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### Developing Division: A Computer animation thesis report

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Developing Division:  
A Computer Animation Thesis Report

by

George M. Nadeau

Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
Master of Fine Arts

MFA Photography Program, School of Photographic Arts and Sciences  
Rochester Institute of Technology  
Rochester, New York  
September 1, 1997

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September 1, 1997

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## Introduction

This paper offers a review of the production of my thesis animation *Division*. In it I will describe the challenges I faced and the approaches I used to resolve them. The process was organic and all the development decisions were repeatedly studied and questioned. Consequently, this paper does not attempt to be a chronological record. Rather, the sections are intended only to organize the process into six main areas of development. The first section will focus on the development of the story, including the definition of the mood and setting. The second section will focus on the development of the characters' personalities and functions. Next, the third section will focus on the visual design of the characters. The fourth section will focus on the visual design of the environment. Furthermore, this section will describe considerations of the characters' movements in their environment. The fifth section will focus on the development of the animation. Finally, the sixth section will review the aural component of *Division*.

### Section I: Development of the Story

After determining to create a tragic story about envy, I began my research. Soon I stumbled upon Aesop's fable *Avaricious and Envious* in which two neighbors appeal to the god Jupiter to grant their wishes. Jupiter agrees under the condition that whatever he grants for one neighbor he will grant twice as much for the other. Avarice wishes for and is granted a room full of gold. Accordingly, Jupiter presents two rooms full of gold to Envious. Envious, who does not like to see Avarice have any pleasure, wishes to be blinded in one eye in order that his neighbor will be blinded in both.

I was immediately attracted to this story. However, for purposes of my thesis, I believed that the story would be more effective if the characters wished for beauty, not wealth; after all, even though Avarice was blinded, the roomful of gold remained in his possession. I decided that the characters should wish for something purely visual. Of course, rainbows came to mind. Unfortunately, while they satisfied the requirement, I quickly realized that they presented the problem of ownership. Since rainbows are intangible, physical possession is impossible. The inability to

describe possession and the doubling effect would render the story unclear.

Next, I considered flowers. Initially I was reluctant to employ flowers because Norman McLaren presents a similar theme with a similar device in his *Neighbors*. After further thought, however, I concluded that my animation would be sufficiently different. Suddenly, my story developed. My somber story (with fleeting moments of delight) would be told using flowers as the principal device. One character, Schroeder, would garden while the other, his neighbor Dylan, sunbathed in his own yard. The appearance of each of Schroeder's flowers would be followed by the growth of twice as many in Dylan's yard. Ultimately the gardener would attempt to blind his passive neighbor. In addition to portraying the gardener's self-destructive behavior as irrational, I believed portraying his desire to blind a noncompetitive, innocent bystander further demonstrated his madness.

Since envy divides people I arrived at the title *Division*. It also refers to the basic mathematical relationship between the two characters. Furthermore, one can deconstruct "division" into the components "di," meaning twofold, and "vision." Both components are descriptive of plot elements.

When my story was presented to others for feedback, it was met with a variety of reactions, from appreciation and understanding to utter confusion. I encountered the same range of reactions when I later presented the rough cut of the animation. On both occasions I reexamined the construction of *Division*. I questioned whether it was too ambiguous and vague. Certainly I received several suggestions of ways I could (even *should*) delineate the characters' motivations and clarify the conclusion. The minority of responses that were positive indicated that I had presented adequate pieces of the puzzle for *some* viewers to comprehend the story. However, filled with self-doubt, I wrestled with the issue of "broadening the audience." This is the most difficult problem to resolve, not just with *Division* but with all my work.

Presently, I am fortified by the attitude of David Cronenberg. In describing his work and his relationship with the audience, Cronenberg once said, "I'm assuming a certain level of involvement and intelligence and sensitivity and willingness to go where I'm going. In other words I don't

go for the lowest common denominator, a so-called 'mass-audience,' because as soon as you do that, you've automatically diminished your film." Indeed, my primary goal is not to produce a universally appreciated work. I respectfully discount the comments from frustrated viewers about the abrupt and unforeseen conclusion; I believe mine is the ideal combination of the unpredictable yet inevitable conclusion. I also discount the criticisms regarding the characters' lack of expressiveness; I believe my characters effectively communicate their attitudes through their simple, uninflected actions. Furthermore, since I do not require the viewer to grasp the meaning of my film immediately, I do not regard it as a shortcoming when he is compelled to contemplate my film after its screening. After much deliberation I have come to accept that there is a limited audience for *Division*.

## **Section II: Development of the Characters' Personalities/Functions**

To reiterate, character development was not performed separate from or subsequent to the development of the story but is treated separately in the interest of organization.

The goal for my thesis animation was to tell a story about a man who is destroyed by his envy. Therefore, I determined that I only needed one developed character and an incidental character for him to envy. Schroeder was well-defined as a gardener who produces and appreciates beautiful flowers. Gradually his possessiveness and envy is revealed. Finally he is exposed as malicious and self-destructive. On the other hand, Dylan had no identity. Surely it was not necessary to attempt to justify the innocent bystander's right to his vision. In fact, early suggestions to develop the sunbathing neighbor were disregarded because I feared his development would distract from Schroeder's story. Dylan was intended merely to be a victim.

Eventually I realized that the second character presented an opportunity to add complexity to the story. To exploit the opportunity Dylan presented, I adopted the idea of making him more active as a painter. Thus, symmetry was introduced to the previously one-sided story. As a painter Dylan is a better counterpart for Schroeder. Both are creative and imaginative. While

Schroeder produces real flowers, Dylan produces representations of them. Dylan's talent provides another substantial reason for Schroeder to feel competitive with him. The audience, therefore, is encouraged to understand the destructive behavior Schroeder directs toward his adversary. Significantly, the irrationality of Schroeder's ultimate act is not undermined by the viewer's initial identification with his motivation. Providing Dylan with an identity vastly improved the story.

