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3D ANIMATION AS A MEDIUM OF CULTURAL REPRESENTATION AND EDUCATION: A CASE STUDY OF MAGIC CELLAR PART 1

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320 552

Thesis submitted to the Faculty of Humanities, University of the Witwatersrand, Johannesburg South Africa, in fulfillment of the Degree of Master of Arts in the field of Digital Animation.

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ABSTRACT

Post-apartheid South African children are exposed to modern technological entertainment – television, cell phones, video games, TV animations and many other forms of popular art and media. This research report analyzes how well *Magic Cellar* (hereafter referred to as *MC*) both represents cultural diversity to a mixed audience of South African children from different ethnic backgrounds and cultures, and educates them more generally. A historical perspective on animation is provided, including animation in South Africa, as well as the technical processes of animation, and how these apply to *MC.*

In so doing, answers to two main questions are sought: can 3D animation be used as an alternative or support to the school classroom in educating children through popular media forms? To what extent can 3D digital art technology in the form of animation be used in representing cultural diversity to children of different cultural backgrounds? Drawing on theoretical concepts, as well as comparing *MC* to successful programming for children that uses animation to educate, this research report argues that 3D animation, a medium that "seems to attract learners' attention and increase their motivation to learn"(Khairezan 2), can be used to represent cultural diversity and to educate children.

Declaration

I declare that this dissertation is my own work. It is submitted for the Degree of Master of Arts in the field of Digital Animation at the University of the Witwatersrand, Johannesburg. It has not been submitted to any other university for degree examination in any form.

_____

Roland N. KANGONG

_____day of_____2010

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Chapter 1 – Historical context and production processes

1.1 Introduction

This chapter explores the origins and history of animation in South Africa. The focus will include animation more generally, given that South African animators were inspired and influenced by animators and animation studios in the USA such as Walt Disney, the Fleischer Brothers, UPA, MGM, as well as studios and animators from Europe. This is followed by a history of children's animation on TV, with a brief look at the SABC TV's early programming for children.

As Maureen Furniss has argued, the historical context of an animated film affects the way it is produced (233). The historical background adumbrated above will serve as a platform for critically examining *Magic Cellar*, an African animated televised series, and how these production processes were derived from American and European animation. *Magic Cellar* Part 1 (*MC*) was chosen because it comprises the very first episodes of any 3D animated TV series to come out of Africa, and South Africa in particular.

What this study will reveal is that *MC*, a 3D animated TV series, is a product of a complete 'coming together' of computer graphics/modern technology, traditional storytelling and edutainment, as well as a coming together of South Africa, Canada and India during the production process.

1.2 History/Origins of Animation

Although the origins of animation can be traced as far back as 1798 (Wells 113), it was animators in the early twentieth century like James Stuart Blackton, Emile Cohl, Winsor McCay, and George Pal, to mention just a few, who arguably contributed most to the development of animation as a modern art form and entertainment medium. Their attention to detail, and the pragmatism and pictorial realism that they pioneered, may be considered the beginning of an animation aesthetic that would later influence an animator like Walt Disney, who became a major influence on animators worldwide, including many South African animators.[1] George Pal, on the other hand, contributed immensely to puppetry, a 3D animated form that was popular in South Africa in the early days of TV broadcasting (Shapurjee 17).

Animation changed from the big screen and its earlier form as a 'junior' partner to films, to a "reduced" (Wells qtd. in Stabile and Harrison 15) style: the television. This is believed to have been pioneered by Hanna-Barbera but related to work by the United Productions of America, UPA (ibid.).

This part of the chapter relies on Giannalberto Bendazzi's *Cartoons: One Hundred Years of Cinema Animation*, which gives a history of animation worldwide, and Shanaz Shapurjee's thesis: *A Historical Enquiry into the Animation Unit, situated within the South African Broadcasting Corporation (SABC) 1976 – 1988.* SABC policies and regulations on children's programming are recorded by Nadia Bulbulia in her thesis *Children's Programming on South African Public Service Television: Filling the*

[1] In 1975, animator Butch Stoltz from the SABC visited Disney studios in Burbank, California to observe Disney animation and their production pipelines (Shapurjee 60).

