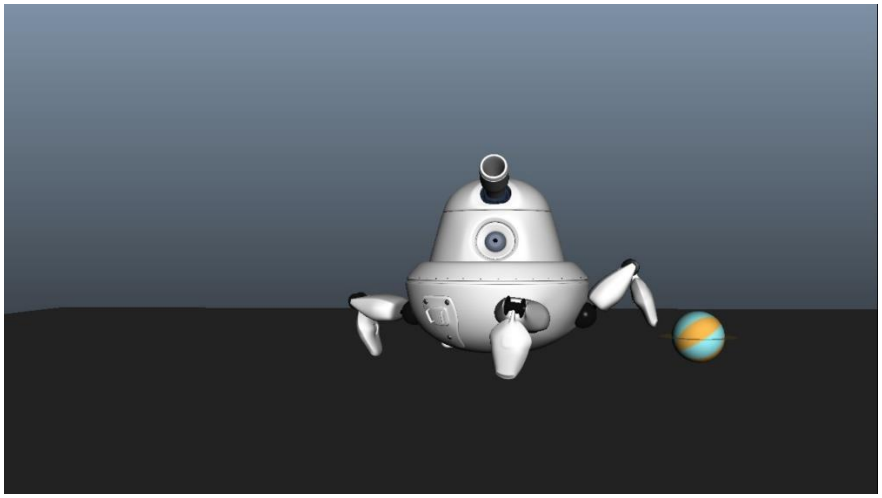
Conveying, Personality and emotions through a Non-humanoid character



Innovations report by

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Abstract:

The aim of this project is to find out how one can convey character, personality and emotion in a non-humanoid character. In other words most of the expressions would be conveyed using the characters body language. In other to achieve the aim of my project, I would first be looking into how personality and emotion can be conveyed in humanoid characters. The information gathered from this will then be used to inform how I approach conveying these traits in nonhumanoid characters.

Contents

Introduction

Anthropomorphism is a unique aspect of animation. Anthropomorphism as a Brach of animation is the act of giving human like qualities to inanimate objects. In such a way that these inanimate objects appear to have a sense of character and personality to them.

According to (Furniss, 1998) “It is an art of expressing human thought and behaviors through animals or inanimate objects.”

Anthropomorphism is a technique that has repeatedly been used by notable animation studio such as Disney, a more recent used of this technique is quite evident in Disney’s latest movie Zootopia

Figure 1: Still image from Disney’s zootopia

In Disney’s latest movie the nature of Anthropomorphism is so evident that the characters in this films walk, talk and even dress in human like fashion. The ability of an animator to animate believable Anthropomorphized characters has an effect on the audience in such a way that the audience is willing to suspend their belief and relate to these characters. One would agree to the fact that audiences are able to relate to these type of Anthropomorphized character because of their identifiable Human like expression, attributes and physique.

As opposed to other Anthropomorphized characters such as Pixar’s Luxor and Aladdin’s magic carpet (illustrated below).are unique as they do not possess any form of facial or human like features that are easily recognizable to the audience. This proposes a challenge for the animators as they limited bodily attributes in other to communicate convincing character animation. For the sake of this report I will

sometimes refer to Anthropomorphized character with no facial features as non-standard Anthropomorphized this character.

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This report would be divided into four sections, the second section of this project would be focusing on the aims and objective of this project, the third section of this report will be looking into physical animation in humanoid characters, the fourth section will focus on breaking down my approach in animating non-humanoid character .The final section of this project would be the concluding and evaluation aspects of the project.

Section 2.0

Aims and Objectives

The Ultimate aim and objective of this project is to be able to convey a sense of personality and emotion in a non-humanoid characters. The non-humanoid character in this case will have no facial features or human like attributes, as I will be focusing on conveying its personality and emotion through body language. I will be judging the success of this project on how the audience is able to relate to the expression being conveyed.

Relevant Case study

The aim of this heading is to identify how this subject has been approached by other artist, scientist and studios.

