

AMY

# The Making of Bingo: Concepts and Techniques

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The making of the animated short film **Bingo** was a unique exercise in production, software development, and storytelling. The production team for **Bingo** needed to accomplish at least two simultaneous goals. First, we needed to help design, test and verify CG software while the latter was under development--software which would eventually become Alias|Wavefront's animation program Maya. Second, we had a goal of experimenting with the storytelling and imagery that CG animation is uniquely capable of producing. For these reasons, **Bingo** is both highly refined as a piece of character animation and distinctly experimental in its narrative.

**Bingo** experiments with narrative form in at least one important way: it is, to my knowledge, the first animation which is entirely based on a theatrical short play, written for the stage. The play itself, entitled "Disregard This Play", is an absurdist, surreal drama performed by a theatre company from Chicago, the Neo-Futurists. The dialogue soundtrack in **Bingo** was recorded directly from a performance of this play, and the animated imagery was created after this recording, completely based on this theatrical performance.

## 1 Beginning Stages

The production of **Bingo** began in late 1996, just before Maya 1.0 began its "Alpha" phase of development. At that time the Alias|Wavefront management made a decision that Maya must prove itself as a production-ready tool before it would be shipped to customers. This would be done through an in-house "production test". We decided that this "production test" would be a story-driven character animated film which would be several minutes long and involve at least five human characters.

Around this same time (late 1996) I first saw the Neo-Futurists on stage. The "Neo-Futurists" is a collective theatre company which performs in a small theatre in the north side of Chicago<sup>1</sup>. Every weekend night around midnight, the Neo-Futurists perform a one-hour show entitled "Too Much Light Makes The Baby Go Blind". Each of these one-hour performances consists of thirty very short plays, performed in rapid succession. The subject matter of these plays is sometimes farcical, sometimes satirical, sometimes



political, sometimes surreal, sometimes disturbing, sometimes infuriating, and almost always uniquely compelling.

Seeing these performances provoked an idea for me: what would happen if one captured the audio dialogue of a theatrical performance as from this company, and used it as a basis for an animation, where the animator(s) created new visual imagery from the vocal performance? As far as I am aware this had never been tried before, so it seemed a worthwhile experiment. Shortly after seeing these performances I proposed to the Neo-Futurists that we adopt one of their short plays into an animated short film, which would ultimately become the Maya 'production test'. After viewing tapes, videos and live performances of hundreds of the Neo-Futurists' short plays, we decided to adopt a performance of "Disregard This Play" by Greg Kotis, one of the founding Neo-Futurist playwrights.

## **2 Pre-Production: Audio Recording of the Neo-Futurists**

To begin the animation **Bingo**, we travelled to Chicago with a sound recording crew and recorded the Neo-Futurists performing in front of a live audience, during one of their regular performances on November 2 1996. Before the performance, each actor was fitted with a portable wireless microphone, so that their vocal performances during 'Disregard This Play' could be recorded digitally at a console placed just offstage.



Figure 1: The Neo-Futurists perform 'Disregard This Play' live in front of an audience of 200 people.

Then, the following day (November 3), we relocated the sound recording equipment on a soundstage of a film studio in Chicago called Post Effects. There, the Neo-Futurists again performed 'Disregard This Play' in this more controlled environment. Again,



they wore the small wireless microphones so that we could get a clean digital audio recording of their vocal performances.

