. During the two-year project, well-known choreographers, composers, and visual artists worked closely with faculty, staff, and students from ASU’s Arts, Media and Engineering program. This applied project focuses on the media related to the piece choreographed by Bill T. Jones.

The motion-e project can be conceptualized as a network of individuals driven by the desire to create new interactive, multimodal dance forms. The motion-e experience can be understood by using an interactive framework, which will illustrate to the viewer the dynamic nature of interaction among the participants.

This applied project will investigate new documentary techniques where interactivity plays a key role. This process includes the capture and annotation of media related to the Bill T. Jones’ dance piece, such as images, videos, sounds, and text. The project will investigate the following issues related to the interactive documentary: (a) basic interaction concepts, (b) visual composition techniques, (c) syntax, (d) multiple storylines, and (e) entering the frame.
Introduction

This applied project investigates new interactive visual storytelling techniques by documenting the motion-e project at Arizona State University. The motion-e project involved well-known choreographers (Trisha Brown, Bill T. Jones, and Bebe Miller), composers (Curtis Bahn, David Birchfield, and Roger Reynolds), visual artists (Marc Downie, Shelley Eshkar, and Paul Kaiser), and faculty, staff, and students from ASU’s Arts, Media and Engineering program (Feng Guo, Todd Ingalls, Jodi James, Loren Olsen, Gang Qian, Thanassis Rikakis, Frances Ward, and Daniel Whiteley. The motion-e project began in fall 2003 and lasted nearly two years. The entire team worked closely together to create new interactive multimodal dance forms. This applied project focuses only on the events corresponding to Bill T. Jones’ choreography, both his residencies and the periods in between.

The motion-e project can be conceptualized as a network of individuals driven by the desire to create new interactive, multimodal dance forms. The motion-e experience can be understood by using an interactive framework, which will illustrate to the viewer the dynamic nature of interaction among the participants. Motion-e can be understood not as a singular event but only in relation to the larger context of events at ASU and beyond.

Using an interactive framework opens up new possibilities of communicating the networked experience in motion-e not easily achieved in video, where the construction can be highly non-linear but where the media are usually consumed in a linear manner. The interactive documentary forces the user to be an active participant in the construction of the narrative because new details are revealed based on what the user does.
Investigating the interactive documentary is important for two reasons. First, young people are used to acquiring information interactively via the Internet. For this audience, an interactive documentary is appropriate. Second, traditional documentary techniques emerged from cinema. Today, electronic media can tell stories in an interactive, non-linear manner, thereby forcing us to question cinematic assumptions for documentaries in such environments. Interactivity gives tremendous authorial control to the reader / viewer. In addition, there are tremendous conceptual challenges as a result of the medium, such as (a) how to ensure that interactions are coherent and meaningful and (b) how to ensure that the viewer’s interest is sustained but not exhausted.

There are two widely used documentary forms: categorical and rhetorical. In the former, the filmmaker focuses on a single category, such as sports, nature, or art. In the latter, the filmmaker attempts to persuade the viewer about a certain viewpoint, such as the horrors of the atomic bomb. Also relevant are the two widely used experimental film forms: abstract and associative. In the abstract form, the director isolates the abstract aspects of the piece from those that ground it in the real world. For example, a documentary on household objects can highlight the shapes and colors of everyday objects. In the associative form, the filmmaker uses a sequence of shots not connected through a narrative but through semantic associations. Specifically, the filmmaker wants to combine meanings of sequential shots that are very different. For instance, a filmmaker might use shots of a stream (calm, serene, quiet), then close-up shots of a man thinking.

The existing categorical and rhetorical documentary forms are not well suited to communicating the experience of a networked collaboration like motion-e, as the relationship among the individuals is dynamic and changes over time. The experimental
film forms break traditional assumptions of narrative and present the viewer with a more complex interpretation of the material. Although all these forms can be used to communicate the non-linear interactions of the network, they force the viewer to consume in a linear fashion, therefore diminishing the impact of the original experience.

The literature review that follows explores documentaries, visual composition techniques, Milan Kundera’s non-linear storytelling techniques, and interactivity.
Literature Review

1 Documentaries

This section reviews seven significant documentaries: three by noted Russian filmmaker Dziga Vertov, along with *Triumph of the Will* (1934), *Night and Fog* (1955), *Winged Migration* (2001), and *Promises* (2001).

Documentaries have been categorized into four different types: experimental art documentary, essay-style documentary, propaganda documentary, and educational documentary. These seven documentaries are exemplary in their respective categories. Each presents new visual storytelling techniques that have prompted documentary filmmakers to re-imagine the creative possibilities of the documentary genre. The visual techniques examined here shall be used in the project in several ways. Some visual elements will make their presence felt directly, while others will establish a starting point for the storytelling approach.

1.1 Experimental Art Documentary and the Technique of Montage

In 1919 Russian filmmaker Dziga Vertov and other young filmmakers formed a group called Kinoks, which means “cinema-eyes” in Russian. The group rejected Western-style cinema, with its emphasis on a story line, stars, plots, props, and studio production (Dawson, 2003). They viewed the cinema of the future as the cinema of fact, as unseen aspects of the real world. Vertov believed that cameras should be used to capture the chaotic visual phenomena filling the universe. Creative editing could then develop these random images into a more honest record of the Soviet experience. He therefore introduced unusual camera angles, fast cuts, and the montage technique, along
with other experimentations, such as the split screen, multilayered superimpose, and inserted sequence of animations.

The use of montage is an outstanding aspect of Vertov’s films that contributed to film theory in the early 1920s. A montage is an expressive film-editing technique that assembles footage from different sources into a whole that creates an impression of continuity. Although Vertov’s documentaries were made with a highly poetic vision of Soviet reality, he considered his films to be documentaries that recorded actuality. After his death, French documentary filmmakers adopted his theory and applied it to their method, *cinéma vérité*.

Vertov’s *The Man with the Movie Camera* (1929) is a straight reportorial documentary film that depicts a day in the life of the Soviet Union and also celebrates the power of cinema to transform reality. This film successfully proved the manipulative ability of editing, special effects, and cinematography to shape a multitude of short scenes from our perception of everyday reality into an experimental documentary.

Throughout the film, a man who is rolling a movie camera repeatedly appears on screen. Toward the end of the film, Vertov introduces a remarkable tight shot of the filmmaker’s eye in the lens of the camera. By showing a cinematographer and comparing the eye to the lens of the camera, the film shows the equality of the filmmaker’s eye with the lens of the camera as the basis for the entire film’s associational form.

*Kino-Eye* (1924), another straight reportorial documentary film, captures the activities of a group of Soviet adolescents. Vertov describes the term “Kino-Eye” as the camera itself, which can record the world objectively without prejudice. He also
describes the camera lens as an innocent device that grasps the world in its entirety and organizes visual chaos into a coherent set of objective images.

Vertov’s *Three Songs about Lenin* (1934) is a poetic documentary film that portrays Lenin from the people’s point of view. It celebrates the tenth anniversary of Lenin’s death. The film is constructed as three short stories, which are developed along with representations of three different songs: *My Face Was in Dark Prison* tells the story of a woman wearing a black veil; *We Loved Him* represents the life and death of Lenin by reflecting the people’s excitement and sorrow; and *In A Big City of Stone* shows the accomplishments of the Soviet Union thanks to Lenin’s rules and thoughts.

1.2 Propaganda Film

*Triumph of the Will*, a propaganda film by Leni Riefenstahl, documents the 1934 Nazi party rally in Nuremberg. The importance of this documentary lies in revealing the role of temporal rhythm, as well as camera placement in political documentaries. Hitler is always shown from a dominant point of view, to underscore his power. The film is paced very well, with the pacing suggesting an inevitable march toward the triumph of the Nazi party. The main lesson from the documentary is somber; visual storytelling techniques can skillfully distort reality and manipulate a large audience into accepting something as horrific as the Nazi party. Both the *Triumph of the Will* and *Olympia* (Leni Riefenstahl’s film on the 1936 Olympic games) were crucial to the Nazi propaganda machine.

Footage of Hitler, uniformed Nazi party members, and soldiers marching to cheerful music reveal how Germans pledged their loyalty to Hitler. Parts of speeches by Hitler and top party officials are also shown. Many shots of Hitler were framed from a
low angle to portray him as a powerful figure. Shots of people’s faces reflect positive, hopeful, and energetic expressions (e.g., smiling faces, children, women, young men).

One of the best known and most influential propaganda films, *Triumph of the Will* helped launch Hitler into power. Throughout the film, the viewers see an alternate point of view that explains how Hitler had a terrifying ability to attract crowds and draw in the masses through propaganda.

### 1.3 Essay-style Documentary

Alain Resnais’s *Night and Fog* is an essay-style documentary that provides one of the first cinematic reflections on the horrors of the Holocaust. The most artistically sophisticated film on the Holocaust, it strongly reacts against war and violence. Resnais made *Night and Fog* in 1955, only ten years after the liberation of the concentration camps. The filmmaker rejected the traditional documentary’s presumption of objective neutrality and used an essay-style narrative that allowed the film to be expressive. Instead of speaking for the victims and survivors of the camps, the film allows viewers to reflect and examine their own responses by asking questions and studying the record. A novelist who survived the Holocaust wrote the script. The poetic narration is delivered in a harsh, dry tone filled with skepticism and irony. The viewers are constantly told that words cannot describe what happened. They remind the viewer that there is no description or picture that can reveal the true horror of the Holocaust. Another ironic element is the lovely music. Lyrical flute passages accompany harrowing images.

*Night and Fog* takes on the extraordinary challenge of communicating the horror of the Nazi camps, where millions perished. These acts of horror and the scale of the tragedy are difficult to comprehend at the personal level. Resnais uses several techniques
to create a connection to the past. First, he juxtaposes past and present through color – the past is always shown in black and white, the present in color. This juxtaposition creates a narrative rhythm throughout the documentary. Both color footage, filmed in 1955, and black-and-white archival footage contrast present and past. While some scenes are horrifying (e.g., the piles of women’s hair, a pyramid of shoes), the viewers are also shown the postwar site of Auschwitz and the construction of concentration camps in color, which looks empty, quiet, and even peaceful. The filmmaker made no attempt to recapture the horror in the present-day footage of the camps. As much as possible, Resnais tries to match the visual composition, when moving from past to present or vice versa, to underscore the reality of the horror. The camps are not a distant abstract memory but physically connected to the present, as if to remind the viewer to be vigilant – these horrors emerge within our midst. The music is another deliberate choice – the lyrical beauty contradicts the visuals, thus creating an effective counterpoint.

1.4 Educational Documentary

Two educational documentaries, *Winged Migration* and *Promises*, provide insights into how documentaries inform and educate.