Once the characters' identities were defined I concentrated on their physical functions. It is essential to identify the tasks they perform before designing their physical structure. In both cases, actions are few and repetitive.

Dylan paints flowers, leans to study the flowers in his yard, and turns his head to look at his neighbor. During the entire movie Dylan stands in place. Consequently, there were no significant obstacles to consider when designing his structure.

Structural design considerations were greater for the more active Schroeder. He walks, kneels and rakes. He uses tools and sets them down. Schroeder's interaction with the earth and his gardening materials presented a substantial challenge. Furthermore, the range of movement in his joints, specifically his shoulders, hips and thumbs, required skillful modeling to maintain smoothness.

### **Section III: Visual Design of the Characters**

Having defined the story in which the characters act and the manner in which the story would be told, I began designing Dylan and Schroeder. The most significant trait they share is creativity. I connected creativity with fertility and decided to relate my models to the figurines of mother goddesses that were worshipped in prehistoric times. I referred specifically to the best known of these figurines, the Venus of Willendorf. While remaining male, the characters were endowed with some of the sensual and voluptuous qualities of the fertility goddesses. I emphasized each character's buttocks and stomach and textured each with a stone-like skin. I also modeled them with prehistoric sloped foreheads.



I understood the challenges created by pursuing a model of ample curves and flesh. To retain smoothness, large joints require more polygons. In turn, more opportunities for intersection problems are created. However, I pursued this character design believing that I could avoid the problems.

It took only a short time to model Schroeder. Unfortunately, the model's inadequate integrity was revealed whenever motions were applied to it. I struggled for weeks to resolve the problem areas around the shoulders and hips. I increased the polygon count to diminish the problem but the awkward shadows remained. The awkward polygons were smaller but still visible. Since the problem of the unsmooth joints was described mostly by shadows, making the material closer to the value of the shadows effectively de-emphasized the problem polygons. Gradually, the skin of the model became so dark that the figure no longer appeared volumetric. The blackened model appeared to be a flat, opaque shadow. The only resemblance to the original character design was in its contour. What I had intended to achieve with a voluptuous character design was drastically undermined with this solution.

I reverted to the original grey, stone-like appearance. I realized that if polygon problems arise when the character moves, it's the movement that should be altered. To prevent the creation of unsightly joint problems, I considered limiting the already limited character movement. Remarkably, it took a few days for me to recognize the foolishness of this proposed solution. Sacrificing movement to save an inferior model would be pure stupidity. Firmly attached to my first character design, I was unwilling to abandon it for another. The days of frustration turned into weeks. I did not know how to proceed.

Then I was reintroduced to the work of Phil Mulloy. In *Possession* and *The Sound of Music* he communicates powerful messages with his simple and direct drawing style. I learned that to prevent his work from becoming too slick he would sometimes close his eyes when drawing to invite mistakes to happen. He prefers his work to appear very rough, very direct and fresh. His approach inspired me.

I decided to loosen up. From the start I had aimed to create models with smooth surfaces

and joints. For the first time I began to question why smooth surfaces are important to my story. My immediate response was that smoothness is irrelevant. I adopted a new approach.

For my first experiment I created a new fence to replace the existing, geometrically perfect, stereotypical, white picket fence. In less than a minute I drew several horizontal and vertical lines with a “rake” paintbrush in Fractal Design Painter and created a new fence. It was not shaped like a picket fence, so I abandoned the idea that it needed to be white. Instead, it was black, imperfect, and beautiful. Whereas I had toiled for an hour to produce the ideal white picket fence with precise spacing between all the slats, I was able to create a more visually interesting one in a fraction of the time. This was a valuable lesson.

The nature of the black fence image also provoked another thought. The fence could be textured-mapped on a plane in three dimensional space, but it would remain essentially two dimensional. I needed to reexamine one of my original choices. I chose 3D software to produce my thesis because I am not confident about my 2D animation skills. And 3D Studio MAX was developed to produce 3D imagery. From the start of production I worked under the unchallenged assumption that *Division* would appear to be three dimensional. Suddenly I realized I had allowed the software (and my facility with the software) to dictate the visual design of my animation. With this new consciousness I was better positioned to exploit my tools.

Without hesitation I returned to my problematic, voluptuous model of Schroeder. I altered its material to make it black. Then I used an “optimize” filter on the mesh to substantially reduce the polygon count. No longer concerned with achieving a smooth appearance, I reduced the polygons of the original mesh until there were so few remaining that nearly every vertex was visible. Rather than wrestle with the polygonal nature of the character mesh, I began to enjoy it. The product of these alterations was an angular silhouette of the original model. I added stark white facial features to complete the transformation. (Several weeks later when I rendered a shot in which Schroeder’s head was tilted to one side, I realized that his eyes and nose form the mathematical symbol for division.) In just a few minutes I created a character design that could work.

I felt liberated. Accepting imperfection in the form of visible vertices, perhaps even celebrating it, enabled me to animate freely. I reasoned that if a viewer is easily distracted by the severe body lines then the true problem must be the uninteresting story.