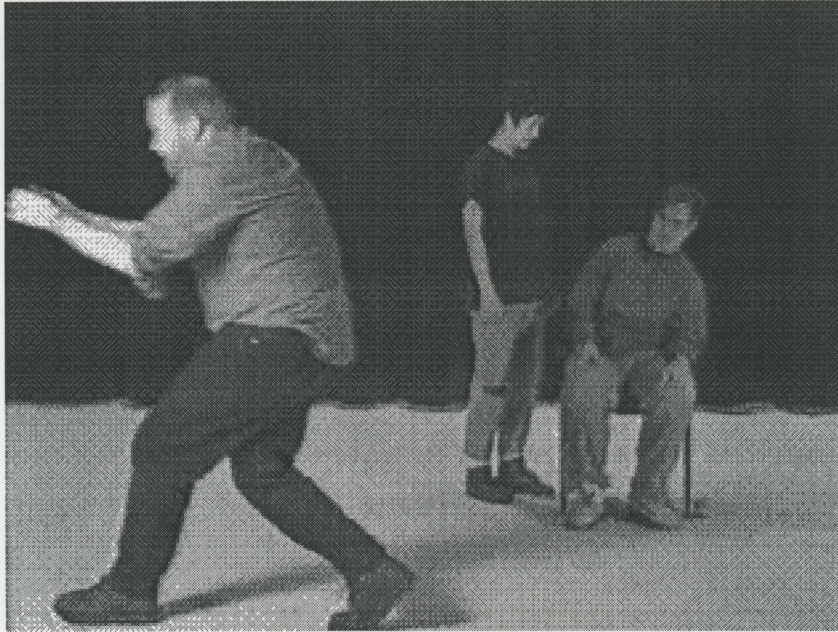


Figure 2: The Neo-Futurists repeat the performance of 'Disregard This Play' on a soundstage at Post Effects Ltd.

### 3 Storyboard

With the audio recording of 'Disregard This Play' completed, we effectively had the dialogue portion of the soundtrack in place for the animation that would eventually become **Bingo**. The challenge we faced at this point was: given the imagery that a high-end animation and rendering package was capable of producing, how could we compose the visual element of this animation to most powerfully convey the story in this play in animated form?

The conceptual approach we took to the storyboard of **Bingo** was to use the computer animation tools to accentuate (and sometimes exaggerate) the *perceptions* of the main character ("Dave")--his psychological and emotional take on what is happening around him. In Figure 3 below, we see the 'Pinhead' sequence. Whereas in the play, the 'Pinhead' character acts through intimidating body and vocal gesturing, in the animation, this character actually becomes larger and more grotesquely deformed as his actions become more intimidating to his subject, "Dave".