Pixar's Luxor junior

Figure 2: Still from Pixar's Luxor junior (1986)

Luxor Junior is one of Pixar's first animated characters. Luxor junior is a man-made object; although this character has no form of facial features or limbs one can instantly recognize the range of expression and his personality. In the film Luxor junior, the bigger lamp as shown above is characterized as an older or parent figure to the smaller lamp stand Luxor, on the other hand Luxor the smaller lamp acts as an energetic, naïve toddler who is fascinated and distracted by objects in his surroundings in this case a ball. The point I am trying to bring out of this is that despite the limited information in designs of the characters as an audience one is able to quickly identity the difference in the ages of the character, their different expression and emotions.

Aladdin's Magic carpet

Figure 3: Carpet from Disney WIkia

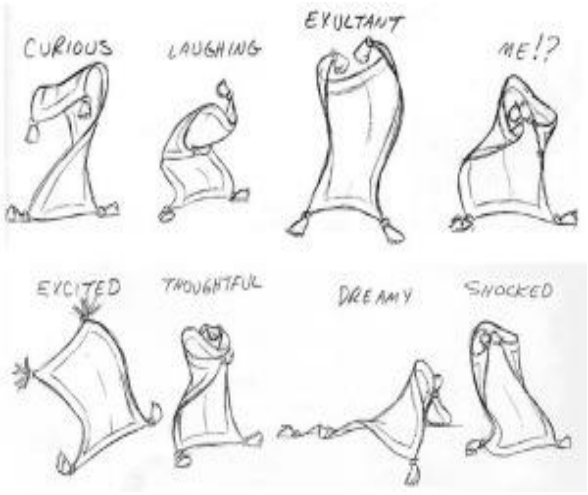


Figure 4: Emotion sheet illustrating various emotion image from cluck animation blog

The second case study is magic carpet from Disney's Aladdin, similar to the lamp stand, the magic carpet in Aladdin shows more sophisticated ranges of emotion, as seen in the images above. In comparison to Luxor junior the carpet is physically

attributed to human ranges of expression and emotion, with no facial form of expression the carpet communicates using exaggerated body movements and gestures in communicating using its four corners.

Comparing both characters one would agree that both characters would indeed be approached differently. Unlike Humanoid characters with facial features, hands, other physical attributes that can easily be imitated or directly used as a reference in animating another Humanoid in the case of Anthropomorphized character such as Luxor junior and carpet would be quite difficult. Therefore in approaching these characters each animators would have had to come up with a unique approach or interpretation in conveying their character and expression. Finding a personal approach in animating non-standard Anthropomorphized characters would be looked into further in the report.

The above characters are notable non-standard Anthropomorphized, however each individual animators have been able to communicate a form of character and expression in such away audiences are able to recognize and relate to them, and therefore the innovative aspect of this project is that I would be attempting using an individual approach in expressing similar characteristics, personality and emotion.

Animating Non-Humanoid Characters with Human Motion data.

Figure 5: Animating Non-Humanoid Characters with Human Motion Data

There has been a number of attempts in animating Non-humanoid characters, among one of my findings is a report paper by Disney research group. Their attempt involves the transfer of Human motion, using the GPLVM (Gaussian latent variable model) performed in the style of the target characters. Among the characters used in

experimenting are characters that are physically or topologically different such as the lamp, penguin and squirrel as seen above. I later found out that as a result of the large differences in topology and locomotion, the animators and actors had to engage in manuals task of recreating corresponding poses for the characters, furthermore the actors had to perform in the style of their given virtual character

According to Disney research group the method used are a lot more efficient as the whole process is far less time consuming as opposed to key framed animation. I was however able to pick out that this process is not any different from the traditional key frame method

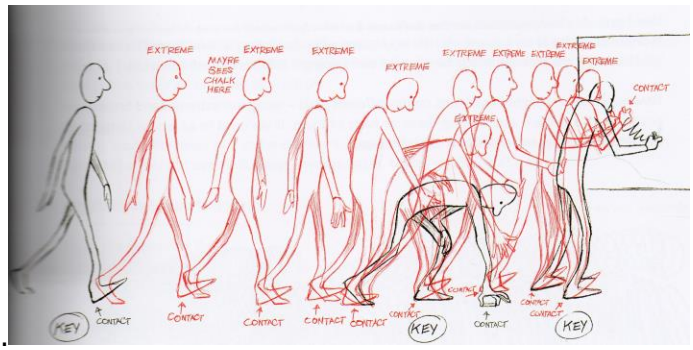


Figure 6: Richard Williams's animation survival kit

The performance of the animator is very much evident. Like the image from Richard Williams animation survival kit the computer is able to learn the major story telling or acting poses.