#### **Section IV: Visual Design of the Environment**

As soon as Dylan was identified as a painter, I had a clear vision of the world in which the action takes place. I was reminded of an anecdote in Oliver Sacks *An Anthropologist on Mars*. Sacks describes a painter, Mr. I, who experienced cerebral achromatopsia because of a car accident. Unable to see color, Mr. I was distressed when he could only distinguish flowers by their shape and smell. He could no longer see the clouds in the sky. Not surprisingly, Mr. I often dreamed that he would wake to a world of color. With this in mind, I decided *Division* would begin as an achromatic world. The viewer would then be as delighted by the appearance of brilliantly colored flowers as Mr. I suggested he would be.

Most of my previous work is marked by barren settings. I have employed wastelands to describe loneliness and isolation. My choice of settings could merely be an indication of my interest in minimalism. My conscious aim is to be an economical filmmaker, eliminating all elements that are unnecessary to the story. Of course, a practical benefit of this approach is faster render times. Although consideration of the polygon count is not the most critical factor in designing the environment, it is on the short list.

The reason the gardener and painter desire to create beauty is because they see none in their environment. Therefore, this story, too, demands a barren environment. It is important that the painter remain uninspired until the appearance of the flowers. If presented with a grazing sheep in the distance, or a rolling tumble weed, or a wheat field or slow moving clouds, the painter would undoubtedly be inspired. I sought to present only the necessary elements: the canvas, the fence which defines ownership, and the ground from which the flowers grow.

Originally, when I developed the world around the Venus of Willendorf-inspired characters, the elements were designed to be photorealistic. I even modeled staples for the back of Dylan's

canvas. All the original objects were replaced when the characters were updated. The easel was painted to match the fence, and the canvas was defined by a quickly drawn black rectangular outline.

Updating the ground proved to be the most difficult. It often occupies a great percentage of the screen, so its depiction was a major design consideration. I painted several organic, achromatic textures and mapped them on the ground plane. Consistently, the textures obscured the characters. Among the black fence, the black figures and the textured ground, there was not enough contrast. The solution became apparent when I decided to pursue the inherent parallelism of the characters. The ground is the gardener's canvas. I described the painter's canvas with an imperfectly drawn black outline, so the ground should only be defined by an imperfectly drawn horizon line. It was an obvious, simple solution to a problem that vexed me for days.

The final design decisions involved the flowers. Originally I thought the appearance of differently colored flowers would help the viewer recognize the correspondence between Schroeder's and Dylan's flowers. After further thought I decided that such color coding was unnecessary and possibly condescending. Ultimately, I decided the flowers should be uniformly depicted with the color of passion.

## **Section V: Development of the Animation**

As previously stated, the animation process was simplified by the development of a more forgiving character design. The low polygon model, with all its discernible vertices, had an unlimited range of motion in all joints. A more complex model needs to be displayed during the animation process, thus slowing it down. In this case, I was able to hide the character mesh and animate the skeleton secure in the knowledge that when the movement was applied to the model there would be no significant problems. In fact, I never had to perform renders to check whether a pose or movement caused a violation of the model's integrity. Furthermore, when it was necessary to make flipbooks to evaluate the animation, rendering times averaged under ten seconds a frame. Animation proved to be easiest part of the production process.

The only problem I encountered in animating the black, two dimensional-appearing figures was superimposition. For instance, in a frontal view when Schroeder places his black hand in front of his black chest his hand becomes indistinct. I resolved such problems with four techniques. One of the methods was to move the camera position to present a more descriptive silhouette. If this was not possible, I might alter the character's pose. My third solution was to create new white geometry to run along the superimposed limb to define its position. If all else proved inappropriate, I used a rendering filter called "outline." With it I could define which appendages should be outlined with an aliased white line. I avoided this technique as much as possible because I dislike the line quality it produces.

The visual design of *Division* creates the impression that it was produced with two dimensional animation techniques. The three dimensional quality becomes apparent only when there is movement. For this reason, I animated the camera with the appearance of every new flower. I intend the selective description of three dimensionality through the use of an animated camera to emphasize the enrichment of the landscape by the flowers.

## **Section VI: Development of the Score**

Although production of the score did not begin until the visuals were completed, it received considerable thought throughout the earlier stages of the process. Initially I planned to send a videotape of the animation to a distant composer with whom I had collaborated in the past. However, by the time I was prepared to work on the score, I decided that I had too many ideas to communicate and that working with a local composer would probably produce better results.

Five times I met with Ian Quinn, a doctoral candidate in Music Theory at the Eastman School of Music. During our visits which lasted up to two hours, we watched my animation repeatedly and discussed the score. Though he had never produced a score before, Ian was able to implement and even enhance my seminal ideas.

Fundamentally, I want the score to express the somber mood of the story. I believed this could be achieved with wind to describe desolation and with the plaintive sounds of distant fog



horns. Ian produced a score with both these elements and included bell sounds to strengthen the haunting and ironic nautical theme.

The greatest requirement was for the creation of sounds that accompany the growth of the flowers. They are needed to alert Schroeder to the unexpected growth of flowers in his neighbor's yard. I imagined each flower would make a single note to announce its birth and later its death. In the final act the growth of the hundreds of flowers would produce a chorus. Ian was receptive to this idea. And he improved it immeasurably. Rather than merely marking the birth and death of each flower with single notes, Ian suggested describing the life-span of each flower with a song. His solution is a more effective and accurate way to describe the sustained impact the flowers have on the landscape so I adopted it without reservation.

The direct communication and numerous meetings with my composer yielded better results than I had expected to obtain. The collaboration with a receptive, intuitive and deeply talented musician encourages me to engage the composer earlier in the production process in the future.