*Winged Migration* (Perrin et al., 2001) captures the beauty, strength, and endurance of migratory birds that fly long distances. To produce the film, 17 pilots and 14 cinematographers were divided into five crews. They filmed bird migrations over three years by flying above 40 countries on seven continents. To film the birds in flight and observe their behavior on the ground and the ocean, the filmmakers developed innovative techniques to follow different types of movements under various circumstances, such as altitude, speed, and weather conditions. They used a variety of
aircraft (e.g., glider, helicopter, balloon) and developed an ultralight motorized aircraft that gave them a nearly 360-degree of field of vision in order to replicate a bird’s-eye view. No special effects were used, yet the beauty of nature was so vivid that it could be described as visual poetry. The film includes many close-ups that transport viewers into the sky and let them become part of the birds’ journeys.

Narration is kept to a minimum so viewers appreciate the visual story without distractions. The music effectively paces the story development and smoothes each transition. Overall, this film successfully enhances the viewer’s appreciation of the beauty of nature.

*Promises* (2001), another educational video documentary, portray political conflict in Palestine and Israel through children’s eyes. Produced by Justine Shapiro, B.Z. Goldberg, and Carlos Bolado, this film introduces political contradiction from a humanistic perspective by introducing it through the eyes of seven children instead of focusing on political events. Those children, between the ages of 9 and 13, are young enough to speak directly and truthfully without self-censorship. More important, they are the future generation, and they will determine whether to continue the conflict between Israelis and Palestinians or to forge peace.

The daily lives of the seven children and their families were videotaped over four years by the Israeli-American filmmakers, who traveled to a Palestinian refugee camp, an Israeli settlement on the West Bank, and the neighborhoods of Jerusalem. Each child offered a different emotional and humorous perspective on what it was like growing up in such a complex area.
Although they live only 20 minutes apart, historically and emotionally the Palestinian and Israeli children are completely separated. The filmmakers built a bridge between the children by giving them opportunities to exchange dialogues, which helped break down prejudices and could lead to peace in the region.

2 Visual Composition Techniques

This section reviews books on visual composition techniques, including film analysis, the principles of film editing, animation, and design and composition. These techniques represent the fundamental techniques used for visual composition and storytelling in films, TV, and documentaries. One reason reviewing them is to understand why they work well and how they relate specifically to the project. Some of these techniques will be used in the video clips for the project. Another reason for examining these techniques is to understand how they can be used in new ways, to create new storytelling techniques. One of the important ideas that emerged after understanding Vertov’s documentaries (section 1.1) was the power of radically new visual composition techniques and their ability to engage the viewer in the documentary.

2.1 Film Analysis

Film Art: An Introduction (Bordwell & Thompson, 2001) is one of the most widely used introductions to film analysis. It analyzes concepts relating to form, narrative structures, documentary films, editing, and the importance of sound.

Film form. Bordwell and Thompson define “form” as a specific system of patterned relationships that we perceive in artwork. The principles of film form include:
- Similarity and repetition: Repetition of elements or patterns enables us to understand a film by recalling characters and settings. Any significant repeated element in a film is called a motif.

- Difference and variation: Film motifs are not repeated exactly. Characters and settings may change, for example.

- Development: A film progresses from the beginning through the middle to the end.

- Unity and disunity: Unity refers to the presence of clear elements that exist as part of the overall form. There are no superfluous elements.

**Narrative as a formal system.** Bordwell and Thompson point out that formal structures are key to a film narrative. There are many different aspects to this system.

- Plot and story: The plot refers to the set of elements explicitly shown to the viewer, while the story refers to *all* the events in a narrative, both those explicitly shown as well as those that the viewer assumes.

- Causes and effects: A narrative is considered a chain of events in a cause-effect relationship that occurs in time and space.

- Time and space: Temporal order, frequency, and/or duration are manipulated in the plot to affect our understanding of events. Similar manipulations are possible for spatial elements as well.

- Openings, closings, and patterns of development: The closing reflects a clear-cut pattern of development that relates it to the beginning.
- **Narration:** The flow of story information may be restricted to one or a few characters’ knowledge, or it may range freely among the characters in different spaces.

**The documentary film.** Bordwell and Thompson describe two forms of documentary films: narrative (described above) and non-narrative. Non-narrative documentaries include two types of forms—categorical and rhetorical.

- In categorical form the filmmaker conveys information in a simple fashion. Categories (groupings that individuals or societies create to organize their knowledge of the world) may provide a basis for organizing the film’s form.

- In rhetorical form the filmmaker presents a persuasive argument. The goal is to persuade the audience to adopt an opinion about the subject matter and perhaps act on the opinion.

**Editing.** Bordwell and Thompson identify four dimensions of choice and control:

- Graphic relations between shot A and shot B, independent of the shot’s relation to the time and space of the story (e.g., lightness and darkness, line and shape, volume and depth, movement and stasis).

- Rhythmic relations between shot A and shot B, such as length, accent, beat, tempo, and pace.

- Spatial relations between shot A and shot B that relate any two points in space through similarity, difference, or development.

- Temporal relations between shot A and shot B that control the time of the action. In narrative film, editing contributes to the plot’s manipulation of story time in terms of order, duration, and frequency (e.g., flashbacks and elliptical editing).
Bordwell and Thompson also make a persuasive case for the careful use of sound in film. Sound engages a sensory mode that is distinct from the visual field; it can actively shape how the image is perceived. For example, sound can guide the audience through the images by “pointing” to things to watch. It also cues the audience to form expectations (e.g., a door opening) and gives a new value to silence.

### 2.2 Principles of Film Editing

In *On Film Editing: An Introduction to The Art of Film Construction* (1984), Edward Dmytryk states that editing is the creative force of filmic reality; the development of film technique has been primarily the development of editing. Filmmakers found that by means of a “cut,” they could manipulate space, time, emotions, and emotional intensity to an extent limited only by their instincts and creative abilities. Dmytryk says that a film’s first viewing should evoke emotional rather than critical reaction. He further identifies some basic rules for editing: (a) Never make a cut without a positive reason; (b) When undecided about the exact frame to cut on, cut long rather than short; (c) Whenever possible, cut “in movement” (e.g., action/reaction, exchanging dialogue); (d) Maintain the rhythm of movement even if the cut has to be shortened or lengthened by a few frames; in other words, do not interrupt the flow.

In *The Blink of An Eye: A Perspective on Film Editing* (2001), Walter Murch discusses basic techniques of film editing. His six criteria for determining good cuts in films include relevance to the emotion of the moment, whether the cut advances the story, and if it occurs at a moment that is rhythmically interesting and “right.” The other rules include eye-trace (concern with the location and movement of the audience’s focus of
interest within the frame) and understanding the two-dimensional plane of screen as well as the three-dimensional space of action.

2.3 Visual Grammar and Story Structure

In *The Visual Story* (2001), Bruce Block first analyzes graphic design and visual composition before developing his focus on visual grammar and story structure. Visual components constantly feed the audience visual information, which affects their moods, emotions, and feelings. The audience cannot escape the effects of the visual components. Block states that once a relationship is established between color and its meaning, the audience will accept the idea and react accordingly (e.g., blue could signal danger). Certain visual components, such as red roses or a black cat, have emotional characteristics already associated with them, although most of the visual stereotypes are easy to break. Stereotypes prove that visual components can communicate with an audience, yet they are the weakest creative use of the visual components. Defining the visual components helps create a great visual production.

Block emphasizes the importance of contrast and affinity: The greater the contrast (difference) in a visual component, the more the visual intensity or dynamic increases. On the other hand, the greater the affinity (similarity) in a visual component, the more the visual intensity or dynamics decreases.

Block develops the idea of story and visual structure: exposition, conflict and climax, and resolution. Visual exposition is the place to define the visual rules that will support the story. The job of the visual components is to tell the story; visual decisions are based on an analysis of the story structure. The rules help the audience in several ways: (1) Viewers respond to the visual unity of the film since it will become familiar to
them; (2) Rules in conjunction with the principle of contrast and affinity could be used to control the visual structure if the film gives the audience a visual experience that parallels the story experience.

2.4 Kinestasis and Collage

Kinestasis and collage are animation techniques that rely on still images or a combination of animations and still images. In *The Animation Book* (1998), Laybourne defines “kine” as “moving” and “stasis” as “stillness.” The author discusses four design genres:

- **Narrative genre**, which is the most common, selects and orders images based on a story line or “real-life” process.

- **Documentary genre** chooses images and arranges them in sequences meaningful to the nature of the subject rather than to an individual story or event.

- **Design genre** is a collection of images that are captured and ordered based on a formal quality that associates one image with the next. Those formal qualities are balance, tone, color, shape, texture, perspective, composition, and graphic and photographic elements. These are elements of pure design rather than elements that are generic to a story or subject matter.

- **Intuitive genre** is a combination of images that feel “right” or “work.” Intuition guides the process of designing. The criteria for selecting and joining images reside beyond the logic of each of these genres.

Laybourne also discusses two styles of collage. The impressionistic style is most commonly used where blitz imagery fills the screen, similar to the effect of a kaleidoscope. For instance, a rapid flow of images is produced through the creator’s use.
of duration, association, proximity, and selection of the images themselves. In the narrative style a combination of cutout images creates non-traditional characters or landscapes. The movement of the characters is often realistic. Narrative movies usually contain a story with surreal visual elements.

2.5 Design and Composition

In Design and Composition (1997), Nathan Goldstein discusses the foundational aspects of visual composition. He defines composition as the examination of the structural and organizational aspects of the language of graphic design. The basic principles of composition include balance, emphasis, simplicity, hierarchy, and unity. Every part of a work possesses visual weight, which causes our eyes to move in the direction of a different or attracting feature in a work, and physical weight, which makes us sense the downward direction dictated by a form’s weight. For artists, the word “tension” defines the sense of parts or elements threatening change, striving to meet or repel each other, or altering their shape or location. The viewer senses tension when directional actions are ambiguous or in conflict.

Goldstein also delves into the importance of the basic elements of design: line, shape, volume (three-dimensional illusion), space, value (the clarification of volume and space), texture, color, and unity. An important focus of the book is compositional structures: the grid, circle (point of balance), and triangle (high tension, unease). Goldstein discusses structures, such as a central location, two centers (creates a dynamic), a bridge (the harmonious joining of parts), and the cantilever. Other compositional structures include the idea of an even spatial spread, the radial burst, and different types of spatial emphasis, such as diagonal, horizontal, and vertical.
3 The Works of Milan Kundera

The goal of this project is to investigate new storytelling forms for the interactive multimedia documentary and to develop new interactive documentary forms that focus on the relationship of an individual or event to a larger network. As a model, the novelist Milan Kundera has successfully developed non-linear stories that enable the reader to understand the individual’s relationship to the society in which he/she lives. By fragmenting the time line, Kundera can simultaneously focus on the individual and bring out the relationship with the other characters and situations. Incorporating Kundera’s non-linear storytelling strategies is an important facet of this project, which will develop relationships between Kundera’s style and the electronic documentary narrative structure.

Kundera’s The Art of the Novel (1988) reflects on the structural framework underlying his work, which is manifested in two novels—The Unbearable Lightness of Being (1982) and Immortality (1988).