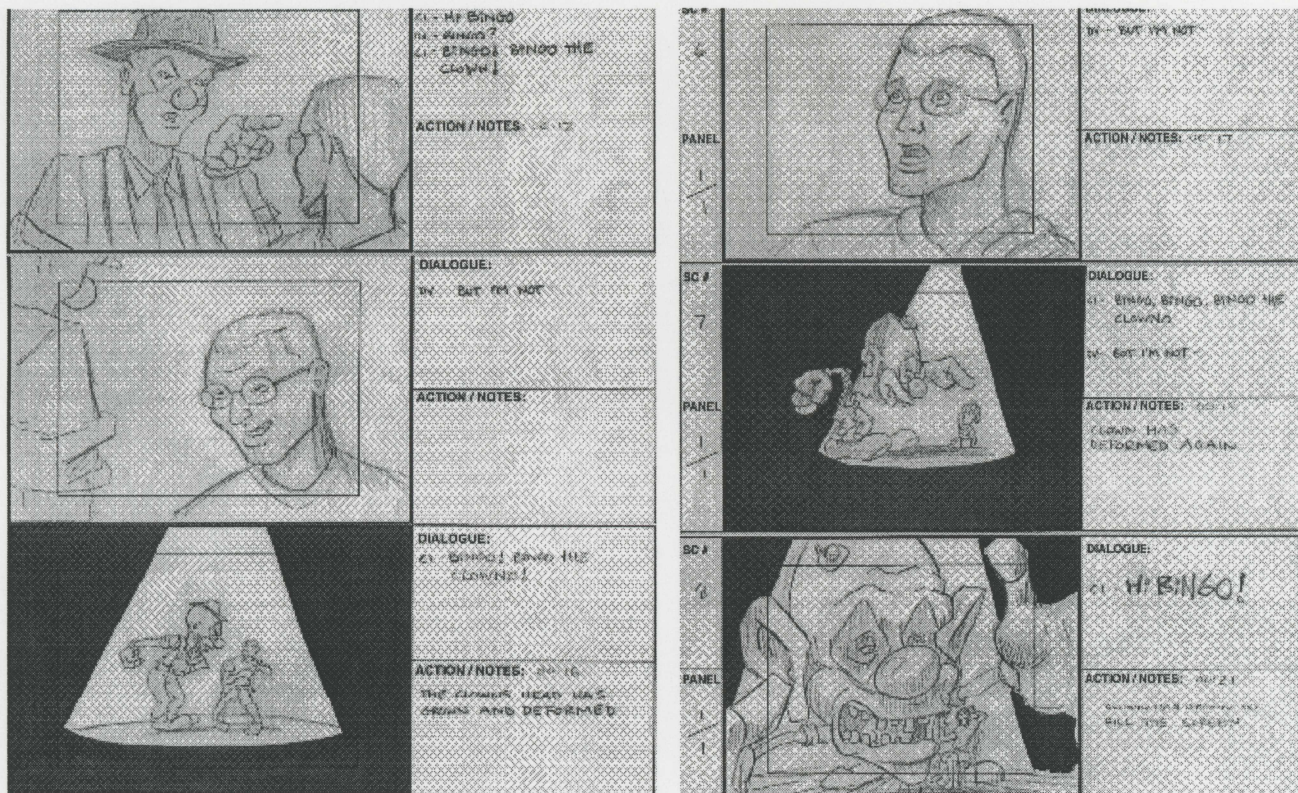


Figure 3: Storyboard panels from the 'Pinhead' sequence

#### 4 Character Development: Four Examples

In the storyboard for **Bingo**, there is one main character, "Dave", and four characters which appear, one after the other, to confront and torment Dave. Because these characters appear one by one, they were modeled and set up, one by one, as each scene in **Bingo** was ready to be shot and rendered. For animated short films, this is a rather untypical production approach; typically, all characters for a production are modeled and set up concurrently. Because we were testing Maya while its modeling tools were in development, the first characters (Dave and Pinhead) were modeled mostly with "pre-Maya" software; later characters (Harlequin, Balloon Girl) were modeled completely in Maya, and the last character to appear (Money Guy) was modeled in Maya NT.

##### Pinhead

Pinhead, the first clown to confront Dave in the play, was the first character to be modeled for the animation:

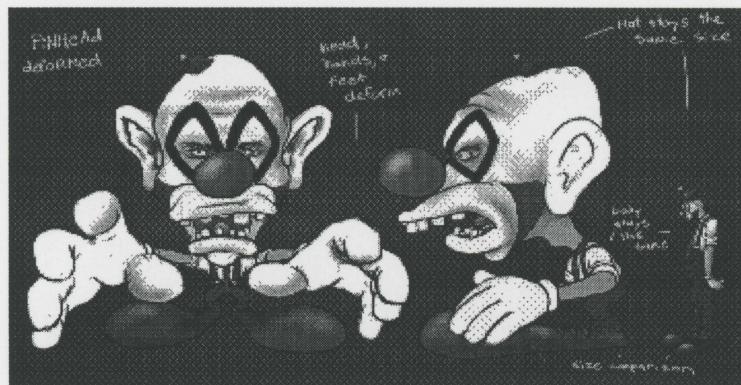


Figure 4: Concept sketches for Pinhead



In Maya's early development, (early 1997) its modeling and animation capabilities were limited to primitive objects and motions. Below is a still shot from an animatic done in Maya Beta1, showing an early test of Pinhead walking up to Dave's chair:

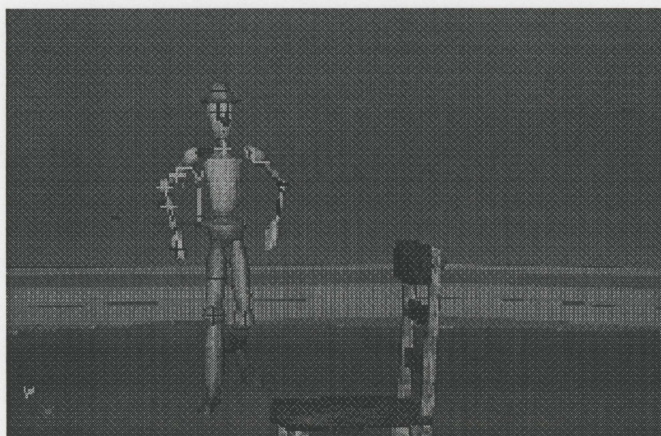


Figure 5: Early animatic test of Pinhead

By the time Maya was in its latter Beta stage of development, Pinhead's appearance had been greatly refined:

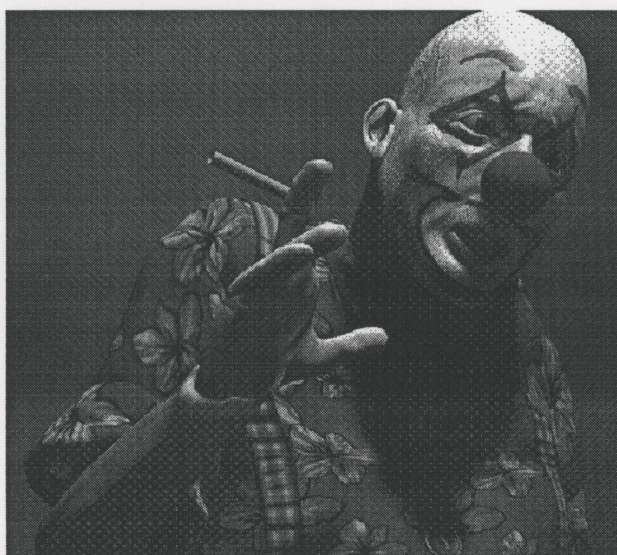


Figure 6: More advanced model of Pinhead

By this point in Maya's development, the software was showing advanced capability to combine complex textures, inverse kinematics, skin deformation and cloth-like behaviour together in rendered frames. The above figure is from one of the first motion tests for **Bingo**, completed just before principal shooting for Scene 1 of **Bingo** began.

#### "Dave"

The main character in **Bingo** is "Dave", the hapless man who remains seated throughout his ordeal with the clown characters. He was the second character to be modeled, wired



and textured for the production. The early character sketches of Dave show him as an somewhat ordinary-looking man in his early 30's, dressed in typical urban street attire:

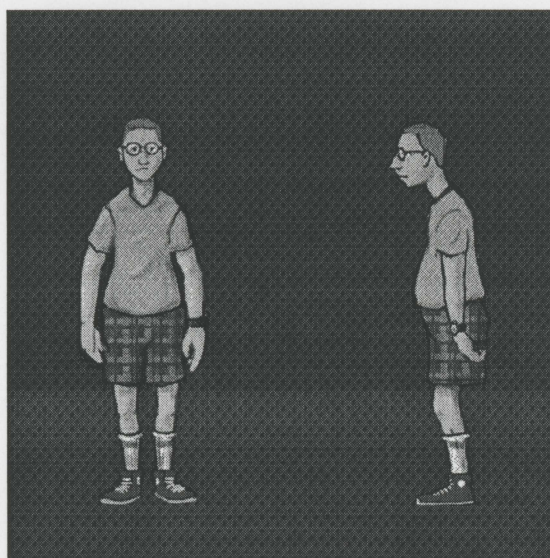


Figure 7: Concept sketch of "Dave"

By Maya's later Beta period of development, Dave had taken on a highly realistic, refined appearance. Note the hair under Dave's baseball cap in the figure below; this was modeled with a custom Anisotropic shader developed for this production:

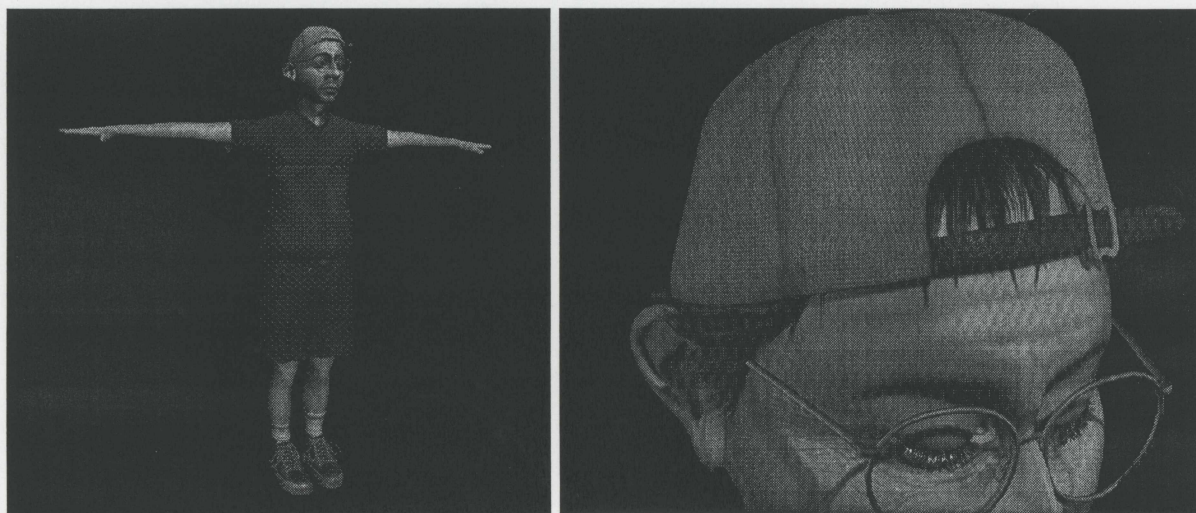


Figure 8: Advanced modeling of "Dave"

### Balloon Girl

Balloon Girl is the second "clown" character to confront Dave. Unlike the adult actor who plays this character in the play, Balloon Girl is modeled as a young child, perhaps 5 or 6 years old, and standing less than one meter tall. Her characterization is cloyingly innocent, then irritating, and then deeply menacing.