## **Conclusion**

In this paper I have reviewed the many choices I made in producing my thesis animation. The production rarely progressed as I had envisioned it. The completion of the project depended upon my willingness to reexamine early assumptions and decisions. I reevaluated the story, the identity of the characters, and the visual design of the characters and their environment. When some of my design goals proved to be too exacting, it was necessary for me to capitulate. I was challenged to abandon my original vision and develop a new one. My revisions required animation considerations that were unforeseen and presented new opportunities. Lastly, I elected to collaborate on the score with an inexperienced film composer instead of working with either of the musicians with whom I had previously collaborated. While the final product vaguely resembles my initial conception, I am hopeful that viewers of *Division* will be unaware of the unavoidable concessions and recognize only the artistry.

## • References •

Carels, Edwin. "Anarchy in the U.K." *Plateau*. May 1993: 4-6.

Ferrante, Anthony C. "Is David Cronenberg a Sick Man." *Film Threat*. February 1997: 6-12.

Sacks, Oliver. *An Anthropologist on Mars*. New York: Random House. 1995.

**• Appendix One: Thesis Proposal •**



Division

by

George M. Nadeau

Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
Master of Fine Arts

MFA Photography Program, School of Photographic Arts and Sciences  
Rochester Institute of Technology  
Rochester, New York  
April 26, 1996

Erik Timmerman, Chairperson  
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## Treatment

### *Story*

In the morning, Dylan stands in his backyard which is defined by a picket fence. He stands before an easel and applies gesso to a canvas. A couple hours later he applies finishing touches to his painting of a flower garden. The image comes from his imagination not from his environment.

Dylan stops painting, turns and waves to Schroeder who has entered his own backyard with a tray of gardening tools and materials. From the opposite side of the picket fence Schroeder acknowledges Dylan and notices his brilliant painting. Then Schroeder turns his back toward Dylan, sets down his tray, combs the soil, and drops a seed into his flower bed. Schroeder smiles when a yellow flower bursts from the ground. Dylan sighs. Schroeder turns to see Dylan has moved from behind his easel; Dylan lies on the ground and examines two yellow flowers in his own yard. Schroeder quickly deposits two more seeds beside his single flower, and two more flowers sprout through the surface, one red and one orange. Again Schroeder hears sounds emanating from his neighbor's yard. Schroeder turns to see Dylan appreciating his two red and two orange flowers that appear beside his two yellow flowers.

Schroeder reaches for his packet of seeds while glaring at Dylan. Schroeder inadvertently pricks himself on his pruning shears. Blood appears on his right index finger. Dylan exclaims and Schroeder turns to see him examining the blood on his right and left index fingers. Schroeder raises his shears and snips down his yellow while watching his neighbor's flowers; Dylan's two yellow flowers wilt. Similarly, when Schroeder cuts his remaining red and orange flowers, Dylan's four upright flowers wilt. Dylan observes his six flowers wilting in the ground then resumes his position at his easel.

Schroeder examines his flower bed and the three flower lying upon it. Schroeder retrieves his packet of seeds and scatters its entire contents onto the soil. Dozens of brightly colored flowers appear. Despite the beauty of his new flower garden, Schroeder is distracted by sounds from Dylan's yard. There, twice as many flowers surround Dylan at his easel. Schroeder glares over the fence at Dylan and his larger garden. Then Schroeder looks at his own garden. Schroeder trembles with anger and clenches his fists. Dylan turns and observes Schroeder raising a shiny object in his hand. Schroeder thrusts his pruning shears into his own right eye. Cut to black.

## *Aesthetics*

Images will be stark and simple. Most objects and characters will be smoothly modeled in white and grays. Only the flowers, blood drops and Dylan's painting will be brilliantly colored.

Additionally, Schroeder and Dylan are identical except for their eyes. Schroeder's are black beads while Dylan's are colored and beautiful.

## *Technique*

I will produce this story in 3D animation using Electrogig's 3D-GO. I will render images as TIFFs, transfer them to an optical disc cartridge and finally transfer them to SVHS for editing.

I intend to collaborate with a trained musician to produce the score. Sue Doherty, who has an M.A. in Music Composition, assisted me with my film *Boxes* and has expressed interest in further collaboration. Should Sue become unavailable I have another musician, Devin Kirschner, interested in assisting me with this project. Devin produced the score for my film *Nightlight*.

## **Budget**

|                        | Estimate | In Kind | Actual Cost |
|------------------------|----------|---------|-------------|
| Script and storyboard  | 1500.    | 1500.   | 0.          |
| Animation              | 20000.   | 20000.  | 0.          |
| Sound                  | 3000.    | 3000.   | 0.          |
| Videotapes             | 50.      | 0.      | 50.         |
| Optical Disc Cartridge | 200.     | 0.      | 200.        |
| 8mm Data Cartridges    | 80.      | 0.      | 80.         |
| Total                  | 24830.   | 24500.  | 330.        |

## Timeline

I intend to produce my thesis over two quarters and to screen my thesis at the end of the Winter quarter of 1996. I will register for 6 credits in the Fall and 6 credits in the Winter.

|                 |   |
|-----------------|---|
| Pre-production  | April<br>script<br>storyboard<br>proposal<br>meet with committee  |
| Production      | May<br>storyboard<br>model<br>meet with committee<br><br>June-August<br>(not enrolled for thesis credits)<br>model<br>animate<br><br>September<br>animate<br>meet with committee<br><br>October<br>animate<br>meet with committee<br><br>November<br>animate<br>produce rough cut<br>sound composition<br>meet with committee |
| Post-production | December<br>reanimate, re-render where necessary<br>titles, credits<br>editing<br>sound composition<br>meet with committee<br><br>January<br>editing<br>sound composition, editing<br>design screening poster<br>thesis screening<br>thesis report<br>meet with committee   |