3.1 The Structural Framework and Key Elements in Kundera’s Novels

In The Art of the Novel, Kundera discusses the role of musical ideas in his novels, narrative strategies, the seven-part structure, and the future of the novel.

3.1.1 The Influence of Music

Kundera had a much stronger passion for music than literature until the age of 25. He composed music for piano, viola, clarinet, and percussion. He divided each composition into seven parts, which previewed the structural design of his novels. As in his novels, the pieces consisted of parts that varied in form, like jazz or fugue, each with different instrumentation (piano and viola; piano solo; viola, clarinet, and percussion; and
so forth). That formal diversity was balanced by a strong thematic unity; from start to finish, only two themes (A and B) were elaborated. The last three parts were based on a polyphony that he considered original at that time—the simultaneous development of two different and emotionally contradictory themes.

Kundera (1988) believed in the importance of the formal aspects of music. He wrote, “Any musical composition involves a good deal of purely technical activity: exposition of a theme, development, variations, polyphonic work that is frequently quite mechanical, filling in the orchestration, transitions, and so on” (p. 48). Polyphony is a key idea in the development of his novels. Specifically, an equality of voices—complete balance where none dominates or serves to accompany—is a crucial aspect of his narrative.

The opposite of polyphony in the novel is uni-linear composition. Since its beginning, the novel has always tried to escape the uni-linear, which would open rifts in the continuous narration of a story. For example, Cervantes tells the story of Don Quixote’s journey (linear story). As he travels, Quixote meets other characters who tell their own stories. These stories are “packed inside” the “box” of the novel, a technique often seen in 17th- and 18th-century novels. In the 19th century, polyphonic strategy developed as another method of breaking out of the linear mode.

One example of musical influence on Kundera’s writing occurred when he was working on *The Unbearable Lightness of Being*. He realized that the last part should be *pianissimo* and *adagio* (“Karenin’s smile” has a calm, melancholy mood with few events) and that it would be preceded by the part described as *fortissimo* and *prestissimo* (“The Ground March” has a rough, cynical mood full of events). This strategy was the result of
another significant lesson from music, where a shift in tempo also implies a shift in emotional atmosphere; each passage of a musical composition conveys an emotional expression. The sequence of movements in a symphony or sonata has always been determined by the unwritten rule of alternating slow and fast movements, which almost automatically meant sad or cheerful movements.

3.1.2 Story Structure

Mathematical structures abound in Kundera’s writings. There is a seven-part structure in his novels, as in his musical compositions. In The Art of the Novel (1988), Kundera writes, “The seven-part structure doesn’t represent some superstitious flirtation with magical numbers, or any rational calculation, but a deep, unconscious, incomprehensible drive, an archetype of form that I cannot escape. My novels are variations of an architecture based on the number seven” (p. 74).

Polyphony is another musical influence that plays a key role in Kundera’s stories. In particular, the polyphonic quality in the Unbearable Lightness of Being (1982) is most striking in part 6. The polyphonic passage is the keynote of the whole structure, which contains the essence of its architectural balance. More specifically, part 6 is inserted as an essay rather than being part of the story development. In the essay, fragments of the characters’ lives are interrupted as “examples” and “situations to be analyzed.”

Part 6 also plays the important role of chronological displacement because the events occur after those in part 7, the last section of the novel. Despite its idyllic quality in part 7, this dislocation is filled with a melancholy that comes from the reader’s knowledge of what will happen. Kundera uses this structural approach in Immortality (1988) as well.
Kundera constructs novels on two levels. First, he composes the story and develops its themes. The themes are worked out steadily within and by the story. A theme can be developed on its own, outside the story. He calls that approach “digression,” or abandoning the story for a moment. Digression enhances rather than weakens the discipline of the composition. For example, in the *Unbearable Lightness of Being*, Kundera digresses from the main narrative by expanding one of the novel’s themes—kitsch.

Kundera distinguishes between motif and theme. In his view, a motif is an element of the theme that appears several times during a novel, always in a different context, while a theme is an existential inquiry. Such an inquiry is the examination of certain words, which is the theme or key words. A novel is based primarily on certain fundamental words. Throughout the novel, those principal words are analyzed, studied, defined, redefined, and then transformed into categories of existence. For example, in *Unbearable Lightness of Being*, those words are “weight,” “lightness,” “soul,” “body,” “Grand March,” “kitsch,” “compassion,” “vertigo,” “strength,” and “weakness.”

3.1.3 The Future of the Novel

In *The Art of the Novel* (1988), Kundera discusses several possible futures for the novel.

The appeal of play: Kundera considers Laurence Sterne’s *Tristram Shandy* and Denis Diderot’s *Jacques le Fataliste*, the greatest novels of the 18th century, because they reached heights of playfulness and lightness. Afterward, the novel got tangled up in the imperative of verisimilitude—realistic settings and chronological order. It abandoned the new possibilities opened up by these two masterpieces, which could have led the
European novel in a different direction.

- The appeal of dream: The fusion of dream and reality is what Franz Kafka achieved and what the Surrealists later called for. Kundera believes that this contribution is less the final step in a historical development than an unexpected opening. He sees the novel as a place where the imagination can explode, as in a dream; the novel can break the wall of the seemingly inescapable imperative of verisimilitude.

- The appeal of thought: Kundera considers the novel the supreme intellectual synthesis that can illuminate man’s being. The appeal of thought is not to transform the novel into philosophy. Rather, the history of the novel is not yet completed. Kundera maintains that a story can be arranged in various ways in novels, such as by rational and irrational, narrative and contemplative.

3.2 The Unbearable Lightness of Being and Literacy Criticism

In The Unbearable Lightness of Being (1982), Kundera redefines certain keywords and concepts, such as eternity, lightness and weight, body and soul, and light and darkness. He also redefines the meanings by having different characters use them in different contexts (but consistently, for each character).

The novel includes references to historical figures (philosophers, politicians, artists, and so forth) and concepts, including Tolstoy, Anna Karenina, Jules Verne, Beethoven, Picasso, Bach, Kafka, Mozart, Jan Hus, Don Juan, Sophocles, Oedipus, music composition, cubism, painting, politics, and proverbs (e.g., eyes are windows of the mind).

*The Unbearable Lightness of Being* is divided into seven parts:
1. “Lightness and Weight” (The story is focused on Thomas.)

2. “Soul and Body” (The story is focused on Tereza, then Tereza and Thomas, then Tereza and Sabina.)

3. “Words Misunderstood” (The story is focused on Sabina and Franz, then Franz’s story, then Sabina’s story, where she leans about the deaths of Thomas and Teresa. This part, which expands into the “river of variation of semantics,” includes a small dictionary of words misunderstood between Sabina and Franz, such as woman, royalty and betrayal, music, parade, the beauty of New York City, Sabina’s home country, grave, old church in Amsterdam, power, and live in the truth.)

4. “Soul and Body” (The story is focused on Teresa.)

5. “Lightness and Weight” (The story is focused on Thomas.)

6. “The Grand March” (This is an essay. Kundera called this technique a “digression,” as described in section 3.1.2. The story is focused on Jacob, the son of Starling, followed by the word “kitsch,” Sabina’s story, and Franz’s story. Kundera enters the novel and analyzes his characters, Franz and Simon, along with Franz’s death and Simon, who takes care of Thomas’s funeral.)

7. “Karenin’s Smile” (The story is focused on Teresa and Thomas living in the countryside, the death of Karenin, and the last day of Teresa and Thomas’ lives.)

In Agnès's Final Afternoon: An Essay on The Work of Milan Kundera (2003), Francois Ricard and Aaron Asher discuss the interaction of narrative content in The Unbearable Lightness of Being. They write that the polyphonic possibilities result from the interaction within the same story of two or more story lines of separate narrative
content. Those lines are made of the thoughts and journeys of different characters or
groups of characters and told simultaneously or in parallel. For instance, parts 2 and 4,
which focus on Tereza, alternate with parts 1 and 5, which focus on Thomas. The parts or
pairs focused on the couple Tereza and Thomas alternate with parts 3 and 6, which focus
on Sabina and Franz.

In *Understanding Milan Kundera* (1993), Fred Misurella discusses the role of
Kundera in relation to his work. Misurella notes that Kundera frequently introduces an
autobiographical anecdote, which reminds readers they are reading fiction, not fact. As
narrator, Kundera is reaching out to his audience on a human level, as if his readers were
a company of thoughtful friends. This encourages his readers to speculate, along with
Kundera himself, on the meaning and nature of his characters’ lives in the context of real
experience.

### 3.3 *Immortality* and Literacy Criticism

Kundera’s novel *Immortality* (1988) further develops complex structures by
involving larger numbers of characters with multiple stories across time, space, and
history. Each story line is fragmented and carefully arranged so readers cannot confuse or
forget about other parts of the narrative developed in a parallel manner. Fragmenting
story lines is an effective way to reveal the essence of the story during the course of the
novel. This technique also motivates readers to discover how all the elements, including
cause and effect, are connected to each other tightly and deeply.

Like most of Kundera’s novels, *Immortality* is divided into seven parts:

1. The face
2. Immortality
3. Fighting (subsections: The sisters / Dark glasses / The body / Addition and subtraction / Older women, younger man / The Eleventh Commandment / Imagology / The brilliant ally of his own gravediggers / A complete ass / The cat / The gesture of protest against a violation of human rights / To be absolutely modern / To be a victim of one’s frame / Fighting / Professor Avenarius / The body / The gesture of longing for immortality / Ambiguity / The clairvoyant / Suicide / Dark glasses.

4. Homo sentimentalism

5. Chance

6. The dial

7. The celebration

In *The Novel as Obbligato: Reading Milan Kundera* (1996), Yoko Kudo discusses *Immortality*’s mathematical and thematic structure. Kudo points out that one of the unusual aspects of Kundera’s novels is found even in the table of contents. In *Immortality* and his other novels, Kundera reuses some of the same titles in the table of contents (e.g., the titles “dark glasses” and “the body” appear twice in part 3). Kundera says the repetition has a musical effect. The seven titles are all nouns and seem nonsensical and disconnected from each other. They do not give readers any specific images of the story itself. The table of contents in Kundera’s novels generally does not let readers anticipate the narrative development and timeline of the story, as in many other novels. The table of contents usually sends effective messages to readers, as in Cervantes’ *Don Quixote*:

- Part 1 of the ingenious gentleman Don Quixote of La Mancha
Chapter 1. Which describes the condition and profession of the famous gentleman Don Quixote of La Mancha

Chapter 2. Which tells of the first sally that the ingenious Don Quixote made from his native land

Chapter 3. Which recounts the amusing manner in which Don Quixote was dubbed a knight

Chapter 4. Concerning what happened to our knight when he left the inn

Chapter 8. Regarding the good fortune of the valorous Don Quixote in the fearful and never imagined adventure of the windmills, along with other events worthy of joyful remembrance

On the other hand, Kundera constructs his novels by using a set of keywords. Because they are the novel’s theme and motif, they are repeatedly analyzed, explored, and defined.