Gaps in Policy and Practice. Maureen Furniss, Donald Crafton, John Lasseter and Paul Wells also provide insights into animation history. The history of animation as explored in this chapter is limited by the scope of this project to a few individuals who played major roles in the development of the art form, especially in South Africa, and does not by any means suggest that these were the only or even the most important players in the development of animation.

Such was the influence of Walt Disney on the animation aesthetic generally, and the practice of South African animators in particular, that it is important briefly to examine his work prior to turning to the impact of television on animation.

1.3 Walt Disney

As Wells has put it, "Walt Disney is viewed as the key pioneering figure in the creation of the art, commerce and industry of animation" (77). Certainly the most written-about figure in the animation field, Disney's influence and contribution to the animation aesthetic merits academic attention.

Walt Disney's studio had such widespread influence that it is believed to have dominated aesthetic norms to a greater extent than ever seen before in any other medium (Furniss 109). He created a new and precise aesthetic language through which he communicated his ideas to his audiences. The long history of Walt Disney, which is beyond the scope of this research, spans the period from 1922 when he founded Laugh-O-Grams Films in Kansas City, even till today, many years after his death. John Lasseter, in his presentation to SIGGRAPH[2] 1987 mentions that between the 1920s and the late 1930s, animation in the Walt Disney studio "grew from a novelty to an art form" (Lasseter 35). He

[2] Special Interest Group on Computer Graphics.

suggests that with every picture made a greater level of realism was attained, as characters took on true personalities and actions looked more convincing. Despite the satisfaction of the public, Walt Disney felt there were still many limitations to what his characters could do and that they lacked appeal to the human eye. As a result, he set up drawing classes for his animators under the instruction of Don Graham of the Chouinard Art Institute in Los Angeles. These classes led the animators to communicate their ideas to each other, isolate, analyze and perfect the new skills, which eventually led to the 12 Principles of Animation that remain the bedrock of character animation in the animation industry today (Lasseter 36).

These 12 principles are: squash and stretch, timing, anticipation, staging, follow-through and overlapping action, straight ahead action and pose to pose, slow-in and slow-out, arcs, exaggeration, secondary action and appeal.

In the words of Paul Wells, "Disney's insistence upon the maintenance of a particular aesthetic which defined the studio's practice, also effectively defined the art form" (20). The 12 principles that defined Disney's 2D animation art form, and their applicability to 3D animation, will be discussed in detail in Chapter 2. The work of Disney Studios influenced animators worldwide, including animators who immigrated to South Africa[3] and trained South African animators.

1.4 African/South African animation

The history of animation in Africa is scantily documented and not easy to find. However, Bendazzi suggests that animation on the African continent started in the 1930s in Egypt when the two Frenkel

[3] English animators Denis Purchase and Gerard Smith came to South Africa respectively in 1948 and 1969 with knowledge of traditional Disney animation (Shapurjee 24).

brothers watched a *Mickey Mouse* cartoon and were inspired to start their own studio, *Kahira Studios*, learning to animate by trial and error, and eventually releasing a film called *Mafish Fayda* in Cairo on February 8, 1936 (Bendazzi 391). This is an example of African animation inspired and influenced by animation from Disney Studios.

Bendazzi (391) lists 18 African countries with a history of animation. He suggests that after starting in Egypt, animation expanded in the 1950s and 1960s, leading to improved quality in the 1970s and 1980s. But he does not provide the historical contexts in which the many African animations cited were produced, nor does he mention the technical production issues involved in those productions. This could be because information on these productions is not easy to find, or because there is simply an absence of documentation.

Today, animation works of an international standing like *MC,* which received 42 international awards, are being conceived and produced by South Africans. New computer technology and training has led to the growth of modern animation studios in South Africa.

