The Opportunity: A 3D Animation About Karma

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The Opportunity

A 3D Animation About Karma

Thesis documentation submitted to the
Faculty of the College of Imaging Arts and Sciences in candidacy
for the Degree of Masters of Fine Arts in Computer Graphic Design
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9 August 2016

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Date
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Abstract

*The Opportunity* is a three dimensional animation that illustrates the idea that by helping others you can inadvertently help yourself. The story is told using an animated sunflower, bees, tulip, and farmer.

In a sunflower garden, a sunflower tries to entice a bee to pollinate it, but a tulip (that is not supposed to be in the sunflower garden) attracts all of the bees. The tulip sees the farmer coming to weed out any unwanted plants. Seeing the fear in the tulip’s eyes, the sunflower helps disguise the tulip. The farmer is tricked and the tulip is saved. With the tulip disguised, the bee chooses to pollinate the sunflower instead.

Through this story, the goal is to show that the good in helping others does not just stop at the recipient getting what they want. Eventually the good deed is repaid without that being the original intent. According to Dictionary.com, karma is defined as an *action, seen as bringing upon oneself inevitable results, good or bad, either in this life or in a reincarnation* This is the basic underlying principle of this story. http://markreisch.blogspot.com

The final animation exhibits a four minute visual story.
1. Introduction

In many instances of observation, the negative consequences of someone’s actions can be seen; e.g., a person driving a car cuts off another driver on the road and then that first driver gets into an accident, or a person yells at another and then falls into a ditch. Youtube.com has many instances of these, but this film is interested in the positive results of the actions of an individual. For instance, a person heading to make a deposit at a bank stops to help someone cross the street and only later discovers that because of the time spent helping, he was not caught in a bank robbery. The important aspect of this thesis is that it is not a quid quo pro situation, but rather the “Universe” giving the punishment or reward. For example, in the scenarios above the person being cut off in the car does not make the other person get into the accident, nor does the person being helped across the street pay the other person helping them as a reward. These are situations where karma punished the person driving badly and rewarded the person helping at the crosswalk.

Karma is popularly understood as the law of cause and effect, whereby an individual’s actions or deeds shape their past, present, and future life and afterlife experiences. Karma is associated with Eastern religions such as Hinduism, Buddhism, Jainism, and Sikhism, each of which has its own way of viewing it. [Chacko 2012] Though this thesis is not aimed at religion, the karma law has been observed and experienced. The success of this thesis will be based on the viewer’s interpretation of the short animation.
2. Research
Research was generated in three categories: Content, Visual and Technical.

2.1 Content

How to tell a story about karma?

Finding the definition of karma from Elizabeth Chacko helped focus this thesis. Not only does karma have to deal with the present actions of an individual but there is also an afterlife component that is associated with it. That aspect is that *the soul is reincarnated in a new physical body after death and that the particular body, family, as well as social and economic circumstances into which the soul transmigrates after a person dies is determined by that person’s deeds during his or her lifetime*. [Chacko 2012] In a four-minute animation this would be too much to include so the decision was made to focus on the immediate outcome following the action of the character.

In researching the topic of karma, the Oxford Companion to Philosophy has an interesting point of view of karma and God wherein God is relieved of punishment. *A slanderer, for example, is allegedly reborn with bad breath. Thanks to this doctrine, the Hindu theist’s God is acquitted of responsibility for evil. Buddhists or Jaina atheists take it as a natural law needing no omniscient monitor*. [Oxford 2005] In keeping with this idea we are all creators of our own destiny. We have control to have good or bad things happen to us. The decision to make those choices is not out of fear from an omnipotent being, but rather the direct actions of the choices that the individual made. This idea is incredibly intriguing because the individual cannot blame anyone or thing for their fortune or misfortune but themselves. In this thesis though, the sunflower does not save the tulip, in an effort to obtain a reward. The mere act of helping another flower survive
is the only goal. The Karma he receives from his actions is unexpected and a pleasant surprise when the bee finally chooses him.

### 2.2 Visual

Immediately after the thesis concept was approved, designs were created that had a realistic texture and cartoon-like body style for the sunflower. During the time that there was a hold in production due to the workload, new visual influences were discovered. These new influences inspired a change in the art direction of *The Opportunity*. One particular influence was the animation *Meet Buck* (https://vimeo.com/user2825043). The illustrative painterly style of this film had great appeal. The simplistic texture and shapes of the character became very influential and eventually guided *The Opportunity* towards this style. In this design, the goals were to get a painterly gesture like texture and use no bump or displacement maps. The light and dark areas would be painted into the texture. Typical 3D films such as the *Toy Story* series by Pixar or Disney’s *Frozen*, feather the colors and have them bleed into one another. The colors in *The Opportunity* were purposefully not blended. The stroke of the brush was intentionally visible to help add a layer of “texture” to the texture.