In Kundera’s novels, specific parts assume significance. In the last section of part 5 of *Immortality*, the main character, Agnes, dies in an accident. Her story, therefore, is complete. For Kundera, the number five signifies the end of the piece. In part 5, subsection 9, Kundera, who appears in the story as a character who is writing *Immortality*, says, “I’ve been waiting for the part six. In my novel, the new character appears out of blue. Then, in the end of the part six, he leaves without leaving footsteps just like when he appears. He is not any factor of cause or effect—that is exactly what I am aiming for. The sixth part will be a novel in the novel.” Thus, part 6 is an essay inserted in the novel. There is a thin connection between Agnes’s story and part 6 of the
novel. The story chain and development are disconnected between parts 5 and 6. Then Kundera, who seems to finish writing his novel, and other characters are to meet in the seventh (last) part. Though *Immortality* has seven parts, the story is told in the first five parts. Therefore the third part is the center of the story (out of five parts). Since the story climaxes in the third part, it has subsections and is twice as long as the other parts.

Unlike realistic novels where each character’s individuality is distinctive (e.g., one’s name, titles, personality, history, habits, physical appearance, clothes, and living conditions), all the characters in Kundera’s novels remain abstract. Kundera’s characters tend to maintain a kind of anonymity. The readers are informed of a character’s gender, age, profession, and entry in the state registry, but the singularity of his or her *person* is largely erased. There is no family name, sometimes not even a given name. His or her physical attributes and facial features are not described. In *Immortality*, Kundera keeps Agnes’s charms as abstract as possible, whereas realistic novels try to convince readers by providing visual information. There is no date in the story of Agnes. By contrast, there are specific dates and numbers in the story of Goethe and Bettina, who actually existed and are well-known figures (e.g., “Sep. 13, 1811, when he was 19”). In his novels, Kundera presents each character at a different intensity and in a different way.

One way to divide novels is into one-track (one main character) and multi-track (several main characters interact or connect with each other at separate points). Yet in *Immortality*, Kundera chose characters who cannot interact (e.g., Agnes and Goethe). Kundera calls this form “polyphony.”
4 Interactivity

This section describes three scholarly articles that deal with interactivity and narrative. Interactivity is critical to this project, since it deals with non-linear navigation of content based on user interest. The key idea is that the user can construct his or her own path though the media through a fixed set of interactions.

4.1 The Art of Interaction

David Saltz (1997) discussed the historical relationship between interactive computational frameworks and traditional performances. He defined interactive frameworks in terms of a computational mechanism of sensing and analysis that changes the user environment. He pointed out that this “interactive” performance framework is similar to a playwright’s written play (analogous to the computer instructions) performed by actors.

Saltz suggested that interactive frameworks such as hypertext are not performative (the user becomes a live performer in the work) but function as explorers—the audience just follows preordained paths. Finally, he proposed that the lure of interactivity implies the latent desire of the artist to connect in a more intimate way with the audience in a manner suggestive of the participative theater movement of the 1960s. He said interactive performance will work by adopting a theatrical ideal from the avant-garde theater movement, establishing authentic human contact and a renewed sense of community.

The key idea with interactivity is not real-time feedback but the computational framework that underlies it. This makes the media programmable. Indeed, loops and branches are direct consequences of loop-and-branch constructs in programming.
languages. Second, the notion of “participatory performance” by the audience is understood in a limited manner. Engaging with a book (with preordained sentences) is similar to a simple hypertext site; the immersion and participation happen in the mind of the audience. Finally, by focusing on the visible manifestation, the author ignores the rich structural framework that emerges out of using computational mechanisms, which is crucial to its comprehension.

4.2 Interactivity, Online Journalism, and English-Language Newspapers in Asia

Brian Massey and Mark Levy (1999) conducted a content analysis of English-language online newspapers in Asia using a four-dimensional conceptualization of interactivity. They focused on Asian online sources because they had not been extensively researched up to that point. Print newspapers in Asia tend to focus on agendas relating to nation building and developing consensus.

Massey and Levy identified four crucial aspects of interactivity related to online journalism: (a) the complexity of choice—the range of content that Web journalists make available to the reader, (b) responsiveness to the user—the degree to which online journalists can react responsively to members of their audience, (c) the ease of adding information, and (d) the facilitation of interpersonal communication—a news website is a tool for one reader to engage in synchronous communication with another reader.

Massey and Levy analyzed the interactivity of 44 newspapers. The results were disappointing. Although there was tremendous diversity, very little attention was paid to immediacy, interpersonal communication, and responsiveness—all key elements of online journalism. A notable exception was the South China Morning Post. The authors also noted a lot of repurposing from the printed page. The online editions may have had
small staffs and budgets, leading to an overworked staff without the time to create original online content.

4.3 Blade Runner: Speculations on Narrative and Interactivity

Patrick Crogan (2002) discusses the idea of interactivity by comparing the film *Blade Runner* with its corresponding computer game. Both provide insight into the difference between narrative and interactive forms of media. It was billed as “the first real-time adventure game” that had “a constantly changing plot” peopled with characters armed with sufficient artificial intelligence to make game play unpredictable and highly responsive to player interaction. However, the game did not do well with the gaming community because it failed to live up to its promise by being too “automated” in terms of navigation, provided key events, as well as the ability of the player to interact with the game.

Interactivity is generally presumed to give greater freedom to users, who can respond to, alter, or otherwise interact directly with the text. Conventional narrative, with its closed, linear, and predetermined form, is seen as the model of constraint against which the new media struggle.

Automation refers to blind mechanical repetition, which is the opposite of crafting a handmade item. This polar opposition is fundamental to Crogan’s analysis of the modern industrial age of mass reproduction, which can be seen in the film’s narrative and figural preoccupation with various forms of automatons, artificial organisms, and replicates.

As a production method, automation does not allow for human intervention or interaction. The Blade Runner game tries to minimize the influence of such prescription
by transferring as much control as possible to the individual “interacter,” who manufactures the course of events through eye-hand interface with the screen. In its attempt to reproduce the design, ambience, and thematic significance of the film, however, the game remains faithful to modes of narrative and spectator positioning commonly associated with the broadcast forms of conventional modern media. These modes are:

1. The game is divided into “acts,” which begin and end with connecting sequences that are “cut-scene” animations with no interactive element. The player can only watch these scene-setting transitions for cues about the progress of the game’s plot.

2. A narrative chain of events is pre-designed.

3. The sets have limited options for interactivity.

In the film *Blade Runner*, “[T]he more we see, the more our uncertainty grows.” Every stage of the game’s replication of the film provides the chance to speculate on the validity of the putative opposition between mechanical repetition (narrative) and innovative creation (interactivity). The game not only provides the ambience, technologies, and scenarios of the film but also, through interactive design, immerses the gamer inside the *Blade Runner* milieu with all its epistemological traps and ethical doubts. The game has a multi-linear story structure. The user can influence a narrative turn of events through his or her initial behavior.

While the player can control the narrative sequence and alter the outcome of the game’s story, there are certain crucial sequences in the game in which “cut-scene animations” take place like movie segments. During these, the player can only sit back
and watch. These sequences are key transitions in the game’s overall division into acts. These transitions, which correspond with new scenes being loaded onto the computer’s RAM from the disk, are a necessary convention in adventure and role-play games.

Scene setting is motivated by substantial investment in classic narrative features, such as character development, a relationship with the supporting cast, and a back-story. This is a somewhat inescapable fact in interactive adventure games. Transitions between acts involve interactions with other characters that both advance the game’s scenario and reveal information about a character’s past or present association with other characters. A transition appears when a gamer has discovered things or accomplished tasks. Thus, it has a number of alternatives that are combinations or complications of the simple choice between two absolute positions.

5 Conclusion

This literature review examined documentaries created by masters such as Vertov, Reifensthal, Resnais, Perrin, and Shapiro. The importance of these documentaries lies in the development of new storytelling techniques that effectively engage the viewer.

The films of Vertov (The Man with the Movie Camera) and Perrin (Winged Migration) reveal the importance of experimental frameworks in successfully communicating facts. Vertov developed the aesthetics of montage to communicate the essence of Russian life. Perrin introduced novel shots that enable the viewer to experience a bird’s-eye view of the world. Resnais (Night and Fog) and Shapiro (Promises) incorporated storytelling techniques that added emotional depth to their documentaries. These important visual composition techniques will be used for creating the videos and still images that are integral to my interactive multimedia documentary.
Visual storytelling plays a key role in communicating ideas. The visual narrative is considered a formal system, with rules of composition and temporal syntax. This formal system plays a crucial role in maintaining story coherence; the viewer understands the content with the rules established by the narrative. Milan Kundera developed successful non-linear narrative frameworks in his novels. He used narrative devices such as “entering the frame” and fragmented time in his novels.

This applied project will incorporate two narrative devices: the establishment of rules of syntax as well as “entering the frame.” This applied project will experiment with new narrative frameworks to communicate the central ideas of a large project (motion-e) at ASU’s Arts, Media and Engineering program. Interactivity will allow viewers to create their own path through the facts while constrained by the formal narrative structures in the interaction. The formal narrative structures will be developed through use of transition matrices that control the probability of transition. When the user is watching a media element, the next media element shown will depend upon two things: when the media element was captured (during motion-e residency and between residencies) and the topic focus (motion-e / ASU / other). The transition probabilities govern the narrative of the interaction.

This project will introduce three viewpoints of the motion-e residency at the Arts, Media and Engineering Program: (1) a detailed, focused view of the motion-e residency, (2) a broader examination of people and activities that were co-occurring at ASU, to provide a larger context to understand motion-e, and (3) more abstract, interpretive media elements where the author enters the frame through the media elements, inspired by Milan Kundera’s technique of “entering the frame.” This narrative device provides a
human context in which the events at ASU and at motion-e take place. This technique, “entering the frame,” is also inspired by Vertov’s device of using the cameraman in his landmark documentary *The Man with the Movie Camera*. Vertov’s documentary enables us to appreciate the world he captures, as well as his own role in the capture. Use of this device in this project serves to remind the viewer that the interaction is a construct, so the viewer should be on guard. Interaction with the media creates a novel experience that takes place within a formal system.
Methodology

The literature review reveals a clear need for investigating new documentary techniques where interactivity plays a key role. An interactive exploration of the motion-e network allows the construction as well as the consumption of the content to be non-linear. This applied project will capture and annotate media related to Bill T. Jones’ dance piece. These media may be images, videos, and sounds / text. The project will investigate the following issues:

- Interactivity: Basic mechanisms of interaction using Macromedia Flash.
- Visual composition: Effective visual composition techniques that represent the media elements (images, videos) captured during the residencies and between residencies. The media elements include video capture of interviews, performances, and PowerPoint presentations, as well as videos of discussions.
- Syntax: New rules of syntax that allow the user to effectively navigate the interactive content.
- Multiple focuses: The role of multiple storylines to communicate the events at AME. This idea was inspired by Milan Kundera, who skillfully uses multiple storylines that involve different characters but which occur at the same time, thus creating multiple levels of focus for the reader.
- Entering the frame: Developing a way for the project creator (Yurika Abe) to “enter the frame” of the narrative. This device reminds the audience that the documentary is a human construct and that the audience should be wary of blindly accepting the facts in the documentary. This idea is inspired by Kundera’s novels as well as by Vertov’s documentary *The Man with the Movie Camera*. 
2.1 Implementation

This project was created in Macromedia Flash, a popular, flexible framework for interactive visual environments that contain animation. Programming languages such as Java, Director, and Web-based scripting (PHP scripts) were also considered, but Macromedia Flash seemed a better choice for this project. The other programming environments might be better suited to other projects. For example, interactive DVD’s are often authored with Macromedia Director or DVD Studio Pro. Flash-based interaction allows the user to dynamically navigate among visual material (images and video) related to the applied project.