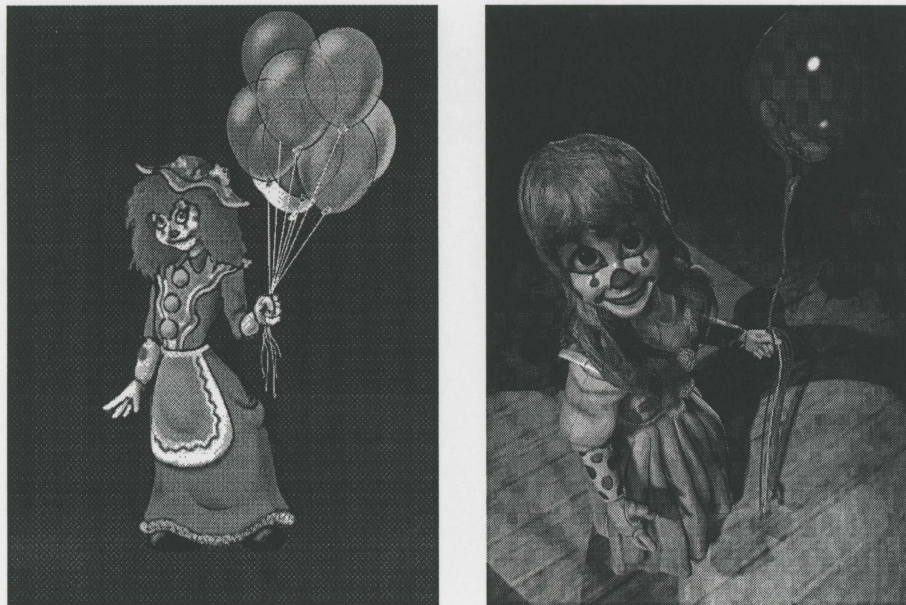


Figure 9: Balloon Girl--concept sketch and completed model

Because Balloon Girl's first appearance in **Bingo** is several minutes into the animation, she was created when Maya was already much more developed than when Pinhead or Dave were modeled. The anisotropic shader used in Dave's hair is used in a far more extensive manner for Balloon Girl's hair. In addition, the Balloon Girl character provided an opportunity to test Maya's Dynamics capabilities--to simulate the motion of her dress as she walks, and to create the motion of the balloons on their strings.

### The Money Guy

Near the end of Dave's ordeal in **Bingo**, he is confronted by a tree-like creature who is strikingly non-human in his appearance: he has seventeen arms, each arm has five fingers, and each finger holds a wad of paper cash. The Money Guy is simultaneously the most absurd and the most menacing character in **Bingo**.