Rendering was also explored. One idea was to use the UDK real-time rendering engine. Using a renderer such as mental ray® or RenderMan could take a considerable amount of time. By reducing render time, the production deadline could be met easier. After exploring the feasibility of the UDK pipeline, it was abandoned because it had too many unknowns and on initial testing, it was difficult to get the scale of the field correct. Arnold was the next choice. This was a new rendering engine RIT had purchased to help students learn the latest software used in the
industry. In exploring the viability of putting this into production, it was found to be faster than mental ray®, easier to get good results, and simpler. This would also help build knowledge that would be used to help students learn the software. With all these positive attributes, Arnold became the renderer of choice.

2.3 Technical

Rigging is an important aspect of any 3D animation. The book *Mastering Autodesk Maya 2015* by Todd Palamar was studied to learn how to have body rigging that would work for the stems and arms for the flowers. Spline inverse kinematic (IK) joints were used for the neck and spine. IK and forward kinematic (FK) switching joints were used for the arms. Though the arms were IK/FK switchable, in the animation, the sunflower was only animated with the arms in IK mode and the tulip was only animated with the FK arms. This was primarily due to the character styles and shapes. The sunflower arms had a pseudo elbow giving it more of a human arm, whereas the tulip arm had a curved shape making the FK style good for arc animation of the arms.

The book *Rig it Right: Maya Animation Rigging Concepts* by Tina O'Hailey was used for facial rigging the sunflower. After some testing, the results that were obtained were not quite to the level that was needed. In the cheek area, the blendshapes were used. Blendshapes are a system in Maya where you create one shape and then a target shape that you want to change into. You attach them together using a node called a blendshape node. This node creates a slider tool allowing for seemless blending from one shape to the other. The problem with this method is that many blendshapes are needed. The movements of the vertices, or points on the surface, also move in a linear fashion. This linear movement is contradictory to organic movement that moves
in arcs. To combat this problem, in-between targets are used. In-between targets are just like the blendshape target shapes, but are different in that they are placed in-between the base shape and the target shape but their shapes define the path of travel of the vertices from the base shape to the target shape. This process also adds an exponential number of shapes to the rig. Though this process sounds relatively easy, creating these shapes to then coordinate with other parts of the face in a convincing manner takes a great deal of patience and time to look accurate. Because of the ever-increasing limitations on time, a search for an auto-rig was made to see if better facial deformation could be created. In the search Advanced Skeleton auto rigger was quickly found (http://www.animationstudios.com.au/#!advanced-skeleton/n0co2 ). It had both facial and body rigging available, for the sunflower, the facial aspect was used. The reason for using this rigging system was because it quickly and easily set up all the blendshapes and control points that were needed to create a believable character. For example, when a character smiled, the geometry on the cheeks not only curved up following the smile, but the cheeks were also pushed forward as if the muscles underneath were contracting. These small details helped the sunflower have more personality and a more elastic looking face.

The farmer was rigged using the Advanced Skeleton. Since this was a simple body rig, this helped gain more days for animating. Meghdad Asadilari created the tulip facial rig. He was brought in on this project to fix a problem in the chest area on the sunflower discussed further in this paper, so it was an easy addition for him to place bones in the face of the tulip. The bee was simply rigged with IK legs with the rest of the body being FK.
3. PROCESS

3.1 Thesis Parameters

**Presentation**
A 3D Animated Story

**Length**
4 minutes

**Audience**
General Population

**Format**

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<td>Sample Rate: 48kHz</td>
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<td>Frame Rate: 24 fps</td>
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**Technology**

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<th>Rendering Hardware</th>
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<td>Mac Pro</td>
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<tr>
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<td>Mac OS X (10.11.2)</td>
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<td>3.5GHz 6-Core Intel Xeon E5</td>
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<tr>
<td>Arnold 1.2</td>
<td>GeForce GT 650M 1024 MB</td>
<td>Dual AMD FirePro D500</td>
</tr>
</tbody>
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**Storyline**