2.2 Motion-e

This applied project deals with motion-e, a two-year project at ASU’s Arts, Media and Engineering program (AME). Motion-e involved artists and engineers at AME, as well as dance choreographers (Bill T. Jones, Trisha Brown, and Bebe Miller), visual artists (Marc Downie, Shelly Eshkar, and Paul Kaiser), and composers (Curtis Bahn, David Birchfield, and Roger Reynolds).

The dancers choreographed a specific movement in conjunction with the AME artists and engineers. As part of an artist residency, each dancer visited ASU separately several times a year, along with visual artists and composers. Three visual artists participated in all the residencies. Roger Reynolds created sound material for Bill T. Jones’ piece, Curtis Bahn for Trisha Brown’s piece, and David Birchfield (AME music faculty) for Bebe Miller’s piece. The AME faculty—Thanassis Rikakis and Todd Ingalls (both music composers), Gang Qian (electrical engineering faculty), and Jodi James (dance kinesiology)—participated in all the residencies.
The entire team then worked together to create the movements, visuals, and sounds. Cooperation was extremely important because the dancers had to be aware of the possibilities of the real-time motion capture system, which could reliably report the results to the visual and sound creation engines in real-time. Since the visuals and sounds were controlled by each dancer, it was important that those components did not distract the dancer or overwhelm the audience watching the performance. The visuals were projected onto a translucent scrim placed between the dancer and the audience, thus superposing the generated visuals on the dance movements. For the purposes of making the applied project less complex, only Bill T. Jones’ residencies were included.

Motion-e is designed to develop new interactive dance forms through the real-time analysis of dancers’ movements. Analysis extracts the lexica and syntax of the dancers’ stylized movements. The system then creates sounds and visuals in response to the movements. The entire process happens in real-time, thus allowing the dancers to control not just their physical form but also the sounds and visual environment.

2.3 Interaction

The interface of this applied project organizes the media in the database into three non-overlapping levels: (1) motion-e, (2) events at ASU involving AME or Cronkite School students, and (3) material from the media collection of the project creator (Yurika Abe). The idea of multiple levels is inspired by Milan Kundera, who skillfully uses multiple storylines that involve different characters but which occur at the same time, thus creating multiple levels of focus for the reader. All the media for motion-e were captured from the beginning of the residency in 2003 until its completion in 2005. Other
ASU-related media as well as the creator’s media were captured between 2000 and 2005. The applied project contains more than 600 images and videos.

The applied project includes three types of media:

- Media directly related to the motion-e project. These include videos of the movements, creative discussions among project participants, and interviews of AME participants.

- Media related to events at ASU that involve students at both AME and the Cronkite School. Some of these events overlap the motion-e residency, while others occurred between consecutive Bill T. Jones’ residencies.

- Media related to the project creator that serve as a backdrop to the events at ASU and the motion-e residencies.

Although motion-e media were obtained during all the artist residencies, motion-capture sessions were videotaped only during the residencies at the beginning as a visual reference for AME’s motion analysis team. Therefore, the videographer framed the shots as widely as possible and locked down the camera to videotape the entire movements of a dancer in the space. On the last day of the first few residencies, a public event demonstrated the progress of motion-e, and all the PowerPoint presentations, demos, performances, and Q&A sessions were videotaped. Those public events were later edited down to a length of 7 to 10 minutes. Several artists’ discussions and B-roll were videotaped only after motion-e was developed further. Most participants, however, were not comfortable being videotaped. Therefore, during artists’ discussions, the videographers were only allowed to set up the video camera in the locked position with a built-in microphone before the discussion and could not alter the shot or adjust the audio.
Non-linear Storytelling Forms

levels. Unfortunately, motion-e participants, including the AME team, had little understanding and appreciation of video production. The lighting and sound were geared toward theatrical purposes rather than video production. Two interviews for the AME motion analysis team, however, were conducted during non-residency periods, when the participants were more relaxed. The light and audio were set up specifically for the interviews.

ASU materials were videotaped between 2000 and 2005. All the AME events occurred during the motion-e residency or between consecutive Bill T. Jones’ residencies. Short, edited stories about Cronkite School and other ASU students were prepared between 2000 and 2002. Most materials related to AME were captured as video documentation throughout the year. Therefore, the lighting situations and audio conditions were not satisfying. On the other hand, the short, edited portraits of students were videotaped with reasonable lighting and sound. Students were chosen based on the project creator’s interests at the time. Multiple shooting sessions for each story yielded interview and B-roll footage. Interview questions were carefully prepared before each shooting. All the stories were edited with Final Cut Pro.

Media related to the project creator were obtained between 2000 and 2005. All the media were from her personal collection and filmed in far-flung places, such as Japan, New York City, and Arizona. Still images were captured in 2004 and 2005, while most video was recorded between 2000 and 2003. More than 250 images were selected from thousands of photographs. Adobe Photoshop and Final Cut Pro were used to make composites, add treatments, and animate sequences of images. Inspired by the material
itself, personal interpretations, and memories, the project creator selected the assets, altered the speed and color, and applied single or multiple filters.

2.4 The nature of the interaction

The project begins with a non-interactive video, then proceeds to the Flash interaction. The metaphor is a river that flows from the mountains to the ocean. The river is formed by small tributaries, which in turn are formed by snowmelt or rain.

The non-interactive video shows the top view of the mountain, with the sound of falling rain in the background. The mountain then opens up like a flower, accompanied by the sounds of birds. The video slowly dissolves into an image of the paths of the streams that finally merge into the river. Climbing up the mountain is a metaphor of our daily lives as we try to achieve personal success. We can follow different paths as we climb up the mountain, yet we all end up at the same place. The river serves as a counterpoint. Here, the goal is not a single point that incorporates everything else in life, beyond the self. The river communicates the idea that our personal activities occur in the larger context of life. The video indicates that motion-e cannot be interpreted as a singular event either but must be understood as part of the larger context of all our lives.

The interactive component, which was programmed in Macromedia Flash, illustrates the river metaphor. The media are arranged in three levels: The first correspond to motion-e, the second to ASU events connected to students at AME and the Cronkite School, and the third to events related to the project creator that serve as a backdrop to the events at ASU and the motion-e residencies. The media are represented as clickable icons floating in the river. The idea of the levels stems from Kundera’s work, where the
author uses multiple storylines to create multiple focal points within the novel, involving different characters within each storyline.

The personal-media level performs a special function. The idea emanates from both Vertov’s celebrated documentary *Man with the Movie Camera* and the writings of Milan Kundera. In Vertov’s documentary, the cameraman plays the twin roles of cameraman and *creator* of the very documentary we are watching. The cameraman is a device. He serves to remind the audience that the documentary is a human construct and that the audience should beware of blindly accepting the facts in the documentary. In Kundera’s novels, the novelist enters the frame of the novel and interacts with the characters. This achieves two things: First, it breaks the fictional world, reminding readers that the characters and the story are constructs; second, the author’s interactions affect the future development of the storylines.
The user interacts with the Flash project using a computer mouse. Initially, all the media elements float from right to left, as in a stream. Media elements that belong to a certain level always remain in that level. The media elements are arranged chronologically, in increasing order of time. Time increases from left to right. A media element to the left of another would have occurred earlier in time.

When the user moves the mouse over the interactive space, the program responds to the mouse’s location. First, the mouse’s horizontal location determines the time frame of interest to the user. This helps locate a “focus” within the interactive space. The location focus refers to a small time window created around the current mouse location. The focus window affects the size and transparency of the media icons. Media elements near the current mouse location will be rendered in the normal icon size, while elements farther away will shrink. The focus zone also changes the transparency of the media icons. Those close to the mouse location are rendered opaque, while those farther away become progressively more transparent. Thus, the changes in both size and transparency reinforce the idea that the mouse creates a focus area, allowing the user to examine the media elements in detail.
The timeline is organized in two states: periods involving the motion-e residencies and periods between them. This is done for all three levels. This organization indicates the natural work rhythm during the creation of the interactive dance piece. The residency periods at AME were the important creative moments for each dance piece. This was the time when important decisions were made about movements, sounds, visual feedback, and movement analysis. The periods between residencies were also important because the AME faculty and students used them to develop the movement analysis algorithms and work on sound generation and visuals. While David Birchfield refined the sounds for the Bebe Miller piece, Jodi James (movement), Loren Olsen (visuals), and Todd Ingalls (sound) worked on a choreographed dance piece that premiered with motion-e. They worked on this piece between the residencies, when the AME faculty and students were more relaxed and communicative. This was when all the interviews with the AME faculty and students took place.

**Figure 2:** The three levels can be considered three states. The rules of syntax are established by determining the strength of the transition between the states.
When the user moves the mouse over a floating media element, all the media icons come to a standstill. The interaction reveals notes about the media icon from a database below the river, including facts like who, when, where, and what. Clicking on the media icon creates a pop-up window that shows the media element in detail. This could be a video, an image, or text. Moving the mouse over the media element causes the program to reveal the media elements that follow in time, based on rules of syntax.

The rules of syntax are set using transition matrices. A transition matrix is an organized set of numbers that determines how the system creates visual transitions between the three focal levels. In this project, the system has three states. Each state represents one level—motion-e, ASU, and the project creator, as illustrated in Figure 2. An ellipse represents each state. The bi-directional arrows between any two states indicate that the visual transition can occur in both directions. The self-loop for each state indicates that the state can lead to itself. Each state is associated with three numbers, indicating the strength of the transition to all three states. The matrix (Table 1) has three rows and three columns. The first row corresponds to the strength of the transition from the motion-e state to the other states, including to itself.