## • Appendix Two: Original Storyboard •

DIVISION

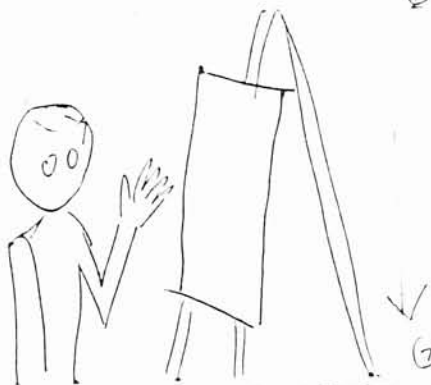
①



③



⑤



⑦

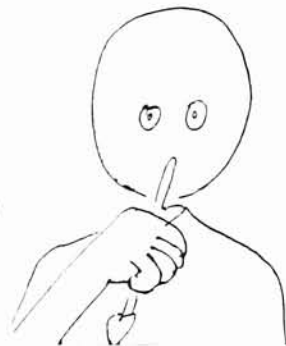
↑ DIVISION ↓

DIVISION

↓ DIVISION ↓

↑ Fence and's eye view

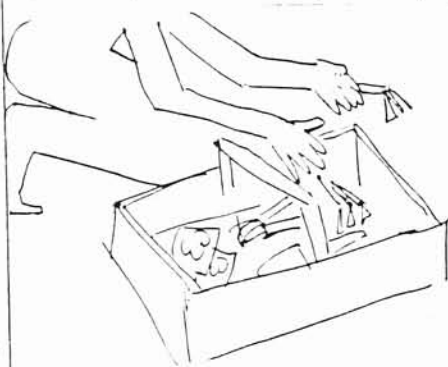
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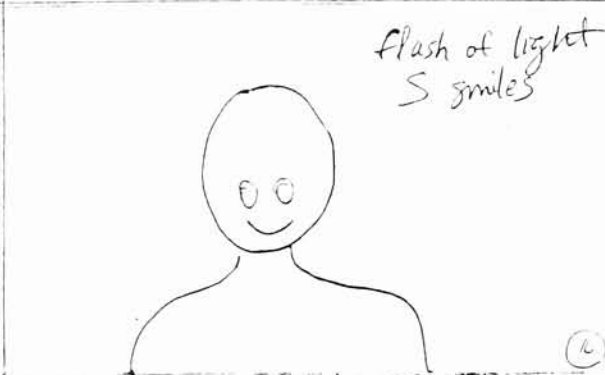
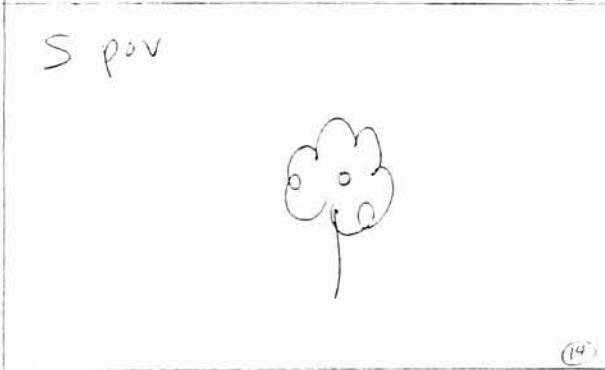
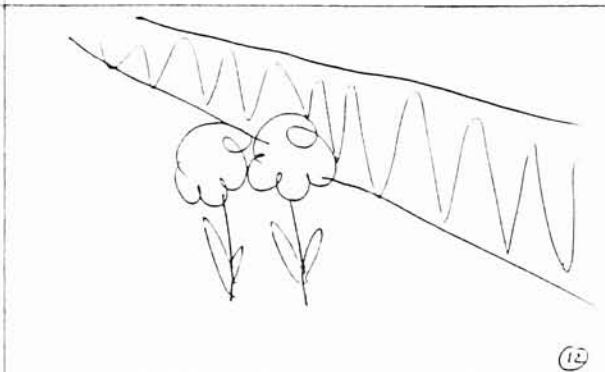
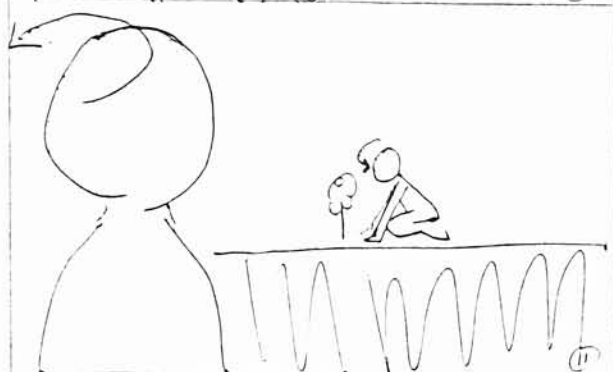
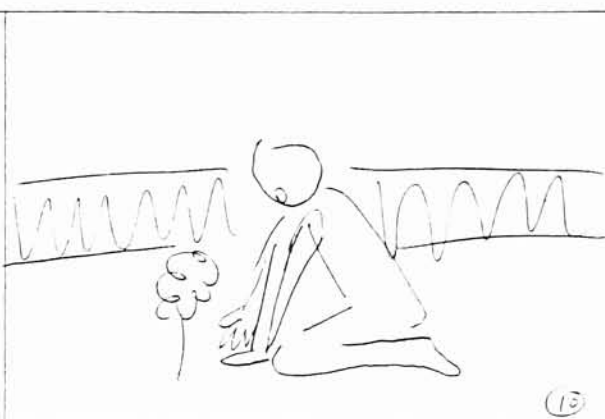
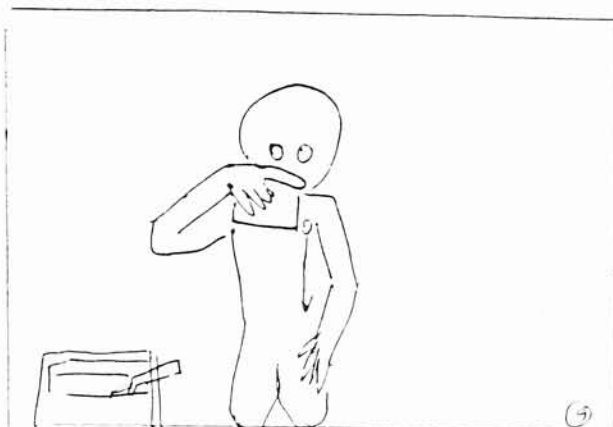
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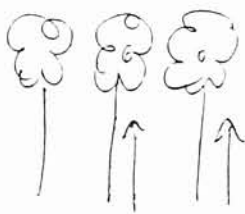