1.4.1 The early days

The early days of animation in South African can be traced back to the 1890s when Thomas Edison's *kinetoscope* was sold in Johannesburg in 1895 (Shapurjee 30). This heralded the beginning of much-desired entertainment in South Africa, especially in the cities where gold and diamonds had been discovered.

The Jameson Raid and other developments that led to the Anglo-Boer War in the late 1890s saw a change in entertainment tastes in South Africa, which included the advent of vaudeville acts such as chalk talks performed by travelling showmen.

In 1896, Sydney and Edgar Hyman, the owners of a vaudeville program in Johannesburg known as *Empire Palace of Varieties* had Carl Hertz, a conjurer, conclude a show with "animated photographs" which were "short snippets of film, much like the ones used in the *kinetoscope*" (Shapurjee 30-31). Hertz used a projector he called the *cinematograph* to project images on a sheet.

According to Shapurjee, Carl Hertz's apparatus and Edison's kinetoscope, though still crude forms of cinematic technology, had come to South Africa to stay, bringing cultural, moral and social changes. African Film Productions, a studio built in Killarney in Johannesburg in 1915, produced the first animated film from South Africa called the *Artist's Dream/The Artist's Inspiration*, which featured a cartoonist known as Denis Sentry as The Artist, and Mabel Bay as The Girl. In this animation, according to Shapurjee, the artist sketches a woman in a park and his drawings later come to life in a live action film. It was directed by Harold Shaw and was a lightening sketch work that strongly echoed the work of American animators such as Winsor McCay and James Stuart Blackton.

Four more animated shorts produced by comic artist Norman H. Lee were released by African Films productions in 1917, namely: *Don't You Believe, The Adventures of Ranger Focus, Crooks and Christmas* and *The Adventures of Ben Cockles.* But from 1917 up until 1940, there were no more animated films produced in South Africa (Shapurjee 35).

According to Shapurjee, the 1940s saw the animation industry in South Africa torn between traditional hand-drawn cel animation from the Alpha Film Studio and special effects from the Killarney Film Studios (36).

Killarney Film Studios was the name adopted in the 1940s by the African Film Studio that produced the first animated South African film in 1915. This film studio had a separate Animation and Optical Department that was run by James Reindorp and produced special effects and transitions for feature films and newsreels (Shapurjee 36). Even though the equipment used in this studio was archaic compared to equipment used in America and Europe, the staff gained insight into the production of special effects, and South African animation in the form of special effects became a successful art form in the advertising industry when television was introduced in the 1970s.

Reindorp, who was responsible for filming all the animation, had a fixed camera supported on four wooden poles, 2 fixed lights and an animation motor that exposed one frame every half second. (Shapurjee 37). Shapurjee mentions that the camera was not correctly aligned so cels on top of the table had to always be adjusted at some angle to get the images right.

When the Alpha Film Studios was formed in 1946, Reindorp left Killarney Studios. His assistant Benny Mechanik took over the studios' Animation and Optical Department and continued to produce special effects and transitions. The production techniques used at this time by Mechanik involved creating mattes on high contrast film by shooting them in black and white, using Vaseline to create filters that could be applied to camera lenses in patterns, generating fades manually by passing the film through ferro-cyanide, fixing in hypo and drying them on washing lines (Shapurjee 38).

These were crude production techniques compared to the computer-based techniques used in producing *MC* and the enormous computing power available to animators and special effects artists today.

Alpha Film Studios produced traditional hand-drawn animation in South Africa in the 1940s. By 1947, the owner of the studio, Bill Baxter, brought over an English animator, Denis Purchase, who produced animated commercials known as “drawtoons commercials” (ibid.). The arrival of such foreign animators as Purchase influenced South African animators in terms of production.