**Table 1:** The transition matrix between the three states during the residency

<table>
<thead>
<tr>
<th></th>
<th>motion-e</th>
<th>ASU</th>
<th>project creator</th>
</tr>
</thead>
<tbody>
<tr>
<td>motion-e</td>
<td>0.8</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>ASU</td>
<td>0.35</td>
<td>0.05</td>
<td>0.6</td>
</tr>
<tr>
<td>project creator</td>
<td>0.7</td>
<td>0.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>
For example, consider the “motion-e” state. Since this state is associated with the motion-e layer, it becomes active when the user (i.e., the person interacting with the Flash program) moves the mouse over a media element in the layer corresponding to “motion-e.” Now the interactive program has to determine what to show next. This is determined by the transition matrix. Further assume that the three numbers associated with the motion-e state are \{0.8, 0.1, 0.1\}. These numbers indicate that the strength of the transition from the motion-e state to itself is strong (80%), while the transition to the other two states is weak (10%). If the user is watching a media element corresponding to the motion-e layer, then the next likely media element of interest should also be the motion-e state.

The strength of the transition from the motion-e state to the ASU state is 0.1, while the backward transition from the ASU state to the motion-e state is 0.35. The self-transition is high for motion-e (0.8) and very low for ASU (0.05). This asymmetry indicates that when the user is watching the motion-e state, he / she should stay in the motion-e state and not start focusing on the other states. But if the user is watching the ASU state, the system will nudge the user to start paying attention to either the next motion-e media element or the next media element associated with the “project creator” state.

Figure 3: The transition matrix affects the size of the next media element displayed. The transition matrix itself changes, depending on whether the user is watching media elements from the residency or between residences.
The project contains two sets of transition matrices, each corresponding to whether the user is in the residency time period (when the motion-e activities are important) or between the residences (when other events at ASU and for the project creator assume greater importance). Table 2 indicates that the matrix between the residencies differs from the time of the residency. Between residencies, events that take place with AME or Cronkite School students and events that affect the project creator become more important. It is important to note that changing the transition matrix numbers changes the attention of the user navigating the media.

The transition matrix numbers affect the media elements. The next media element’s size is proportional to the transition strength, thus allowing the user to focus on the correct element (see Figure 2).

**Table 2**: The transition matrix between the three states in between residencies

<table>
<thead>
<tr>
<th></th>
<th>Motion-e</th>
<th>ASU</th>
<th>project creator</th>
</tr>
</thead>
<tbody>
<tr>
<td>motion-e</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>ASU</td>
<td>0.1</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>project creator</td>
<td>0.3</td>
<td>0.1</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Conclusion

3.1 Summary

This applied project resulted in the creation of an interactive documentary of the motion-e project focusing on a dance piece choreographed by Bill T. Jones. The motion-e project involved students and faculty from the Arts, Media and Engineering program, visual artists, and composers.

The literature review discussed seminal documentaries, standard visual composition techniques, non-linear storytelling by Milan Kundera, and other attempts at interactivity. Seven documentaries were categorized into four different types: experimental art, essay style, propaganda, and educational. Each of these exemplary works presented new visual storytelling techniques. Some were used in the video clips that are part of this project.

The applied project contains more than 600 images and videos. It includes three types of media: (a) media directly related to the motion-e project, including videos of the movements, creative discussions among the participants, and interviews with the participants; (b) media related to events at ASU that involve students at AME and the Cronkite School; and (c) media related to the project creator, which serve as a backdrop to the events at both ASU and the motion-e residencies.

The Macromedia Flash interface uses a river metaphor to evoke the key ideas behind the motion-e project such as a dynamic nature of interaction among its multiple participants as well as how the project was progressed through the artists residencies during two years in relation to the larger context of events at ASU and beyond. The project was strongly influenced by Dziga Vertov’s *Man with the Movie Camera* and...
Milan Kundera’s novels. In Vertov’s film, the cameraman serves to remind the audience that the documentary is a human construct and that the audience should be wary of blindly accepting the facts in the documentary. This idea and technique of “entering the frame” is also successfully used in Kundera’s novel and incorporated within the applied project. The applied project’s interaction incorporates three storylines, a technique inspired by Kundera. He skillfully used multiple storylines that involve different characters but which occur at the same time, thus creating multiple levels of focus for the reader. This project shows how multiple storylines can intersect by introducing transition matrices that govern the visual transition between media elements.

3.2 Limitations

A limitation of this study is that it did not examine the entire motion-e project, in particular the residencies of Trisha Brown and Bebe Miller. This decision was made in order to focus the study on the work of Bill T. Jones. Including all three residencies, however, might reveal new storytelling possibilities.

Another limitation is not telling the story of a single individual who participated in motion-e. Not enough documentation was available. It was simply too complicated to shoot and edit material for one person, especially since the roles of the AME participants kept changing over time.

3.3 Insights

Developing this documentary proved extremely challenging. Reflections on these challenges have led to several insights.

It was difficult to document the motion-e project because most of the participants did not appreciate the demands of high-quality video production, including appropriate
lighting and flexible camera locations. Future projects should ensure that all participants understand the demands of creating a documentary.

One of the most difficult aspects of creating this project was learning how to program in Macromedia Flash. Although learning any media construction framework is valuable, working in an entirely new narrative construction medium meant the creator had to relearn how to tell a story in an interactive setting. Even extensive knowledge of composing video did not help directly (though it helped with creating the videos), as the mechanism of how the viewer consumes the story in video format is different. The documentary video maker has much more control over temporal rhythm and pacing than in an interactive setting. Use of the interactive framework pointed out limitations of video storytelling, thus revealing new storytelling frameworks. Future interactive storytellers must balance the acquisition of new knowledge against what is already known.
Bibliography


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Journal

Spring semester 2004

Forming a committee

Toward the end of February, I went to see graduate advisor Trisha Farwell to discuss my applied project. She gave me a form and some suggestions about forming a committee.

One of my major interests was to investigate storytelling techniques in the digital world, and my proposed project was to produce a multimedia documentary. The possible subject was *Motion-e*, a large, interdisciplinary research project I had been video-documenting as a graduate research assistant in the Art, Media, and Engineering Program.

I felt Carol Schwalbe would be an excellent chair because my fascination with applying non-linearity to visual storytelling as well as my interest in using electronic media, increased tremendously during her Online Media course the previous semester. I believed that she would be a great mentor to help me explore the concept of non-linearity and its effectiveness in telling a story.

I was hoping to have Jim Dove as a second committee member since he was a professional broadcasting editor with extensive experience and knowledge in traditional documentary creation. I felt he would offer great input on the video portion of my project, including storytelling techniques in documentary production.

For the third member of my committee, I thought Frances Ward, an academic professional specializing in visual arts at the Art, Media and Engineering program, would
be perfect because she had extensive artistic experience in visual storytelling and digital image manipulations. Her artistic vision would enhance my creativity and help me discover new perspectives on communicating the ideas.

The first week of March, I approached my future committee members individually and discussed my visions. All three agreed to be on my committee. I was glad to form a powerful and well-balanced committee.

**Proposal defense**

Toward the end of April, I finished the first draft of my applied project proposal. The title was “Non-linear Storytelling Forms for Multimedia Documentaries,” which was seven pages long. Carol had given me a sample proposal to follow. I discussed my proposal with each committee member, made some revisions, and defended it May 11th.

I was a little nervous about the defense, but it went fine. I discussed each section in my proposal and my reasons for doing the project. The committee members gave me some advice on possible literature to review and asked me questions about how I planned to implement the project.

**Summer 2004**

I did not make much progress over the summer because of my MTV internship. Since I was in New York City, I had easy access to a Japanese bookstore. I bought Japanese editions of some of Milan Kundera’s novels, books on criticism of Kundera’s work, Flash tutorials, and books on new media. I read some of Kundera’s novels and started to learn Flash. I also spent lots of time developing my visual communication skills by composing images using sophisticated Photoshop techniques. I looked into the design
and composition aspects of visuals and spent a lot of time practicing design editing with Avid Media Composer.

**Fall semester 2004**

**Reforming my committee**

At the beginning of this semester, I had to reform my committee. My third committee member, Frances, had left ASU. For her replacement, I wanted a faculty member from the Arts, Media and Engineering program for a couple of reasons. First, I had continued working there as a research assistant. Second, the subject of my multimedia documentary was about one of their research projects, which I was documenting. I approached two faculty members: Professor Vibeke Sorensen and Professor David Birchfield. Vibeke is an artist and professor working in digital media art, interactive architectural installation, and multi-site networked visual-music performance. David Birchfield is a composer, theorist, and computer musician who has also worked with multimedia. Both agreed to join my committee. Since it was uncommon to have four committee members at the Cronkite School, Carol had to talk to the graduate director.

**Starting point**

One of the first things Carol told me to do at the beginning of the fall semester was create a timeline from September 15th through May 2005, when I would be defending. I also made a plan and a reading list for my literature review. We decided to meet every Wednesday afternoon to discuss my progress. Creating a timeline helped me grasp the overview. I tried to give myself enough time for each step, although I knew I would be stressed out this semester because of my heavy course load.
**Weekly meetings**

I read about one book per week. When I had a big book to read, Carol let me have an extra week. Along with readings, I took notes on main points and ideas I thought were interesting or relevant to my applied project. I also watched some significant documentaries in film history so I could learn and better understand the structures and techniques of documentary storytelling. I took notes on each film.

Even though I had many books to read, there were no scholarly articles in my original reading list. Carol often encouraged me to go to the library and find articles. I never tried to do so until the end of this semester. I went online and found 11 articles through LexisNexis. I read all of them, but only a few were relevant.

Besides the weekly meeting with Carol, I met each week with Vibeke and David on Wednesday afternoon. All the meetings with Vibeke were very exciting. Since I was taking her course on creativity in time, space, and the multimedia universe, we ended up discussing class projects rather than my applied project. Yet in terms of visuals and storytelling, my class projects and applied project were deeply connected at the conceptual level. As a matter of fact, we frequently talked about interactivity, free association, and non-linearity during the first half of the semester. She always introduced me to new perspectives and resources that were very inspiring. Most of my class projects were focused on videos and still images to create animations rather than working with interactivity. I could not ignore my strong passion for video editing.

The weekly meeting with David focused on thinking in term of interactivity as well as learning Flash. I tried to familiarize myself with Flash by creating at least one small piece every week. I struggled a lot in the beginning since I was still new to the
program. By the end of the semester, I had become an expert in creating materials using
the button function. However, I had very little understanding of action script, which was
the most useful function. My experience in scripting language was very shallow, and I
had only basic knowledge of HTML. I needed to spend time learning and practicing
action script.

**Literature review**

By the final week of classes, I was supposed to have the first draft of my literature
review. I did not make it. I was overwhelmed and stressed out by the amount of work I
had to deal with toward the end of the semester. I had no sleep for days on end. I still had
a few books, documentaries, and articles left to review. Carol told me that if I could send
her a draft by Christmas, she would take a look at it. Yet I missed that deadline, even
though I tried. Since English is not my first language, reading and writing take me an
enormous amount of time. However, at least I was able to analyze Milan Kundera’s work
by reading criticisms. After that, I felt so much better about my idea of applying his
techniques to my project. I will finish the literature review by the end of winter break.

**Additional thoughts**

1. I found it challenging to work on a long-term project like this one. During the
   semester, I constantly had deadlines for short-term projects and papers for my courses
   that diverted my time and attention from the applied project. I always felt I was behind
   and stressed out about this almost every day.