The story begins with one sunflower in a large sunflower field. He is trying to attract a bee to pollinate it. The bees keep passing by because they are all more interested in the tulip growing beside the sunflower. The sunflower gets mad at the tulip and points for it to leave the sunflower field. Just then they hear a sound from the distance and both of them look and see the farmer “weeding” the tulips from the field. The sunflower is happy, but the tulip is frightened that he too will be killed. The tulip tries to escape but can’t. The closer the farmer gets, the more the sunflower realizes that this tulip will be killed. The sunflower decides to hide the tulip by making it look like a sunflower. As the farmer looks now at the disguised tulip, it looks as if the disguise didn’t work and the farmer’s hand sweeps in near the tulip but doesn’t strangle it. Instead, the farmer pulls a snail off of the tulip and walks away. The tulip is saved! When a bee comes by and then looks at both the disguised tulip and the sunflower, it sees a disgusting looking
sunflower (the tulip) and the beautiful sunflower. It decides to go to the sunflower. In this story the karma that the sunflower receives is directly related to the good deed of helping the tulip.

3.2 Design Ideation

This story could take place virtually anywhere with different characters because the story revolves around a “universal truth” which has been told countless times. After numerous iterations it was decided to use flowers as characters. Completing a three dimensional animation independently requires a tremendous amount of work. To be able to complete the film on time, the settings and number of characters was purposefully limited. Normally in a professional production a team of artists would have a part in each aspect of the production. There would be story writers, modelers, animators, and compositors just to name a few. Initially the production was planned to just have myself create the entire film. Having one location helped truncate the number of sets that needed building. Using flowers, the rigs of the bodies could be repurposed. The characters are limited in their mobility, reducing the amount of animation required. In this way, the focus could be on the quality of the animation rather than the quantity. As production went along, other artist were brought in to help in finishing the film.

After the thesis proposal was accepted, work began on the designs of the sunflower. The initial designs were to incorporate hyper realistic textures, but cartoon like in overall shape and form. In the VCDE Continuation of Thesis class sculptures were made and a preliminary 3D design sculpture was created in this style. The design was not quite what was envisioned. The first couple iterations the sunflower had teeth and the facial seeds were not in a Fermat spiral pattern. The texture on the body was very detailed with veins of the leaf. The initial plan to take classes
while working on the thesis and working full time ended up being too much of a workload.
The decision was made to complete all of the required classes first, then concentrate all efforts on the thesis. This plan took three years to be able to finally get back to working on the thesis. In that time, RIT had gone through a semester conversion from quarters and instead of being able to take three classes at a time, the number was reduced to two classes per semester. After this extensive length of time, new techniques were learned; software such as ZBrush and Maya had evolved, which changed the animation pipeline. With ZBrush, an artist could sculpt as if working on digital clay and not worry about the typology or edge direction of the model. Once sculpted a zremesher button can be pushed and an automatic calculation of the edges is made to create a better edge flow. Maya had updated the modeling tools to help quickly build shapes but the most important update has been the viewport 2.0 update. This update helps Maya handle many more polygons than previously possible by using more of the GPU of the computer. When
animating, this helps speed up the animation visualization.

### 3.3 Production

*Storyboards and Animatic*

The initial layout of shots began with the storyboard. The camera angles and shot progressions were quickly sketched out in 2D. This is a quick iterative process that allows the artist to discover what is actually going to need to be created in 3D rather than making an entire set, one can just make the objects that will be in camera. This saves time from making things that won’t be seen. The other thing that the storyboards do is to give a progression of information to the audience. It can quickly be discovered if the series of shots are helpful or confusing. Once the shots have been established the same images are brought into a video editing program such as Adobe CC 2015 After Effects. The still images can then be laid out on a timeline and spaced so that the timing of the entire film can be created. This can be a challenging time because animated shot lengths are being made from static images. One feature of Maya 2016 was supposed to be the ability to use the camera sequencer tool. This is a tool that would allow the 2D animatic to be brought in to Maya and have the cameras automatically set up based on the length of the shot. When trying to export the 2D animatic as an xml file, the file would not properly import into Maya. The result was that the file would appear to load but would not set up the cameras. After Effects 2014 was also tried but produced the same result when imported. When this happened the decision to keep trying or find a workaround needed to be made. After three more hours trying to get the problem resolved, the conversion of the 2D to 3D animatic was created by importing the 2D animatic into Maya. Once imported, 3D cameras were setup to match the shots angle and duration. The problem that can occur is that the shot lengths can be too short or too long. This can be adjusted in the 3D animatic and replace the 2D animatic. The 3D
animatic is taking rudimentary or completely finished 3D models and moving them through a 3D space using the timing of your 2D animatic. If a shot needs more or less time, this is the place to make those corrections. When the 3D animatic is done, in Maya, a playblast of the shots is created. A playblast is a quick screen capture of each frame that Maya puts together in a video to see if the movement timing are correct. Those playblasts take the place of the 2D images on the timeline within After Effects.