Karl Sims – Evolved Virtual creatures.

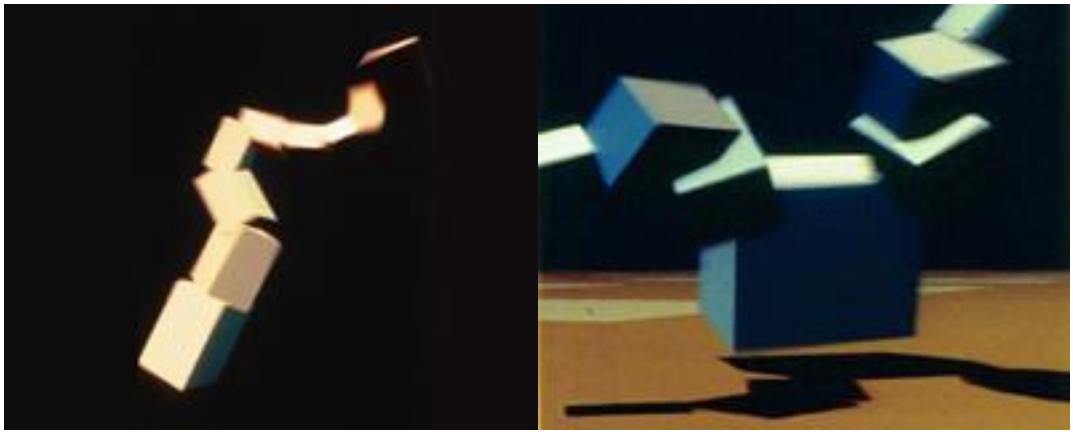


Figure 7: An evolved creature swimming (left)

Figure 8: An evolved creature hopping (right)

A similar finding relevant to this project is Karl Sims Evolved Virtual creatures. The main aim of this project is to demonstrate Darwin's evolution theory within a simulated physical environments. These abstract like objects are given a task such as movement or swimming in a simulated environment the most successful objects ability to perform each task is combined with another in other words evolve or mutate to make new offspring's with similar or even better ability. The information's provides a very interesting case as the number of possible movement are limitless. The combination of these movements also creates a unique sense of characters for each creature. Further down in the project I would adopt this method in experimenting locomotion in my chosen character as I believe one is able to find a unique sense of characters.

Section 3.0

Conveying personality and emotion in Humanoid characters using physical animation

As I mentioned in the introductory section of this report, in other to successfully communicate a sense of character or emotion in a non-standard Anthropomorphized character. I have decided to approach physical animation in humanoid characters. The success or failure of this will inform my approach in animating my chosen non-standard Anthropomorphized.

Animation style: Before animating I had to decide upon what style of animation I aimed to achieve. Since the overall aim of the project is to be able to convey personality and emotion physically, I therefore settled on pantomime style of animation as most of the narrative are told using body language.

Narrative: Unlike lip sync animation physical animation requires a number of planning as the staging and idea being communicated at the audience has to be clear enough and less ambiguous. The plot of the short animation is explain below

Figure 9: Still image from the pantomime animation

A character attention is drawn towards a gift, with excitement the character is excited to find out the content of the box only to be frightened by the content of the box.

While attempting to animate this short character animation, Ed hooks acting for animators served as a guide.

In other to communicate the story I tried to make sure that every key poses describes the intention of the character.

For this project the Ed hooks seven principles of acting was used as a major guide in achieving my goal.