2. Throughout this semester, I thought about how to implement the creative portion of
   my project. The idea I would love to integrate is clicking. The action of clicking could
   be the key to navigate the story on a deeper level. I could segment a story into multiple
layers (levels) and put them together in the inverse pyramid shape by starting with an overview. I want viewers to get to the core of the story by clicking. Only interacters who explored my piece by clicking certain numbers of times could reach the heart of the story. It’s like reading a book—the more you read, the more the story develops. In order to appreciate the story I would put together, the interacters must have (1) the desire to thoroughly investigate my piece and (2) the motivation to actually explore it by clicking.

(3) When I finished my proposal, I was not sure if I wanted to create my project for DVD or Web. Since many elements will be videos, I thought a DVD would provide better quality. The more I thought about this, though, I realized that creating a website would make more sense, especially when I considered integrating Kundera’s techniques that have cross-cultural influence. The Web would reach out widely, globally, and unlimitedly. It would better serve my needs.

(4) One of my favorite film directors, Emir Kusturica, made a new movie in 2004 called *Life is a Miracle*. I accidentally found a promotional site done in Flash. Since I have loved this director’s work for more than 12 years, I ended up visiting the website multiple times. I started thinking that maybe I could use the site as a model for mine.

**Spring semester 2005**

**Jan. 16 - 22, 2005 (Week 1)**

This week, I looked closely into the Flash site *Life is a Miracle* ([http://www.lifeisamiracle-themovie.com/](http://www.lifeisamiracle-themovie.com/)).
**Introduction:** A name of each cast and crew member fades in and out while the animation of railroad tracks starts to build up on the black background. As those tracks are about to be completed, a train starts running on them across the screen. This is a great implementation of the film’s concept that the railroad (the key item of the story) is navigating a user into the site. This introductory element can be skipped.

**Entering the main page:** After the introductory page, a film title appears and fills the screen for a few seconds. Then a video clip from the movie starts to play in the middle of the screen. The video contains music with singing, but there is no additional sound, such as narration or conversations from the scenes. There is a “sound on / off” option at the top right corner of the screen. (When I selected the “sound off” option, it faded out beautifully instead of stopping suddenly.) The music changes into the quieter background sound when users leave the main page so they can gain information without any distractions. Right above the video, the main navigation bar appears, with a secondary navigation bar right below the video clip.
The main navigation bar includes the following elements: Story (Photos, Synopsis), Emir Kusturica (Biography, Filmography, Interview), Cast (icons of six leading characters provide access to their bio pages), Filmmakers (Production, Screenwriter, Image, Production Designer, Sound, Crew List), Music (Extracts, Original Soundtrack, No Smoking Orchestra), Log Book (Making of, Photos), and Video Clips (Film Clips, Trailer, Teaser). The secondary navigation bar includes Press, Credits, and Contact.

The video clip playing in the middle of the index page is my favorite part of this website because it is purely visual and yet very attractive, which motivates me to find out what it is all about. It also includes a clever interactive element; when one or more of the leading characters appears in a medium to close-up shot, the person’s name shows up with a mouse-over action. This is a link. When the name is clicked, a tight shot of the character appears that leads the user to the biography page of the particular cast member. I love the idea of having this kind of navigation or interactive element, which is highly driven by visuals. The clip is edited footage from the movie and lasts about three minutes (then loops).
Besides **Biography**, the “filmography” and an “interview” of each cast are provided. A bio page exists under **Cast**, which shows a map of seven train stops. Six of them feature the names of the leading characters, and those elements take the user into each cast’s bio page. When a user mouses over one of those names, a thumbnail image of the cast pops up. This works well to make an instant connection with their face, role, and who they are, especially for those who have not seen the film. The seventh stop says “Cast,” which takes the user into another cast page that lists all the cast members. An icon at the bottom right corner says “Back To The Video,” which takes the user back to the video clip (to the point where the user left off) on the main page.

The **Story** page has two sub-elements: **Synopsis** and **Photos**. **Synopsis** includes three pages of short descriptions of the film with different images. There are only six pictures in **Photos**. When a user mouses over the thumbnail image, it enlarges slightly. There is a clicking option to make those images larger.
The **Emir Kusturica** page includes **Biography, Filmography, and Interview** with a simple scrolling frame for each element.

The **Filmmakers** page contains several subsections. The “Filmography” of each professional is provided under **production**, **screenwriter**, **image**, **production designer**, and **sound**. The **Crew list** gives the names and titles of all the members of the production.

The **Music** page contains three elements: **Original Soundtrack** with one audio file of the theme music; **No Smoking Orchestra** with a biography, discography, and interview of the band who produced and performed the film’s soundtrack; and **Extracts** with parts of three sample audio files from the film.

The **Log Book** includes **Photos** and **Making Of** (though this is unavailable). Of the six photo thumbnails, two are made with slide shows of three different images. When a user mouses over the image, the thumbnail pops up with a brief caption. There is no option to download those images or view them as larger images.
The **Video Clips** page contains a **Teaser**, **Trailer**, and **Film Clips**. Only the trailer option is working. A user can choose between Real Player or Windows Media Player to download the video.

**Press** is under the secondary navigation bar in the bottom right corner. On this page, a user can download the press kit (a 20-page PDF document). In addition, 17 high-resolution images (.tiff and .jpeg files) are available to download for printing.

The **Credits** page simply provides a credit roll of the film with a scroll bar.

The drawback I found in this site is that there are very few links between the elements. In my project, I would like to try to have interconnections between as many components as possible. On the other hand, I felt that several elements and ideas were successfully implemented. I will use some of those as models for my project, such as: (1) a visually driven navigation; (2) integration of the concept (key items / key words of the story) to lead into the site; and (3) integration of visual elements with written materials as much as possible.

(1) A visually driven navigation: I have been thinking about categorizing my story by levels. In the first level, I want to provide a big picture without any details where the interacter won’t know much yet but will grasp the general idea. My challenge here is how to present the first level so it can motivate interacters to investigate
deeper levels of the story. The main video clip on the *Life is a Miracle*’s home page suggests a possible solution. It is purely visual, without any particular information (e.g., plot, text, narration). Since it did not provide any details, it was somewhat mysterious and appealing, which encouraged me to explore further to see what the story was all about.

(2) Integration of the concept (key items / key words of the story) to lead into the site:

*Life is a Miracle* used railroad tracks to lead me into the site, which was a visual hint (or preview) of what I could expect within the site. The more I looked into the site, I noticed that the item (railroad) made a strong tie with the story and unified all the portions in the site.

(3) Integration of visual elements with written materials as much as possible: Since I am planning to deal with multiple people in my project (at least in the first level), it becomes a challenge how to make users keep track of everybody. What I experienced in the *Life is a Miracle* site may be the possible solution. The “Cast” page, where six characters were listed with a mouse-over function, provided additional visual information (a thumbnail image of the cast). This page successfully made an instant (re)connection or association with the other information in the site.

**Jan. 23 - 29, 2005 (Week 2)**

This week, I improved my Flash MX skills. I spent five days going through all the exercises in the book *Flash MX H.O.T. Hands-On Training* by Lynda Weinman. Many elements were helpful, although the action script section was disappointing. The book covers very few basic materials, and all of them were too specific, which made me
wonder how much I could apply to my project. After finishing only one third of the book, I felt tired and bored by simply following what the book wanted me to do. It did not offer me any opportunity to think. Overall, I was glad to go over everything since I learned many technical aspects that could be used in my applied project, as well as some tricks I did not know about.

**Jan. 30 - Feb. 5, 2005 (Week 3)**

The best thing that happened to me this week was spending time with Professor Capuzzo, a visiting professor from Brazil who specializes in media critique. He is co-teaching the Global Cinema course with Vibeke. Professor Capuzzo has worked extensively with digital narratives and gave me a lot of ideas, advice, and resources for my creative project.

Otherwise, this week was less productive than usual. On Saturday, I found out about an unfortunate accident that caused one of my classmate’s deaths. It has been a stressful experience. I have been distracted and had a very difficult time focusing on my work. I could not sleep throughout this week. I tried to keep myself busy and spent time working on a video projection order to keep me from thinking about my friend’s passing. Probably because of the fatigue, I accidentally knocked down my external fire wire drive. Unfortunately, it contains a tremendous amount of Motion-e data, which would be very useful for the creative portion of my applied project. Sasan, a tech supporter at the Cronkite School, tested the drive for me and found it has been damaged. Since it was AME’s drive, I had to give it to the tech panel at AME to examine.
Feb. 6 - 12 (Week 4)

This week, I spent time revising and improving the literature review so I could ask Carol for feedback. I have also been trying to re-conceptualize my ideas. After my friend’s death last week, I have been struggling psychologically because I have been feeling my years of belief to be all nonsense. Most creative projects I worked on in the past as well as my applied project are tightly connected to my personal belief in finding a way to show the significance of individual uniqueness. I used to produce short video portraits of individuals, and I was trying to expand those using multiple media through my applied project after encountering the linear limitations of video. Now, I have been questioning various things, including my values. Specifically, since my short videos were somewhere between one and seven minutes long, when I told a story, I had to focus on a tiny aspect of each subject. After a while, it made me feel that I was misleading the facts by representing edited reality. It reminds me of Rene Magritte’s painting of a pipe with a caption saying “This is not a pipe.” Through this particular painting, he expressed what in front of us was not an actual pipe yet an image of a pipe he produced. In my short pieces, I felt like saying, “This is not a fact.” The facts I presented were the edited actualities, which were not real.

I wanted to ease my frustration through my applied project by using multiple media to produce a documentary. My initial ideas and motivations were to expand further my belief in speaking out about the importance of individual uniqueness. However, after my friend’s death, I felt I was lost because I realized that the only condition for an individual to be unique is that one has to exist (be born and living). The titles of the film and novels I looked closely at for my creative project now have a deeper meaning for me.
*Life is a Miracle*, and I agree—it is a miracle to be alive. I have been able to celebrate my birthday every year; it seems natural, but it in fact is a miracle. This is not something I can take for granted. There is *life* underneath all the *living-life* and *daily-life*; in other words, *life* and *to live* are not the same. This is the conclusion I draw so I can deal with Ben’s death, and this is the concept I need to reflect in my applied project. Milan Kundera titled two of his novels *Life is Elsewhere* and *Unbearable Lightness of Being*, which explain what I meant by *living-life*. On the other hand, his novel *Immortality* describes something bigger than our *living-life*, which is *life* itself. By using these ideas to measure my work, the short videos I used to produce could be categorized as a storytelling of slices of individuals’ *living-life*. I had never included any story about *life* itself. In my applied project, I want to tell the story of anybody instead of somebody. I want it to have dimensions and present what is like to be alive, what it is like to live while being a part of life. I want it to be open and universal rather than being closed and specific.