According to Shapurjee, there was no animation equipment available in South Africa at this time as animators used cellophane in place of traditional cels. Wrinkles had to be flattened out of each cellophane sheet before every frame was shot and the imported animation stand had to be serviced every Saturday for it to be used the following week. These technical problems got Reindorp to pitch an idea to Oxberry, renowned makers of animation stands, to design the first animation stand in the world that had an aerial image feature for superimposition on live film. This stand was made after two years of negotiation, and Mr. Oxberry, the owner of the manufacturing company, personally came to install it at Alpha Studios in 1956 (Shapurjee 39). Alpha Studios are believed to have produced 60 seconds of cartoon animation every week as well as “drawtoons” by a team of 12 skilled colourists (40). When Bill Boxter died the studio was moved to Killarney, and then to Irene. Denis Purchase remained at the Killarney studio till he joined Dave McKay Animation Services in 1967.

Meanwhile, South Africa continued to produce animation in the form of advertisements and short films to be screened before feature films, until television took over in the 1970s. These first 40 years of animation in South Africa saw the production of effects and titling sequences in traditional hand-

drawn cel animation. It is important to note that these animations were directed at adult viewers, as the content may not have been suitable for children until the introduction of television which brought entertainment to the homes saw a shift to children's programming.

1.4.2 Children's animation on TV

This part of the chapter begins with an account of how animation left the cinema and, as *The Saturday Morning Cartoon*, found a new audience through TV sets in America. The focus shifts to changes that occurred in South Africa, leading to children's programming for TV at the SABC where *MC* was commissioned.

Television brought to American suburban and city dwellers advertisements and entertainment, news and information, right in the privacy of their homes. This resulted in the cinematic era of animation taking a different direction and form, introducing new methods of production and new animation traditions (Shapurjee 42). The theatrical short effectively died with the coming of television. In the United States, the Supreme Court in 1948 ruled against studio-theatre chain combinations. This caused studios to separate production from distribution, a move that initiated the decline of animation studios in the USA in the 1950s and resulted in the animated cartoon's moving from the big screen to the new medium of television (Mittell 33).

This new medium demanded that animated shorts screened in cinemas before feature films, that used to be about 6 or 7 minutes long, fit into television time slots that were 30 minutes long. Studios like Disney and Warner Bros. subsequently collected together and integrated old shorts to fit into this time frame. This was an advantage for the animation studios because their works could now be

viewed as independent films in their own right and not just as precursors to big screen feature films (ibid.).

Hanna-Barbera Studios, founded by former MGM animators William Hanna and Joseph Barbera, pioneered animation for television with their limited animation style, a style that emphasizes little animation, repeated movement cycles, no complex choreography, fewer expressions and gestures, basic character design and more dialogue. Using this formula they successfully produced animated TV programming and motion pictures for 45 years until 2001 (Mittell 38). Although Hanna-Barbera Studios adapted this limited animation form due to financial constraints, they developed a new approach to animation, redefining its style and content. Emphasis was placed on dialogue and voice-overs, and this is believed to have affected the way in which audiences perceived animation (Shapurjee 45).

South African animators preferred the classical Disney style because of its full-form animation, over limited animation, especially those working on the many series commissioned by the Children's Department at the SABC (Shapurjee).

In the 1950s in America, the television industry decided that cartoons and animations were primarily for children, in spite of the fact that both children and adult television viewers used to enjoy the late afternoon and early evening programs. Animations were scattered across the three major television networks NBC, ANC and CBS. However by the late 1950s, the commercial potential of children's television (with the recognition of children as a market for toys and sweets) led to more original animation coming to television screens.

During the 1960s, although television networks were experimenting with original animation programs, the screening of cartoons in primetime slots had declined by 1963. A series of events, debates and assumptions led to the shifting of primetime cartoons to the Saturday morning timeslot. By the mid 1960s, animation was seen as a genre for children only (Mittell 51), and this affected the worldwide production of animation as a genre.

Partly because television broadcasting came to South Africa comparatively late, in 1976, developments in the US influenced South African animation broadcast on television. Animated works for television were contributed by studios and individual artists. The studios that apparently made the most impact were the Dave Mckay Studios, Anne-Mation and Glenn Coppens Cartoons.