Figure 10: character walks into the shot notices the gift and reacts to the gift

From the above images, I tried to emphasize the intention of the character through the poses. Acting is reacting as illustrated in the last image in the sequence images, the character Reacts to noticing the gift.

Figure 11: Emotion tends to lead to action

As the characters opens the gift he is immediately frightened by the content of the box.

Final animation can be seen here https://vimeo.com/158586238

Edhooks principle to acting serves a useful guide in executing this short exercise, I was particularly happy with the believability of the character. Unlike other characters

I have animated in the past, I was particularly happy with the fact that certain poses such as these.

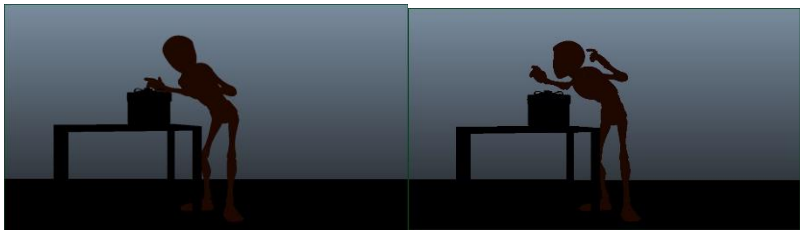


Figure 12: character looks left and right.

From the above figure the poses illustrates how the principle of conflict and self-negotiations applied, key poses as little as this can help to sell the personality of the character.

Section 4:

Animating the non-standard Anthropomorphized characters

Character development:

"Personality and actions are not mutually exclusive. They are not and "either-or" choice. Action defines a character (Hooks, 2000)"

In the earlier stages of this report, I made a reference to the character Luxor junior. I was able to identify the personality of each character as a result of their movement. I admire the personality of these characters, as one is able to connect and sympathize with them. For my character I want to have a great deal of personality and character portrayed in this project.

Choice of non-standard Anthropomorphized characters:

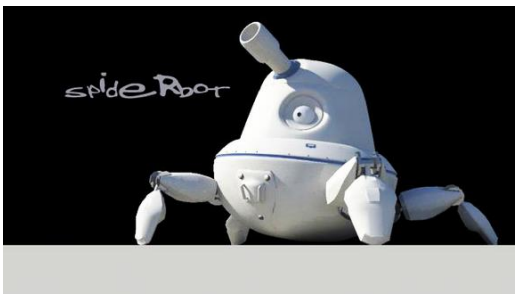
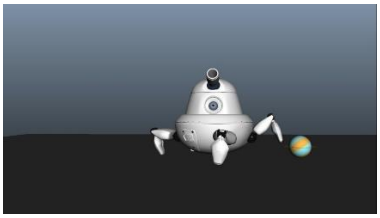


Figure 13: Spiderbot 1.0.0 by Ali Tezel

In other to achieve the aim and objective of this project the choice of non-standard Anthropomorphized characters is important. As I wanted to avoid characters with

prominent facial features that could come across as an emotion. The rig Spiderbot by Ali Tezel seemed to fit all the criteria needed as the spider bot rig has limited range of emotion.

Developing the character:



Before animating this shot I wanted the characters the character to portray as much character. My conclusion on the pantomime animation is that it does not convey enough personality, one of the feedback gotten is that the character came of as entertaining rather than having qualities of empathy.