**Character Creation**

In the character design, after three years away from the project, a new interest in simplification was now the goal. The teeth were removed and after various iterations, the face now had softer features. Many of the decisions for softer features came after posting to social media for feedback.

![Figure 4: Facial variations](image)

These were chosen because they helped the audience feel sympathy towards the sunflower. The sunk-in eyes, and sharper features gave the sunflower had an angry edge to it, which was not the intent of the film. The leaf hands were also redesigned to be thinned and more delicate.
The structure to create the eyes had numerous variations. Use of Boolean objects, textures with normal maps and projected textures with no normal maps were experimented with. Because of the teardrop shape of the cornea with the outer corners of the eyes tapering, the various designs of the eyes made the iris warp when it moved to the outer corners.

*Figure 5: Boolean eye distortion*
The final design used was projection maps onto the eye geometry. This kept the iris from becoming oval.

When the initial body rig was created, problems arose in the chest rotation area.

Due to scheduling deadlines, the current rig would need to be used while a new solution was devised. Meghdad helped with the flower chest rigging but the solution that he created changed the hierarchy of the previous rigs. This new rig performed better, but since animation was
underway, now updating the rig was more steps than just updating the reference. The new flowers had to be referenced in, then the controls needed to be parent constrained to the rig with the animation and the animation baked to the new controls. Though this slowed production down, it ultimately made the animation much better.

![Figure 8: Sunflower final design](image)

The tulip was a different type of flower offering unique design challenges. In the After Effects for Animators class, the assignment was to make a trailer for the thesis. The sunflower model had already been made but the tulip had not making the creation of a trailer challenging. Due to the short deadline a design was created having a face sculpted into a petal so that the tulip could stand straight up.
Though this served the requirements of the class, after the long hiatus, when time came to finalize the designs of the tulip, the idea of incorporating the face into the tulips was much more appealing though David Halbstein advised to continue with the original concept. The new artistic direction of incorporating the face into the shape of the tulip was an enjoyable design problem. There were many questions to answer. How to shape the mouth? Where should the eyes be placed? Should it have a nose or not? A couple quick preliminary sketches were made
but then sculpting in ZBrush began.

Figure 10: Preliminary tulip sketches

This decision was made to utilize the new quick sculpting tools within ZBrush so that this new work pipeline could be taught to other students. Using this digital clay method helped to quickly explore variations of the head design.

Figure 11: Initial sculpt based on sketches

In a design that was coming closer to final, one major note from David Halbstein that helped shape the character of the design was that it looked too sinister with the eyelids being pointy and the eye shapes being oval rather than round. So another softening pass was made. This new iteration was an important one because it helped give the character a more appealing style. The
softer form helps the audience feel sorry for it when it discovers it is about to be killed. In creating the eyes, the design was to look like dew droplets with dirt floating in them for pupils.

![Figure 12: Softened tulip eyes and petals](image)

Again, feedback from social media helped hone the design. The “nose” area was a concern for some people that gave critique.

![Figure 13: “Nose” variations](image)

Variations were created and a final design selected.
The stamen and pistils were the tongue.

Figure 14: Final nose variant

Figure 15: Final tulip design
The bee was made for the trailer as well. This was a quick design for the purposes of making the trailer. After the hiatus, it was planned to create a new bee, but the longer the bee was used the more it seemed to fit with the overall design of the film. The major adjustment was in scale. The size of the bee in the trailer was approximately three times too big. Once size was adjusted, the bee fit the film perfectly.

![Final bee design](image)

Figure 16: Final bee design

For the farmer, the design intent was to have him feel ominous. The reason to be ominous was that he had to evoke a feeling of impending doom and death. The feeling had to be easily and quickly recognizable. The farmer was also supposed to be anonymous. This was not intended to be a specific person, but rather evil personified. The face is specifically obscured and not much detail given so that the farmer can represent much more than just one particular archetype. He is supposed to represent the need for action and the catalyst for change. He was created in the style of the 1920’s era farmer. His hands were of particular importance because they were the tools for the destruction. They were designed to be slightly larger in proportion to the rest of his body to
signify that importance. His textures were initially leaning towards realism, but were changed to the painterly style.