According to Bendazzi (395), Dave McKay produced commercials and shorts in South Africa, the most well-known of which was *The Story of Bath*. In the 1960s McKay worked with National Film Board in Pretoria, Alpha Film Studios, and AdFilms, until 1967 when he became an independent artist, creating two pilot commercials called the "Animads" (Shapurjee 49). When the English animator Denis Purchase was made Director at the Dave McKay Studios, he – together with Gerard Smith, who would later become head of the SABC Animation Unit – produced an average of seven thousand commercials per year, working with renowned animators like Butch Stolz, Glenn Coppens, Alex Bannon and Lawrence Moorcroft (50).

Purchase and Smith later joined Anne-Mation Studios, founded by Gretchen Wilsenach in 1978, and produced for the SABC a film called *Bobby the Cat*. It took 2 years to complete 26 five-minute episodes because of limited funds and few staff members. This led them to embark on commercials to make money to keep the studio operational.

But the commercials became very successful and the studio attracted talents like Butch Stolz, Riccardo Capecchi and Henry Neville from Australia, so that by 1982 it was a well-established studio with good animation equipment such as a Rostrum camera and a Bellow-lithographic camera similar to the one used in Disney studios during the Golden Era of animation (Shapurjee 50-51).

Glenn Coppens, a Belgian animator who had come to South Africa from Disney Studios in Burbank, California, joined Anne-Mation Studios when they were working on one of their big projects in the early 1980s known as *Jock of the Bushveld*. Regrettably, the fortunes of the studio declined and it closed down in 1987. Coppens then worked with Dave McKay Studios on film commercials before starting his own company called Glenn Coppens Cartoons. According to Shapurjee, his studio became so successful that he employed 60 animators and artists working round the clock to meet deadlines, mainly for supplying the SABC with advertisements. Nevertheless, due to huge financial pressures the studio declared bankruptcy in 1999.

Apparently Coppens believed the South African animation industry grew in the 1970s and 1980s because of the adoption of the British studio management approach. South African animators had been involved in commercial production since the cinematic era, and they used the income from this to finance their short film and feature film projects (Shapurjee 53).

As indicated above, after the introduction of television in America animation was increasingly seen as a genre for children, and this trend became global. In South Africa, where children's programming was controlled and restricted by guidelines that limited creative control by the studios (Shapurjee 57), TV producers, researchers and a host of other professionals sought to use animation on television for the benefit of children.

According to Lesser (xxi), the creators of *Sesame Street* believed that television provided a way to reach many children, especially underprivileged non-white children with limited access to preschool nursery and kindergarten education. This, they thought, was possible because of the development and spread of the medium. By 1974, 95% of American households, Lesser (xxii) mentions, in all sectors and income levels, owned at least one television set, meaning that the medium was available to most children and could be used to their advantage. In South Africa, by 2004 45% of rural households owned television sets, and 84% of urban households (Bulbulia 9). These figures are lower than those for the US, but nevertheless substantial. What they mean is that by 2006, when *MC* began broadcast, a good number of South African children had access to the television medium and its programming.

1.4.3 The context of the SABC

At the SABC, apprehension over the effects of television on children led the corporation to develop programming that was rich in educational content. This educational programming was meant to inform and instruct in an entertaining way, as laid down in the SABC Annual Report of 1977 (ibid.). Popular children's programs of the 1970s like *Wielie Walie* and *Die Kraaines* promoted messages like warnings against wild fires and pollution, and emphasized road safety and healthy eating habits (ibid.).

In the early days of the SABC, children's programming was based on separatist apartheid policies, in terms of which children were taught to believe only in their own particular cultures. According to Bulbulia (11), TV programs were designed to keep black and white children apart. Afrikaans culture was depicted in programs for white children, and someone watching TV1 would think they were in a

completely white world, just as someone watching TV2/3 would think they were in a completely black world.