**Feb. 13 - 19 (Week 5)**

I was very busy this week because of the *Motion-e* residency. Being a videographer, I had to be on campus and videotape the motion-capture sessions everyday, which was exhausting. I was not able to work on my applied project at all. However, I did watch a French film, *Blue* (one of the *Three Colors Trilogy*) by Krzysztof Kieslowski. Even though I had seen this film before, Professor Capuzzo recommended that I watch it again to learn from the filmmaker’s technique. Professor Capuzzo pointed out several elements I should pay close attention to, so I carefully studied the use of color, music, and transitions.
Also, I had meetings with Vibeke and David separately to discuss my revised ideas for the creative project. They were very supportive, and I felt relieved. Vibeke gave me a lot of possible visual and conceptual inputs I could integrate. David suggested that I keep investigating an open form, such as the database and random generations we have been looking into.

Feb. 20 - 26 (Week 6)

The most exciting and helpful event this week was meeting with Sheila Sofian and David Fain, who were guest speakers for the Global Cinema course. Sheila, a Guggenheim Fellow in Film, directs the Animation Program at the College of the Canyons in L.A. Her work integrates animation and documentary. David is a stop-motion animator, writer, and director of online content for Warner Brothers. Both Sheila and David use animation techniques, yet they produce for completely different purposes. What I found most interesting was Sheila’s work—the integration of animation and documentary. It was a valuable, eye-opening learning experience because she introduced me to a new possibility and strength in how stories could be told visually using a documentary form.

Feb. 27 – March 5 (Week 7)

My fire wire drive is still in the hands of the AME tech panel. Several experts on campus have examined it, but I have not gotten any good news yet. I am waiting to hear from Data Doctors. They are analyzing the drive and will let me know the estimated recovery costs. I hope they will be able to recover my data.
March 6 – 12 (Week 8)

I finally found out about my fire wire drive. It was recoverable, yet would cost $2,300–2,500. I had to give up and get myself a new drive. This week was another extremely busy week at work because I had to (1) capture and compress all the requested motion-capture video clips from the current residency, then burn several DVDs; (2) videotape and edit a short piece on one of the AME’s research projects on tangible interface; and (3) videotape and start editing a candlelit gathering we had as a part of the memorial for Ben. I have done a lot, but I could not make any progress on my applied project, which was frustrating.

March 13 – 19 (Week 9)

This week, once again, turned out to be hectic. I have postponed my defense date from May to mid-August so I can have a little bit of time to look for work opportunities before finishing school. I am trying to find an internship this summer outside Arizona, but an internship coordinator at MTV Networks made a mistake on my application and acted unprofessionally. All week long, I spent a lot of time communicating back and forth with my former supervisor and other producers while rushing to send out applications to other media companies. Having an internship this summer will be very important for jump-starting my career, so I had to take care of the problem right away, even though it was time consuming. I had to create more DVDs and still images of Motion-e for the website as well as a DVD for Ben’s family. I received requests and tasks one after the other. I just did not know how I could work on my own project while being so busy.
March 20 – 26 (Week 10)

I met with Vibeke this week. We refined the ideas we have been discussing. She gave me more suggestions on what I could include. She also gave me positive energy and made me feel like trying a lot harder. I wished I’d had more progress to show her. I also met with Professor Capuzzo to discuss my project. I asked his view on what makes the work journalistic or artistic, and we discussed objectivity and subjectivity. I also talked to him about ideas for my project, though he thought it needed to be more focused. He left me with several complex, philosophical questions to think about. He said I should not even start my project without having the answers.

March 27 – April 2 (Week 11)

Jim Dove and I finally had an opportunity to discuss my project. He was supportive of my ideas and gave me technical advice on capturing audio and compressing media. He also recommended that I plan my project more clearly, as did Carol, who suggested that I draw a diagram or storyboard. That is one way of working on a project. I prefer creating elements first without having an overall plan because the most important aspect of my project is dynamic navigation, which involves a database. The best way to plan a structure for my navigation system is to study patterns within the database, which is constructed with my materials. If I plan the structure first, it may limit my imagination and creativity. These are the reasons why I’d rather work on the details first. Yet I did not successfully convince Jim or Carol on this matter. I need to find a way to accommodate their concerns.
April 3 – 9 (Week 12)

Carol invited me to attend the Society for News Design’s New Media Quick Course. It was a two-day Flash workshop. I enjoyed the workshop, though it barely touched action scripting, which I needed the most practice on. Fortunately, I found a student who could help me with action scripting.

We made a quick storyboard by discussing what could be realistically implemented. Based on our rough plan, the project might include four scenes: 1. rain (key words: introduction, beginning, awake, birth); 2. mountain (key words: transition, rising action); 3. river (key words: climax, harmony); and 4. night sky with sound of ocean (key word: resolution). The most important section is part 3. Parts 1, 2, and 4 are additional elements and may be unnecessary. These sections may be dropped. I thought it might be nice to see the whole process of the rain falling on the mountain and feeding the river, then the river flowing into the ocean.

April 10 – 16 (Week 13)

I had an amazing experience that inspired me in a tremendous way in terms of non-logical and associative creation, which is exactly what I have been practicing for my applied project. As a part of the Global Cinema course, I attended a lecture by Dr. Gerald O’Grady. He is a media and film scholar and founder and director of the Center for Media Study at the State University of New York in Buffalo. His talk was about “Dziga Vertov’s The Man With A Movie Camera (1929): The Best Film Ever Made.” This experimental documentary film is what I first looked at as a part of my literature review. Dr. O’Grady focused on the analogical and symbolic aspects of Vertov’s film. His lecture gave me courage to trust my approach for my project.
April 17 – 23 (Week 14)

The student who has been helping me with action scripting has been struggling with completing a scene on rain. He is following the directions I created, which are listed below.

Scene: Rain

**Key words:** Introduction, beginning, awake, birth, immature, blue, openness, and ambiguous / blur.

**This scene is a RANDOMLY GENERATED PHOTO GALLERY:**

- On a light blue background, the thumbnail images are randomly introduced within the raindrops (raindrops come down slowly).

- When a raindrop (a thumbnail image) is clicked, its enlarged image appears on the background with a bluish blur filter (while raindrops are still coming down in the foreground).

- As more raindrops are clicked, fewer blur effects will be applied on the enlarged images. Even though the degree of blurriness changes, the unfocused effect will always stay on the enlarged images (the enlarged images never become perfectly clear).

- After several clicks (three to four times), an option of “(go to) next (scene)” will appear (or the option is there from the beginning, but its transparency level is set to high; interactions will make the opacity level go down).

**Materials:** Compressed photos of moments from daily life, objects with no digital manipulations, and the sound of rain.

**Transition to the next scene:** Fade into deep blue.
I also completed the mountain scene. I created the scene without any interactions, unlike other sections. I photographed some materials, prepared still images and video clips, and edited them into a very short piece. To produce this scene, I followed the notes below.

**Scene: Mountain**

**Key words:** Transition, rising action, opening up, and growing.

**This scene is an EDITED VIDEO:**

- Soft sounds of rain, a mountain-like figure appears (this is made by the hands of one or two people), sounds of rain slowly fade out.

- A mountain of hands slowly opens up like a flower. Then the hands open widely, like the branches of the tree (including the lines of palms!).

- A still image of a tree and the sound of a stream slowly fade up.

**Transition to the next scene:** The still image of a tree slowly fades to the video of water, which has a similar pattern.

**Special notes:** Imagine the following when this scene is created.

- When we climb up a mountain, there are various paths we can choose, and all the
paths lead us to the same top (specific / closed).

- Reaching the top (achieving goals) is a common intention of those who climb a mountain.

- Mountain climbing is a voluntary action driven by the ego (one has to want to do it; otherwise, it will not happen).

April 24 – 30 (Week 15)

I worked on the mountain scene again. The resolution of my finished video from last week seems too low, which made me decide to spend time re-creating the scene one more time. Jim gave me technical advice.

Carol asked me the purposes of every idea I am implementing. She needed to make sure I would not lose focus. I need to think about a way to make a compromise with her concern because some of the ideas I am developing do not yet have specific purposes. Based on my experiences, reasons or purposes are almost always hidden underneath the creations, which naturally show up along with the creative process.
May 1 – 7 (Week 16)

The rain section is not yet completed. The student who is writing the action script for this scene has stressed me out. He started working on the section long ago. I doubt that he knows the action script well, even though he said he does.

I have been working on the river section by creating short video clips and still images using Motion-e materials. I need to digitize media, edit, compress, make thumbnails, and put the information into the Excel spreadsheet for building the database. I have made a lot of progress, yet I found this process is extremely time consuming. Time is running out.

Scene: Deep River of Life

Key words: Climax, harmony, compromising, tension, infinity, immortality, freedom, organic / healthy system, path, spontaneous order, unconsciously driven, passive, open / universal, change, and merge.

This scene is a DATABASE-DRIVEN DYNAMIC NAVIGATION:

- Expressing an idea of “living” and “life” using three parts:
  1. The most concerned and focused reality of everyday life (for my applied project, I am using Motion-e footage)
  2. Less concerned portions in daily life (in this section, ASU footage and edited short stories of students will be treated as “essays,” following Kundera’s strategy)
  3. Other deeper concerns will be subjective interpretations of life, such as memory, dream, moments of awareness, and philosophical thoughts (my personal works are used in this section)
- These three degrees of concern are separated into focused, less focused, and unfocused areas.

- On a simple background, the clickable options / buttons are floating on the surface. When a button is clicked, an element appears in a pop-up window. Materials include video, still images, audio, and text.

- Most important, (1) the materials are always changing because they are dynamically generated within the noted relationships, and (2) areas of focus change, depending on the user’s interaction. Within the three different degrees of concerns, if the less focused area (or the most unfocused areas) is clicked continuously more than three to five times, the focus will shift. Note that the default of focus is the area of Motion-e (the most concerned and focused reality of everyday life); therefore, even though the focus shifts, if the mouse starts wandering, it will immediately go back to the default.

**May 8 – 14 (Week 17)**

The student who said he could help me with action scripting is now dropping this project. I was quite upset at first, yet I have no time to waste on this irresponsible person. I decided to drop the rain scene, even though it would have been nice to include. Since I have little time left, I should drop the final scene of the ocean / starry night as well. One of my friends said he could help me program the river scene.

I completed dealing with Motion-e materials. All 249 materials are stored in the database. I have started to work on ASU footage.

**May 15 – 21 (Week 18)**

I have been mass-producing the product. I quit my job with AME back in April, and I have been doing great ever since because I no longer have to deal with the...
tremendous amounts of extra stress. Now, I can finally schedule my time for the applied project. I completed taking care of the ASU footage, which turned out to be about 63 materials. I have started to work on the final portion of the river.

May 22 – 28 (Week 19)

Finally! The database is done! I have about 300 materials for the last portion of river; my database includes more than 600 materials. My friend has been programming the river section for me. It is almost finished. I am leaving for New York City at the end of this week for two months. I will be revising and completing the literature review as well as writing up about my project while in New York. My defense is scheduled as August 18th. I am almost done.