The farm was originally designed to have a flat-like style. In actually creating the space, the foreground and backgrounds were compressed. The barn’s perspective was forced to appear larger than it physically was. Though having flowers simplified the amount of animation needed, what was not taken into consideration was the fact that the farm would need hundreds of flowers. Because the camera never gets close to the tulip field, NURBS planes are used with images of multicolored tulips are used throughout. This helps reduce the amount of geometry needed. For the sunflower field, reduced geometry sunflowers were used, but the initial check revealed that Arnold would not be able to render the full sunflower field using copies of the sunflower. Raymond McCarthy Bergeron was brought in to help with a programming solution. He was able to take four sunflowers and randomize their movements, size and shape. Ray then created instance copies of the sunflowers. These instances are copies of the sunflowers but they just use the original geometry. This reduces the computer’s need for greater amounts of memory that a typical copy would require. He was then able to take the instances and place them in a
grid randomly. Again when dealing with hundreds of individual flowers being able to quickly manipulate and randomize them, this is where programming can really shine. Ray’s help was crucial in being able to render the background with the least amount of render layers quickly in Arnold.

![Figure 18: Field randomness and render](image)

In the “previs,” Shaun Foster suggested that the background was sparse and needed more detail or something to help the viewer’s eye move through the space. The solution to that problem was to begin the film with the tree, beehive and a bee that helps introduce the scene and guide the viewer’s eye into the field.

![Figure 19: Final farm design](image)
Animation

The animation of the story was always intended to have a snappy sort of look and feel. Being a short film, the characters have to be appealing in their timing and movement so the audience can quickly empathize with them. The quick jerking motion of the farmer was used to create a violent feeling of danger and death. Pose to pose animation was implemented with stages of blocking, blocking plus, spline, and polish. Ihab Mardini volunteered to help with animation. Though not originally intending to use his help, as the production deadline drew closer, his help was extremely crucial in finishing production. While he was working on some shots, final rendering of completed animation could begin.

Rendering

Rendering was a challenge for this film because a new rendering engine Arnold was used.

![Arnold renderer not connected to license server](image)

Figure 20: Arnold renderer not connected to license server

Luckily Arnold had a shallow learning curve. It was easy to learn and gave excellent results quickly. Using image-based lighting (lighting based on a texture on a sphere) and one directional light for the sun was all the lighting used to create the final renders. Scenes were
mainly broken up into foreground, background and shadow rendering layers. The images were rendered out using the Open EXR multi-layer format so that all the layers could be rendered out to one file. Using Open EXR helped in file management because many images could be included in one file, reducing the number of files that needed to be kept track of.

Frame Development

In the final look of the film, the background images were blurred and slightly darkened to help the foreground characters stand out. Being such thin characters and the same color as the flowers in the background these techniques helped focus the audience’s attention on the characters. Lastly to give a dream-like look, the entire image was duplicated and the top layer was highly blurred and made transparent. This gives an overall fuzzy, warm, soft look to the film.

Figure 21: Final overall look of the film
**Sound**

Dave Sluberski created the sound design. Being an animation, all the sounds for the film needed to be created or recorded because none of the sounds are created from the 3D characters or scene. The ambient space of the overall environment was filled with cicadas, birds and bee sounds. When the farmer walked the footstep sounds were heavy and muddy. One very important sound that ended up being perfect for the film was the shaking of the tulips in the farmer’s hand. Effective foley work using a rubber hose was created for the flopping sound of the tulip whipping back and fourth. Keeping with natural sounds, to get the scream of the tulip Dave used a screech of a bird at the same time the tulip screams. This gave a voice to the tulip without breaking the natural sound of the film. The bee sounds were also very important to the feel of the film. The bee could be heard coming before it is on screen. When the bee is judging the sunflower, the pitch of the bee changes as if giving the bee a voice of judgment.

**Music**

Jonathan Kruger created the music. The audio when combined with the visuals had an extremely positive impact on the film. Jonathan’s use of horns in the opening scene created a feeling of excitement. The change to guitar strumming brought a feeling of warmth and happiness to the sunflower sunbathing. The use of woodwind instruments throughout the film helped guide the majority of the film with highlights of violins to create tension when the tulips are about to get killed. When the tension is resolved the music is bookended by bringing back the intro melody of warmth and happiness and continued throughout the credits.
3.4 Summary

This process was, for the most part, straight forward. Much of the production pipeline that was used was based on previous productions. New skills were learned such as Arnold rendering and some new tools in Maya.