But in 1994 the SABC was restructured, and the establishment of the Independent Broadcasting Authority transformed it from nationalist government broadcaster into a public service broadcaster (ibid.). In the new era, emphasis was placed on, for example, avoiding depictions of violence in children's programming, and well-defined guidelines of this sort were enforced. Thus there exists the SABC Editorial policy on children's programming that we have today. It is important to look briefly at these editorial policies and regulations in order to understand how *MC* is positioned within the framework of programming for children.

Children's programming, within the context of the SABC, as defined by ICASA, the Independent Communications Authority of South Africa, is:

> programming which is specifically produced for persons between the ages of 0 to 6 years and 7 to 12 years, which is educational, made from their point of view, and which is broadcast at times of the day when the persons in this age group are available in substantial numbers to watch.

This would suggest that at such times when children watch television, there should be available to them good quality programming that can entertain, educate and give them joy. More specifically, SABC Editorial Policy concerning children and children's programming suggests a number of points worthy of note in designing a TV program for the child audience among which are the following:

> Broadcasters are reminded that children embrace a wide range of maturity and sophistication. In interpreting the Code, it is legitimate for broadcasters to distinguish, if

appropriate, those approaching adulthood from a much younger, pre-teenage audience;

Broadcasters may not transmit material that is unsuitable for children at times when large numbers of them may be expected to be in the audience;

Broadcasters are to exercise particular caution, as provided below, in the depiction of violence in children's programmes;

In children's stories portrayed by real-life characters, violence – whether physical, verbal or emotional – may be portrayed only when it is essential to the development of a character and plot;

In children's programmes, due care should be taken in dealing with themes that could invite imitation, such as the use of plastic bags and dangerous household products as playthings, use of matches, and other hazardous physical acts and

Children's programmes may not contain frightening or otherwise excessive special effects that are not required by the story line. (*SABC Editorial Policies* 14-15)

When children's programs were integrated into the SABC, the audience was racially mixed but programs were still clearly made for white or black children. The early days of programming on the SABC TV saw resources allocated to English and Afrikaans children's television, with programs that encouraged puppets and fantasy like *Liewe Heskie* and *Bagalorie Time* proving very popular. Children's drama like the Afrikaans *Trompie* was another investment in programming for children (Bulbulia 11).

The Second World Summit on Television for Children Report (1998), according to Bulbulia (27), found that children's TV in South Africa fails adequately to represent the diverse makeup of its audience. ICASA, the Independent Communications Authority of South Africa, wants local content

programming for children to be identifiably South African, developed for South African audiences and recognizing the diversity of cultural backgrounds in South Africa (75). The challenge for SABC (educational) programming is to provide daily programming for the child viewer on all three of its channels, in more than one of South Africa's 11 official languages. The linguistic organization of the SABC channels is as follows: SABC1 broadcasts mainly in isiZulu, isiXhosa, Afrikaans, English and Setswana, but apparently all 11 official languages are used at some point. SABC 2 broadcasts in English and Afrikaans, with Afrikaans the dominant language used. SABC3 broadcasts in English primarily, followed by Afrikaans.

According to Bulbulia (120), programming for children in South Africa should be more relevant to children by being more representative, more culturally diverse and geographically more inclusive. She further states that according to article 17 of the United Nations Convention on the Rights of the Child, the mass media shall ensure the child's access to programming that promotes his/her social, spiritual and moral well-being, physical and mental health (7).

The advent of animated TV series like *MC* indeed mark an attempt to integrate all the cultures of South Africa in one single program – as is the case with *Sesame Street*, a US program for children of differing ethnic origins and cultural backgrounds.

1.5 Historical context of *MC*

This section relies on information from an interview with Adeelah Carim, the producer of *MC*.

Mfundi Vundla, the CEO and founder of Morula Pictures had the initial idea for *MC* (Adeelah interview). Vundla grew up reading a lot during apartheid South Africa. Books then – and still are – very expensive for the vast majority of South Africans. According to Adeelah, Vundla started *MC* with the idea of helping to inculcate a culture of reading amongst younger children, especially within black

communities, in a way accessible to those who could not afford to purchase books. He thought a good way of doing this would be through traditional African folk tales, as these are also a source of cultural enrichment.