⑥



⑧



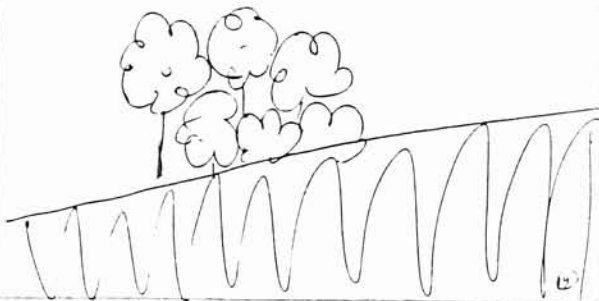


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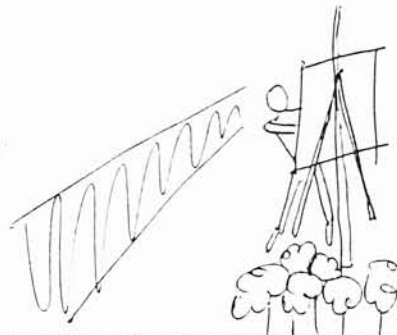
2 flashes  
attract  
S attention



(15)



(16)

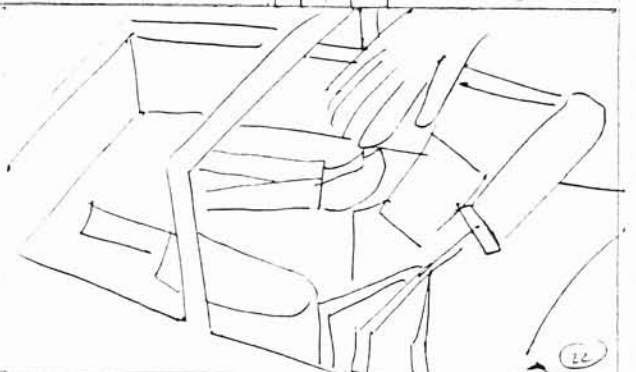


(20)

Walt glancing at Dylan  
S crouches into  
fray



(21)

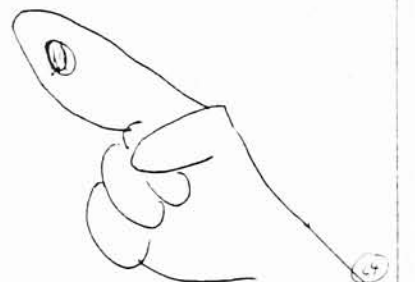


(22)

flash of red  
S reacts and  
lets bloody finger



(13)

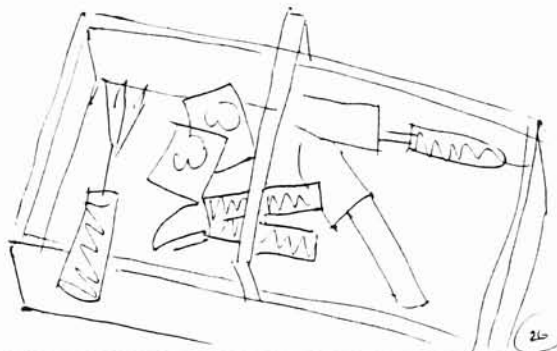


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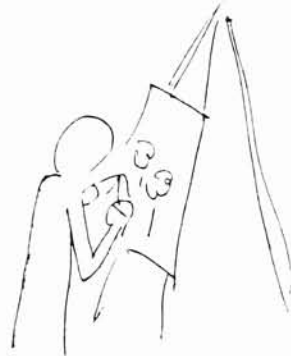


(26)

flashes of red  
from D's  
yawl



(27)



(28)



(29)

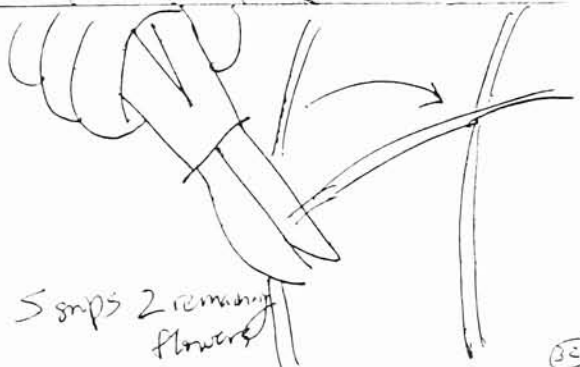
S picks  
up sticks  
then snags  
1 flower down



(30)