The biggest setbacks came in trying to balance a full time teaching workload and producing an animation. Finding the energy and enthusiasm to work on this thesis after working a full teaching day as well as grading took a toll on the production timeline. Fortunately my wife, Kristi Reisch, reserved a room for me at an Air BnB in Rochester over spring break to allow for an undisturbed working week. She also took care of our children while I worked and slept at RIT while finishing this film. It was an incredibly difficult time, but with her help I was able to concentrate on completing the film.

In the thesis defense, there was overwhelmingly positive response to the film. A critique was made that in some of the rendering frames, there were flashes where the background didn’t blur entirely for one frame, which created a quick flicker. That issue was resolved in the After Effects composite by keying the blur on the background layer. Another comment was that the editing of some of the shots could be shorter, like the first bee assessment shot. It was said that bee shot lingers too long. It was also mentioned that resolution shots at the end, after the farmer plucks the snail from the tulip, pass too quickly; i.e. the tulip needs more time to show the relief of not being killed and the hug to the sunflower needs to be more pronounced. While watching the film at that particular moment, I realized I should have shown the karma that the farmer would have gotten for being so mean to the tulips.
The Thesis show also went well. Though there was not an incredibly large turnout, the people that viewed the film enjoyed it overall.
4. CONCLUSION

_The Opportunity_’s main goal was to show the viewer an example of karma and how it can be a good thing. But to measure how successful the film was in the initial goal, a SurveyMonkey was set up at http:// surveymonkey.com and the survey website was https://www.surveymonkey.com/r/RPB9W8D. The questions were open-ended so that the survey wouldn’t influence what message the viewer received from the film. 41 people participated in the survey after watching the film. While this number was not a statistically large number, the responses helped demonstrate whether the film was successful in demonstrating the idea of karma. The data analyzed revealed, though there were three areas that tied at 24% when asked what the take away message was, **helping others, helps yourself** was one answer that respondents provided. The other two tied areas given by respondents were, **be kind** and **do not allow jealousy to be stronger than kindness**. Though these other two areas were not karma messages directly, they are ideas and observations that are agreeable to the outcome.
Survey Breakdown:

**Age**

<table>
<thead>
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<td>18 to 24</td>
<td>31.71%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>31.71%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>26.83%</td>
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<tr>
<td>45 to 54</td>
<td>7.32%</td>
</tr>
<tr>
<td>55 to 64</td>
<td>0.00%</td>
</tr>
<tr>
<td>65 to 74</td>
<td>2.44%</td>
</tr>
<tr>
<td>75 or older</td>
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Total 41

The majority of respondents were from about 18-44 in age.

**Gender**

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<tr>
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<th>Responses</th>
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<td>65.00%</td>
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<tr>
<td>Male</td>
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<td>Responses</td>
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Total 40

The majority of people surveyed were female.

**Ethnicity**

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<tr>
<td>White/Caucasian</td>
<td>78.05%</td>
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<tr>
<td>Asian or Pacific Islander</td>
<td>14.63%</td>
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<tr>
<td>Hispanic or Latino</td>
<td>4.88%</td>
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<tr>
<td>Prefer not to answer</td>
<td>4.88%</td>
</tr>
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<td>Black or African American</td>
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<tr>
<td>European</td>
<td>2.44%</td>
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<tr>
<td>Other (please specify)</td>
<td>2.44%</td>
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<tr>
<td>American Indian or Alaskan Native</td>
<td>0.00%</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>0.00%</td>
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Total Respondents: 41

The overwhelming majority of respondents were White/Caucasian, although multiple ethnicities were represented.
Age Recommended to See Film

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<th>No</th>
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<tbody>
<tr>
<td>children between the ages of 3-8</td>
<td>92.31%</td>
<td>7.69%</td>
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<td>36</td>
<td>3</td>
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<tr>
<td>children between the ages of 9-12</td>
<td>87.80%</td>
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<td>36</td>
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<td>your family</td>
<td>75.61%</td>
<td>26.83%</td>
<td>41</td>
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<tr>
<td></td>
<td>31</td>
<td>11</td>
<td></td>
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<tr>
<td>your friends or co-workers</td>
<td>73.17%</td>
<td>26.83%</td>
<td>41</td>
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<td></td>
<td>30</td>
<td>11</td>
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<td>teenagers</td>
<td>57.50%</td>
<td>42.50%</td>
<td>40</td>
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<td></td>
<td>23</td>
<td>17</td>
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</table>

The majority of votes for the ages to see this film were the 3-8 range. This probably was mostly due to the cartoon like quality of the characters and images and the moral of the story but this is only speculation.