When the TV program was initially conceived, it was going to be live action with a bit of animation, but in the role of producer, Adeelah changed it to a full-scale animation series. This, she argues, was because she thought animation would work better in a series because it has a certain longevity, whereas in the case of live action, children grow up and the actors grow up and change physically, but the animated characters remain the same.

After the conception of the idea for *MC*, the services of a professional research company was sought (the name of the company was not available at the time of interview because Adeelah could not recall the name, although she said she surely had it somewhere), and researchers went into South African villages to speak to old men and grandmothers to get their stories. There was also a lot of research in books and on the Internet (Adeelah interview).

The initial target audience was children between the ages of 5 and 8 years, but over time it was realized that much younger children would appreciate the series too, as they are just as attracted to colour and animation. So the target audience changed to children aged 3 – 7 years.

In the contexts of an ethnically diverse audience of children in South Africa, Adeelah says folk tales transcend all cultures: whether one is Chinese, Indian, North or South American, one encounters similar stories. Inherent in every folk tale is a lesson to be learnt, and a child does not have to be of a particular culture to understand folk tales and the lessons they have to teach.

The writers of the series faced a lot of challenges, as Adeelah recalls. Some of the stories told by old people in the rural villages are very gory and not fit for children, especially the young ones. But at the same time, she said, the writers did not want to take away the essence of the story and change it too much as that would defeat the purpose. Stories that were not offensive to any particular culture or persons were chosen. An example of a story set in Cape Town that had to do with smoking was later recognized to be promoting smoking "in a weird kind of way," (Adeelah interview) so it was re-told rather to promote the message that smoking is bad.

The series was funded in partnership with the SABC and the Department of Communication through NEMISA, the National Electronic Media Institute of South Africa. The Director General of the Department at that time, Andile Ngcaba, believed in the potential of animation as a communication medium and wanted Morula Pictures to develop more animation.

An interview with Firdaus Kharas, the Executive Producer and Director of *MC*, revealed that he had been in South Africa to attend Sithengi, a South African film festival. Vundla had already developed *MC*, so they talked and then went together to see the SABC. Kharas said he was appalled to hear that sub-Saharan Africa had not produced an animated series that reflected its own culture, and he thought that *MC* presented a good opportunity to change that.

Computer animated imagery made it possible for animated films and animated TV series like *MC* to be produced. The available computing power, dynamic user-friendly software, reduced time of production, and the possibility of using the rich language of live action in 3D, all conduce to the making of animated films using computer generated imagery.

1.6 Computer Generated Imagery (CGI)

The field of computer generated imagery must be explored because *MC*, as an animated TV series, is computer-generated, depending upon a range of animation production processes, involving computers and computer software, to arrive at the final product.

The invention of the computer brought a revolution to animation. Computer graphics, computer simulations and computer animation drastically changed the world of animation (Bendazzi 439).

In the mid 1960s, the first computer graphic images were output onto graphic plotters, until the Massachusetts Institute of Technology's Lincoln Lab came up with the idea of connecting a computer to a cathode ray tube (CRT) used for TV, which made computer animation possible. The system was used to display differential equation solutions (Kerlow 7). This innovation led to Ivan Sutherland's developing his *Sketchpad* program, which is seen as the true beginning of computer graphics in a practical sense (Bendazzi 439). The system made it possible for users to interact with wireframe objects using a light pen (Kerlow 8). The graphics output onto the CRTs were single coloured, but it did not take long for scientists (among whom were James Blinn of JPL, David Evans, Ivan Sutherland and Nelson Max) to find ways of representing scenes and images that could not easily be photographed, and for animators and artists wanting to express their art in new ways to recognize this as an opportunity to develop new methods and modes of expression. In 1969, Tom DeFanti and Charles Csuri at Ohio State University joined forces, and in three years developed a computer graphics programming language called GRASS (GRAphis Symbiosis System).