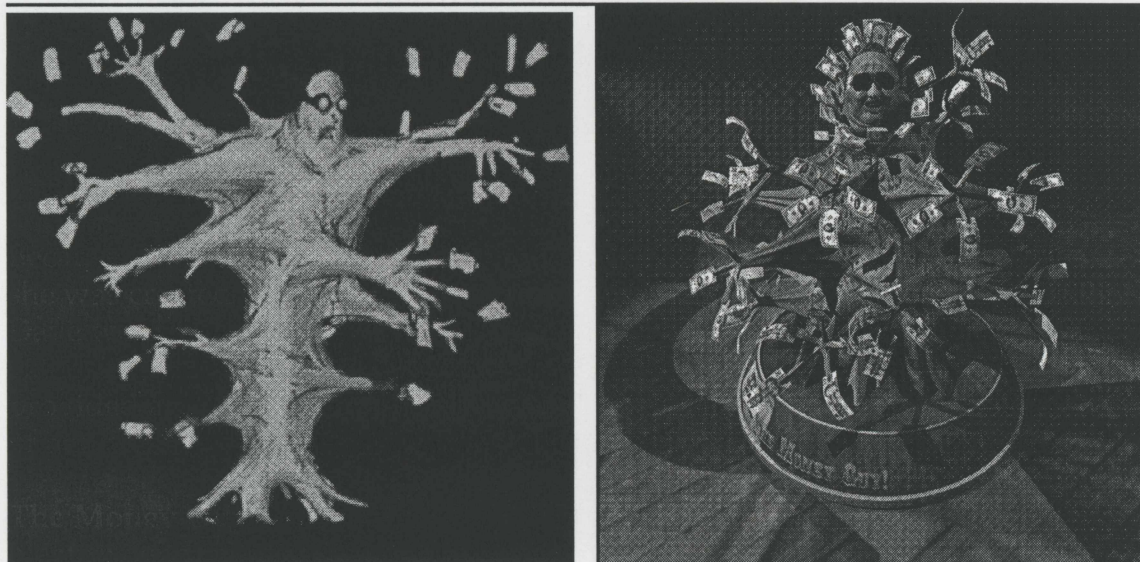


Figure 10: the Money Guy--Concept sketch and completed model.



Because the Money Guy is the last character to appear in **Bingo**, he was the last one to be created, and thus was modeled, textured and wired when Maya's functionality was more or less complete. He is the most complex character in **Bingo** in terms of modeling features used, controls on his arms and face, dynamics setup (on the paper money) and texture layering.

## 5 The Production Process

From the first storyboard sketches through post production, **Bingo** took nineteen months to produce, from November 1996 until June 1998. Because production of **Bingo** was, technically, a massive project for testing Maya, the people who worked on this production came primarily from Alias | Wavefront's Quality Assurance department: modelers, animators, painters, programmers and rendering specialists who worked on **Bingo** as part of an overall program to test Maya. As such, most of these people worked on this production part-time, as part of testing Maya in other, more technical ways. Some individuals 'volunteered' their time: they would work on the 'technical' testing of Maya as their full-time work, but would devote their evening and weekend hours to the creation of **Bingo**.

## 6 The Story in Bingo

*"By means of shrewd lies, unremittingly repeated, it is possible to make people believe that heaven is hell -- and hell heaven. The greater the lie, the more readily it will be believed."*  
--Adolf Hitler, from 'Mein Kampf'

In this paper I have talked about implementing software techniques and experimenting with narrative as "goals" in producing **Bingo**. But most importantly for me, my goal in creating **Bingo** was to tell a story largely driven by the statement above--one which has troubled me both for the evil it conveys, and for the stunning accuracy it expresses about human nature. When I saw the Neo-Futurists performing "Disregard This Play", I saw a crystallization of this statement which I felt could be given power through the art of computer animation.

**Bingo** is in part a "shadow" response to a film I had produced in 1995, **the end**. In that film, I strove to convey a message of self-empowerment and self-awareness. The character in that film reaches a conclusion that is ecstatic: "I am a work of my own fiction". As such, the character realizes he can create his own "reality" out of that "fiction".

**Bingo** shows a consequence when one lacks that self-empowerment. We see the absurd, darkly humorous but disturbing effect that a lie, "unremittingly repeated" has on an otherwise intelligent and mannered person, and that person's self-perception. To me, the main character in **Bingo** has free will: he is free to walk away from that stage where he is confronted by the other characters. He is also free to tell these characters



who he really is, if not "Bingo the Clown". That he does neither, and eventually accepts the absurd conclusion that he is a clown, is on a deep level infuriating to watch. It also mirrors an equally absurd, often inexplicable vulnerability that I have seen in people (including myself) to accept inaccuracies or "unremittingly-repeated lies" about our self-identities. I wanted to give voice to that perception in **Bingo**.

As of this writing, **Bingo** has been shown publicly for nine months, at animation festivals, at computer graphics conferences, and over the Internet. In that time I have been struck by the polarized responses it has received. Some audiences have responded ecstatically to the story in **Bingo**; others have expressed outright displeasure at its content. In a strange way I am as encouraged by the latter response as I am by the former. Above anything else, the story in **Bingo** seems to have "resonance" with audiences. I hope that this resonance results, in a small way, in people examining and bringing to light that dark side we all possess, that side which, when left unexamined, has given strange truth to Adolf Hitler's observation.