**What was the take-away message?** (this was an open-ended question to ensure the viewers were not influenced by the thesis statement)

24% said helping others, helps yourself

24% said be kind

24% do not allow jealousy to be stronger than kindness

16% said treating others with equality is the most important thing we can do

8% said everyone deserves help regardless of who they are

4% the message was unclear

With this open-ended question there could be an infinite number of responses. The responses were categorized into the options above. Though “helping others, helps yourself” is not the definitively strongest message, it is one of the top ones, which makes this film a success.
5. Appendix

5.1 Shot List

The color coding to the left was a breakdown of the animations that needed to be first pass splined each day during the spring break.

<table>
<thead>
<tr>
<th>Image</th>
<th>Name</th>
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<th>Frames</th>
<th>Length</th>
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<td>WS Establish Cam Zoom</td>
<td>005</td>
<td>1000-1680</td>
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<td></td>
<td>Sun Waiting Bees Come</td>
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<td></td>
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<tr>
<td></td>
<td>CU Bee Checking Sunflower out</td>
<td>007</td>
<td>1657-1820</td>
<td>164</td>
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<td></td>
<td>Sunflower Smiling</td>
<td>008</td>
<td>1657-1721</td>
<td>65</td>
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<tr>
<td></td>
<td>Bee Snarls and moves out</td>
<td>009</td>
<td>1657-1761</td>
<td>105</td>
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<tr>
<td></td>
<td>and Pass Sun Mad</td>
<td>010</td>
<td>1690-2000</td>
<td>311</td>
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<td></td>
<td>Sunflower Reacts</td>
<td>020</td>
<td>374-500</td>
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<td></td>
<td>Sunflower Points To move out</td>
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<td>410-457</td>
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<td></td>
<td>Tulip ignores Sunflower</td>
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<td>440-506</td>
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<tr>
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<td>OS Tulip Hears sound</td>
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<td>Farmer Down Row Tulip Being tossed</td>
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<td>588-678</td>
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<td></td>
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<td>695-739</td>
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<td>BGTulip in shadow</td>
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<td>End Time</td>
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<td>Tulip Crying Trying to Hide</td>
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<td>Sun Gets Idea</td>
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<td>Scoop Dirt</td>
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<td>Pluck Sun Pedals Make over</td>
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<td>Hand CU</td>
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<td>Pull Out Cam</td>
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</tbody>
</table>
5.2 Approved Thesis Proposal

Help Yourself

by Mark Reisch 10 October 2012

Thesis Proposal Committee Chair:

David Halbstein, Assistant Professor, Computer Graphics Design

committee Member:

Shaun Foster, Assistant Professor, Computer Graphics Design

committee Member:

Tom Gasek, Associate Professor, School of Film & Animation

Mark Reisch
Abstract

Help Yourself is a three dimensional animation that simply illustrates the idea that by helping others you can inadvertently help yourself. The story is told using an animated sunflower, bees, tulip, and farmer. In a sunflower garden, a sunflower tries to get any bee to pollinate it, but a tulip (that is not supposed to be in the garden) gets all of the bees. The tulip sees the farmer coming to weed out any unwanted plant. Seeing the fear in the tulips eyes, the sunflower helps disguise the tulip. The farmer is tricked and the tulip is saved. The disguise though disgusts a passing bee, and it ends up picking the sunflower instead.

Through this story I intend to show that the good in helping others just does not just stop at the recipient getting what they want. Eventually the good deed is repaid without that being the original intent. According to Dictionary.com, karma is defined as an “action, seen as bringing upon oneself inevitable results, good or bad, either in this life or in a reincarnation” This is the basic underlying principle of this story. http://markreisch.blogspot.com

Project Description

My target audience for this project is a general audience. This is a universal message that people of all ages will be able to appreciate. Challenges in this project will be in dealing with the faces of the flowers. I will create faces on flowers that will feel like a natural fit for the anthropomorphized flowers. Another technical challenge is the height difference in the two flowers. Typically, sunflowers can get as tall as 8-10 feet, and tulips reach 2 feet on average. I plan to cheat the heights visually; the sunflower is going to be a small sunflower in a field of much taller full-grown sunflowers. The tulip is going to be about 3 to 4 feet tall. Also the farmer is going to be short as well. In creating the characters, I am going to create the low polygon model in Maya. I am then going to bring them into ZBrush where I will do the high detail modeling and texturing. The models will be sent back to Maya where the animation and lighting will be created and rendered. Each scene will be rendered in layers and composited in Adobe After Effects or Nuke. If I am able to get access to Nuke, that will be my compositing package of choice. I used Nuke when Digital Domain owned it and this would be a personal challenge to update my skills to the newest version.
Budget