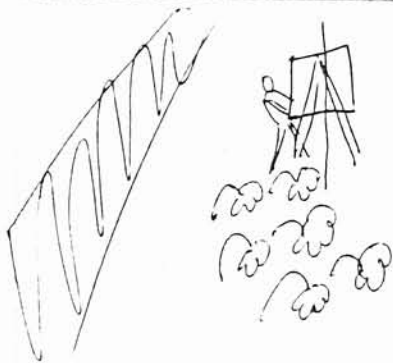


(31)



S snags 2 remaining  
flowers

(32)

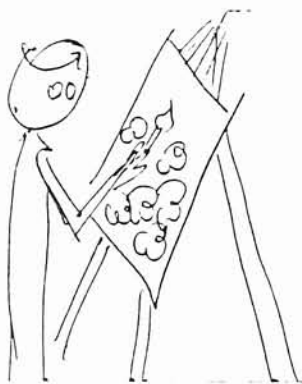


Smile grow on S



(33)

(34)



Flowers are brown

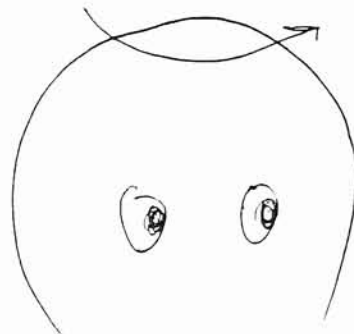
(35)



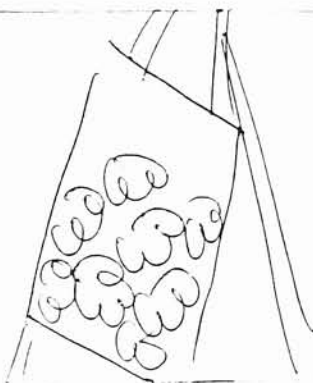
(36)



(37)



(38)



(39)



(40)



Flowers burst from ground



(41)

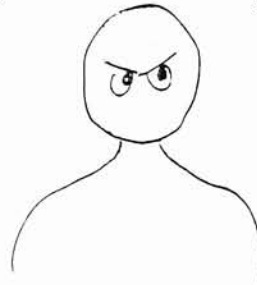
sprays seeds onto ground



flashes light

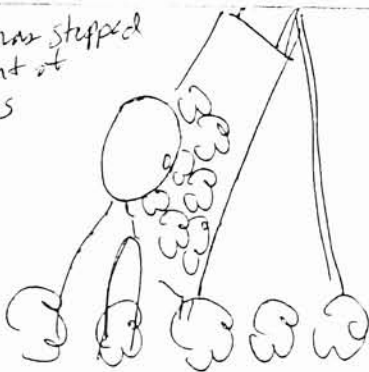
(42)

look out corner of eye as light flash from neighbors yard

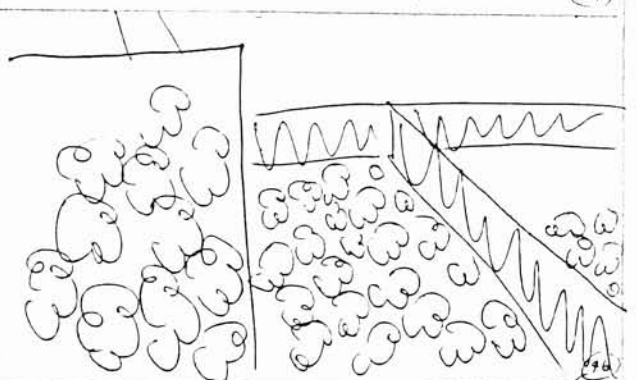


(44)

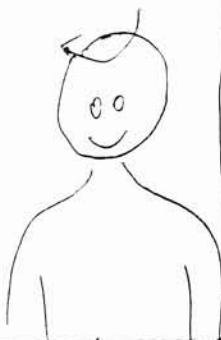
Dylan has stepped to right of canvas



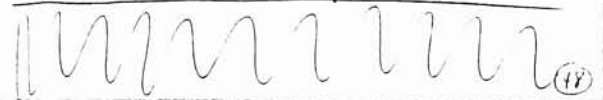
(45)



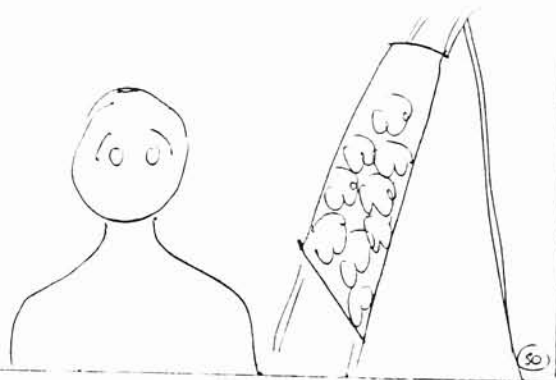
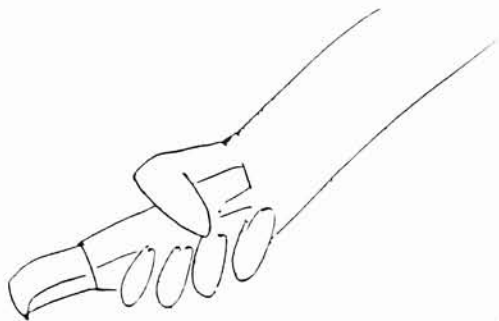
(46)