Chris Landreth  
April 10, 1999



## Appendix: Credits for the animation **Bingo**

### Synopsis:

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What happens when a lie is told long enough and loudly enough?  
One answer to this is explored in "**Bingo**", an animated short film  
based on the short play "Disregard this Play" by Greg Kotis and the  
Neo-Futurist Theatre Company.

### Credits:

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Directed by  
Chris Landreth

based on the play  
"Disregard This Play"  
by Greg Kotis

from "Too Much Light Makes the Baby Go Blind"  
a production by the Neo-Futurists, Chicago, IL,  
Created by Greg Allen

### Cast:

|                 |                |
|-----------------|----------------|
| "Dave":         | David Kodeski  |
| Pinhead:        | Phil Ridarelli |
| Harlequin:      | Diana Slickman |
| Balloon Girl:   | Stephanie Shaw |
| Money Guy:      | Dave Awl       |
| Dr. Pinhead:    | Greg Allen     |
| Intercom Voice: | Steve Mosqueda |

Animated by:  
Chris Landreth  
David Baas  
Joan Staveley

### Additional Character Animation:

Tim Rowlandson  
Jeff Bell  
Karan Singh  
Rick Kogucki  
Jason Schleifer  
Jon Tojek  
Martin Werner



Characters Modeled by  
Mark Forbes  
Daniel Hornick  
Doug Law  
Gerry van Ommen Kloeke  
Ted Charlton  
Duncan Brinsmead

Texturing, Lighting, Rendering and Compositing:  
Owen Demers

Set Design  
Ian Hayden

Additional Modeling and Texturing  
Tim Hanson  
Paul Roy  
Robert Magee  
Gary Mundell  
Christine Beaumont

Particle effects by:  
Daniel Roizman

Storyboard and Character Sketches by:  
Mike Kitchen

Edited by:  
Craig Clarke and Matt Lyon

Produced by:  
Kevin Tureski  
Andy Jones

Executive Producer  
Penny Wilson

Music:  
Jim Lamarche

Musicians:  
Clarinet:     Jeremy Edwardes  
Bassoon:     Jeff Burke  
Percussion:   Ron Ruhe

Sound Effects and Editing by:  
Simon Edwards



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Biography  
Chris Landreth  
April 1999

AMY

Chris Landreth has been an Animator at Alias|Wavefront since January 1994. It's his job to define, test and abuse animation software, in-house, before it is released to the public. In addition to well-mannered software, this has resulted in the production of animated short films, including "the end" (1995) and "Bingo" (1998). Both films have won recognition and awards worldwide. "the end" was nominated for an Academy Award in 1996 for "Best Animated Short Film".

#### Animation Credits:

1998: Bingo, 5m 00s

Premiered as the Finale at the SIGGRAPH 98 Electronic Theatre,  
July 1998, Orlando, FL.

Ottawa International Animation Festival, October 1998:  
Media Prize for Best Computer Animation.

Chicago International Film Festival, October 1998:  
Silver Plaque for Animated Short Films

Sundance Film Festival, January 1999, Invited Short Film

Imagina 99, Monaco, January 1999:  
Prix SACD for Most Innovative Narrative and Production

Academy of Canadian Film and Television:  
1999 Genie Award for Best Animated Short Film

Aspen Short Film Festival, April 1999:  
Best Animated Film

1995: the end, 6m 11s.

Nominee for 1995 Academy Award, "Best Animated Short Film."

Premiered at the SIGGRAPH 95 Electronic Theatre, Los Angeles, CA.

Selected as top animated piece by the SIGGRAPH Electronic Theatre jury.

Imagina 96, Monaco: Prix-Pixel INA, Best 3D Animation.

Imagina 96, Monaco: Prix SACD for Most Innovative Narrative and Production

1996 Atlanta Film and Video Festival, Winner, Best Animated Video.

Computer Animation 96, City of Geneva Award for Best Computer Animation

Zagreb International Animation Festival 1996:

Special Recognition (Original Video Production),

1997 World Animation Celebration:

Winner, Best Professional Computer-Assisted Animation

1993: Data Driven: The Story of Franz K., 3m 15s.

Premiered at the SIGGRAPH 93 Electronic Theatre, Anaheim, CA. Featured at the  
Revue Virtuelle, Centre Georges Pompidou, Paris.

1991: The Listener, 2m 05s.

Premiered at the SIGGRAPH 91 Electronic Theatre, Las Vegas, NV.

Featured on worldwide broadcast of MTV's Liquid Television, September 1992