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<th>COST</th>
<th>TOTAL</th>
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<td>Festivals</td>
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<td>DVD Media (100 pack)</td>
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<td>Posters and Advertising</td>
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<td><strong>Total</strong></td>
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<td><strong>$1,180</strong></td>
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</table>

Marketing Plan

I plan to submit to animation festivals. Below is a small sampling of festivals I plan to submit to.


1. [Northwest Animation Festival](#)
   Submission Deadline: 31 January 2013
2. [Libélula International Animation Festival](#)
   Submission Deadline: Ongoing
3. [The 16th Japan Media Arts Festival](#)
   Submission Deadline: 20 September 2013
4. [Go Short – International Short Film Festival Nijmegen](#)
   Submission Deadline: 1 November 2013
5. [Toronto Animated Arts Festival International (TAAFI)](#)
   Submission Deadline: 29 February 2013
6. [Blackrock Animation Film Festival](#)
   Submission Deadline: 6 July 2013
7. [Savannah International Animation Festival](#)
   Submission Deadline: 1 November 2013
8. [Computer Animation Festival | SIGGRAPH 2013](#)
   Submission Deadline: 15 March 2013

Supporting Documents -

Below is a list of some of the projects that I have been a part of. The thesis I am proposing is within the scope of my competency. My undergraduate training from the Savannah College of Art and Design prepared me to be a 3D animation generalist. I attended the online school of Animation Mentor to further increase my knowledge of animation proficiency. With the education received to this point plus the projects both professionally and personally have prepared me to complete my thesis on time and with a high degree of quality.

Starship Troopers 3- Sony- Animator and Rigging
Sea Monsters - National Geographic - Lead Animator, Scene Setup, Rigging, Render Wrangler

My Super Ex-Girlfriend - Digital Domain - Animation, Matchmoving, Rigging

MPH06 - MPH Show - Animation, Modeling, Rigging
**Survey of the Literature**

I have searched for similar ideas. I have not found any animations, or stories that resemble the way in which I plan to present my story. I did find however, articles on actual positive effects on the human body relating to mental and physical wellness with regards to altruism. William Brown, Nathan S. Consedine, and Carol Magai wrote "Altruism Relates to Health in an Ethnically Diverse Sample of Older Adults." Carolyn E. Schwartz wrote "Behavior; Altruistic Actions May Result in Better Mental Health." And Carolyn E. Schwartz, et al. wrote "Helping Others shows Differential Benefits on Health and Well-being for Male and Female Teens." All of these articles point to the measureable amount of positive effects altruism has on the body. Though these aren’t direct relationships to my animation, they are support for the notion that helping others can inadvertently help yourself.
Sketches / Design Concepts

Opens with a sunflower and tulip field that are separated

Sunflower basking in the sun

Hearing a buzzing sound, He looks to see what it could be.

Big grin, trying to look as appealing as possible
…but it was not enough

Hearing another buzz

Sunflower tires to look even more attractive.

Again it is useless.
Sunflower goes back to catch more sunlight.

In the middle of sunning himself a tulip pops up.

Sunflower motions that the tulip is supposed to not be there.

Tulip refuses to leave.
Another buzz is heard.

Sunflower tries to be even more attractive with a bigger grin.

Still no use.

The bee flies by.
The bee stops in his tracks.

The bee finds a great scent.

More bees come and enjoy the nectar.

The sunflower is sad.
Seeing that, the tulip feels bad.

To help the sunflower, the tulip takes one of his bees and gives it to the sunflower.

Placing the bee on the sunflower.

The sunflower is happy.
Just then the sunflower notices something.

Farmer off in the distance weeding unwanted tulips.

Sunflower tries to think of a plan (tulip won't be reading)

Sunflower has an idea.
Sunflower scoops up dirt.

Slaps dirt on tulips face.

Plucks pedals from his head.

Sunflower goes to work on the tulip.
Stunned tulip incognito.

Farmer walks by and gives the "scrawny" tulip the evil eye.

Farmer walks off.

Tulip shakes off the disguise.

Tulip gestures thanks to the sunflower.
Pull out to see the sun set.
Bibliography


5.3 Bibliography

Books


Websites