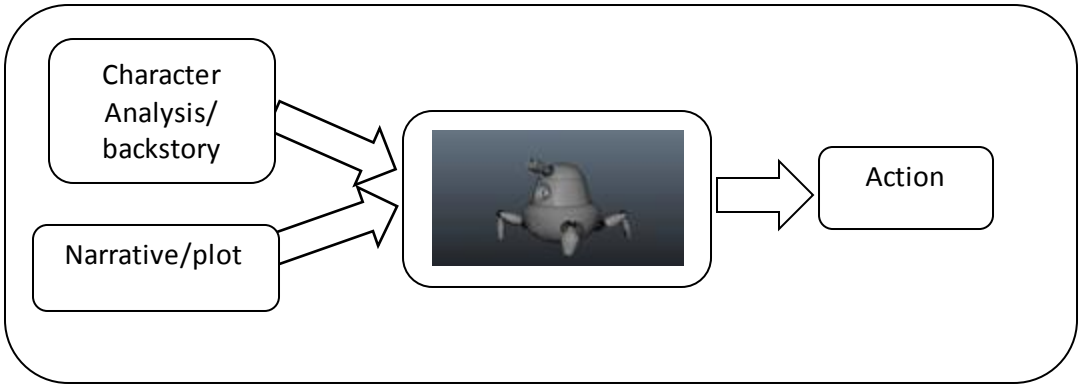
Method

Spiderbot character analysis:

Spiderbot is a four legged robot. He is just about three feet tall. His locomotion resembles that of a spider, Spiderbot is a newly programmed robot with Artificial consciousness, like other living organism he is aware of his environment, with no sense of what or where he is in a constantly in a frantic state and unsure of his environment and other foreign objects in his environment.

Staging, plot and story:

In other to ascertain my objectives of communicating a unique sense of character, it is important that the plot and narrative of the story allows for conflict, this is one of the principles of acting stated by Ed hooks.



The above image illustrates my personal approach in animating the final animation .I believe this are the two main factors that can influences personality and emotion in any character.

The final animation for this project can be viewed online
https://vimeo.com/158587407

Survey Results:

As mentioned earlier in the report, I would be judging the success of the project based on how the audiences are able to relate to the characters emotion and personality. I setup a google Survey of which 30 people participated in the survey.

Question:

What is your perception of the characters reaction towards the ball?

Summary of answers received:

- Majority of the audience responded by perceiving the characters as frightened and scared of the ball
- Most of the adjectives used in describing his emotions are Fear, scared frightened , clueless, afraid and Terrified

Some of the audience went further to describe the characters personality here are a few of them.

- “The character is quite cowardly and easily scared. it’s not come across a ball before so is cautious and afraid of it, like how prey use the fight or flight tactic against unknown predators”

- “He seems afraid of the world and expresses it in the way he jumps when he touches the ball and falls back when he sees it”

The link to the responses can be found in this link

https://docs.google.com/spreadsheets/d/1n7c8DoJ5_CEubR280Z8m4sDU4WYpF52zv-WQuh4uNiM/edit?usp=sharing

Conclusion and Evaluations:

I am very pleased with the final animation. I believe I have successfully been able to achieve my aim of conveying a form of personality and emotion using physical animation in a non-humanoid character. Furthermore judging from the survey and responses received from the audience, I am even more pleased to see the audience pick out the certain emotion.

Furthermore I believe a lot of progress has been in my character animation this is evident when I place both the pantomime animation and non-humanoid animation side by side.

ED hooks acting principles has been a major point of reference in this project and I believe I have been able to apply those principles effectively.

With the final outcome of this project, I would be approaching character animation in a more detailed from rather than going on straight into shooting my references. I have seen how important it is to analyse the character before animating.

The final result of my animation can be found here https://vimeo.com/158587407.

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IMAGES

Image1: (Zotopia) n.d. (image online) Available at:

http://blogs-images.forbes.com/markhughes/files/2015/08/Zootopia-4-1940x1119.png

Image 2: (Pixars Luxor junior) n.d. (image online) Available at:
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Image 3: (magic carpet) n.d. (image online) Available at:

http://disney.wikia.com/wiki/Magic_Carpet

Image 4: (Magic carpet) n.d. (image online) Available at:

https://awsomesauce.wordpress.com/2012/10/29/living-lines-and-the-magic-carpet/

Image 13: (Animating Non-Humanoid Characters with Human Motion Data) n.d. (image online) Available at:

https://www.disneyresearch.com/project/animating-non-humanoid-characters-with-human-motion-data/

Image 14: (Swimming) n.d. (image online) Available at:

http://www.karlsims.com/

Image 15: (Hopping) n.d. (image online) Available at:

http://www.karlsims.com/

Image 16: (Spiderbot) Available at:

http://www.creativecrash.com/maya/downloads/character-rigs/c/spiderbot