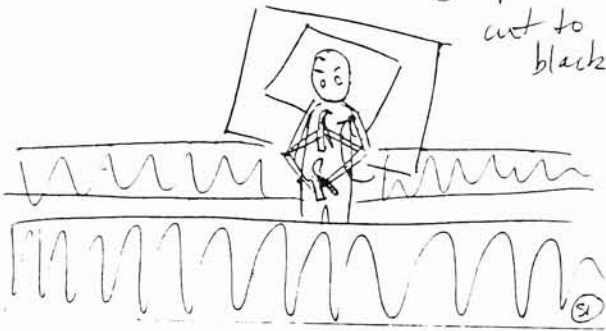
(47)



(48)



jump cuts  
cut to  
black

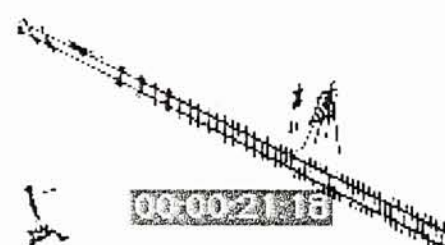
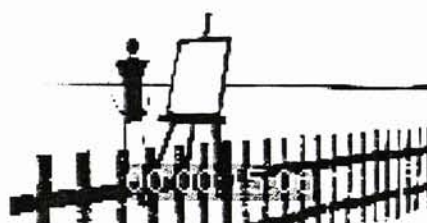
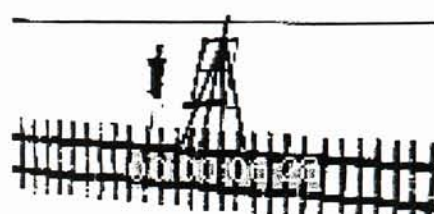


• **Appendix Three: Final Storyboard** •



division

00:00:02:00



Neil appears







...atch



scr...



cla...



...atch



...ank



drop seed 1A



birth of rose 1A



birth of rose 1B 1C



drop seed 2A



drop seed 3A



birth of rose 2A 3A



birth of rose 2B 2C 3B 3C



Neil pricks finger



Art pricks 2 fingers



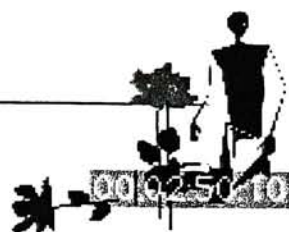
tools clank







snip/dying 1A



dead 1A



00:02:51:02



dying 1B 1C



dead 1B 1C



00:02:56:04



snip/dying 2A



snip/dying 3A



dead 2A



00:03:00:18



dying 2B 2C



00:03:01:08

dying 3B 3C



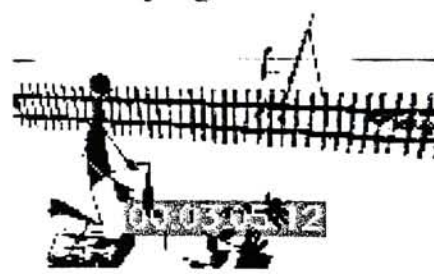
00:03:05:26

dead 2B 2C



00:03:07:24

dead 3B 3C



00:03:05:12

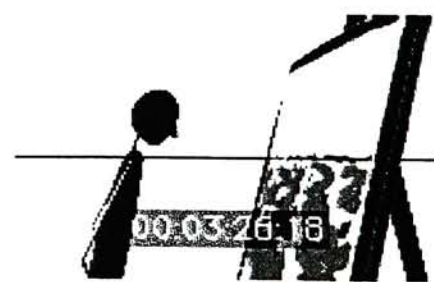


00:03:19:06



00:03:23:22

begin to reveal painting



00:03:25:18



painting flowers transform



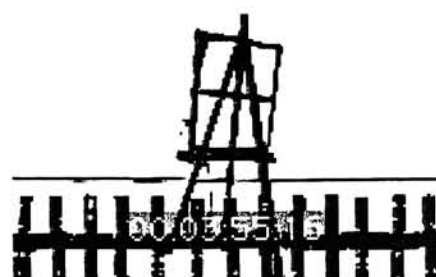
flowers come to life



still life



painting obscured



idea forms



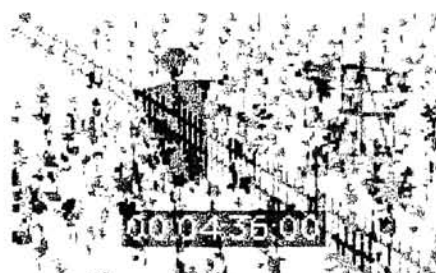
begin planting/growing sequence



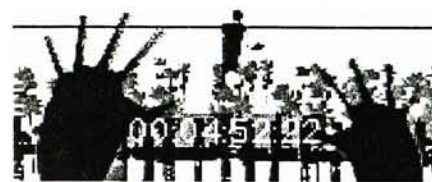




begin to reveal garden



sudden awareness of shears

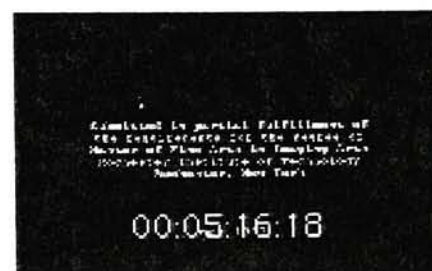
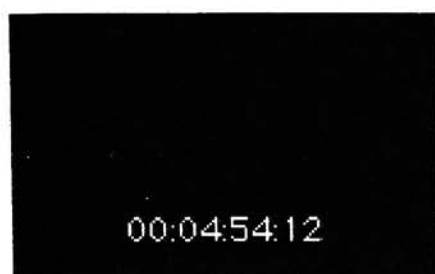


gouge/thrust begins





final frame



## • **Appendix Four: Production Stills** •