The introduction of the GRASS programming language marked the beginning of a phase of rapid development of this new technology in the 1970s. The United States government provided financing

for developing space simulations, interactive flight simulators for pilots in training, and communications.

Ed Catmull at the University of Utah worked on surface representations and Phong Bui-Tong created the shading and lighting model that bears his name today as an animation software texturing material. At the New York Institute of Technology, Alvy Ray Smith created his PAINT system. Richard Shoup of XEROX PARC also created the 'super paint' system using a new technology called the frame buffer technology. This led to the first commercially viable graphics production (Bendazzi, 440). The United States and Canada were the main focus of computer animation demands during the '70s mainly because of high competition among TV networks.

The Japanese were part of the early development of computer animation, but due to their relative weakness in software, they concentrated more in the 1970s on the production of hardware – computers for their rapidly growing manufacturing industries. However, in the next decade when Japanese interest in computer animation was revived (Bendazzi 440), Omura Koichi of Osaka University developed the Links 1 system, which was a network of small computer systems among which work load could be shared, with computers working simultaneously on small portions of an image.

Great Britain and Europe lacked the financial backing America had in developing computer graphics, and had no competitive TV networks demanding more computer animation. They therefore directed their energies towards the artistic side of things, making use of whatever technology they could find. Accessibility to programs like John Vince's PICASO and Britain's Digital Pictures, CAL Videographics,

France's INA and Sogitec, among others, inspired artists to create computer animated images and integrate them with other media.

More advances were made, especially in the USA by NASA to serve the needs of the government. On the other hand, the entertainment industry led by John Whitney Jr came up with computer animation that could produce 2D animation daily, together with character animation and graphics with visual effects for TV. By the late 1970s, computer animation was gaining as an artistic and communications medium, and a few traditional animators like the Walt Disney Studio and Hanna-Barbera were showing interest, in an attempt to cut their costs, in getting involved in experimental work. Bendazzi mentions that Disney studio did experimental work with the University of Utah, while Hanna and Barbera worked hard to develop a computer-assisted cel animation system (441).

England's John Halas was the first traditional animator to produce a computer generated short film in the USA, *Dilemma*. Lasseter worked with Keane to produce *The Wild Things*, which was tested and produced using Phillip Mittleman's MAGI (Mathematics Applications Group Inc) Synthavision, which was a computer animation and rendering system (Furniss, 182).

In 1979, George Lucas, a significant contributor to computer animation (Furniss, 181), hired Ed Catmull to head the computer division in his company Lucasfilm. But many studios were not convinced that they could use the technology due to the high cost, and many animators were reluctant to use it. Robi Roncarelli, writing in Bendazzi's *Cartoons: 100 years of Cinema Animation*, says that computer animation was still viewed with scepticism between 1978 and 1982, the years within which major advances were made in the technology. The mathematical structure of computer animation at the time, with its rigid geometric shapes, made it difficult to use for artists accustomed

to more flexible, traditional methods of animation. The high cost of the computers needed also made it difficult to afford (441).

The year 1981 saw significant growth in the computer animation industry, and what we see in the industry today started gaining serious momentum in that year. At the Canadian International Animation festival, two films, *Snoot and Muttley* by Susan Van-Baerle, and Lucasfilm's *The Adventures of Andre and Wally B*, proved to the world that computers were ready for serious animation including motion blur, squash and stretch and character animation. Aspects of Disney's 12 principles of animation were clearly demonstrated in these films.

The consequences of these technological advances included the incorporation of computer animation with live action and other visual effects. Companies in the USA, Canada, England and France produced complete computer animated commercials. Among these companies were Pacific Data Images (PDI), which used the 'morph' effect that changes images as one watches, Rhythm & Hues, Rez-N8 and Metrolight in the USA, Topix Computer Animation in Canada, Electric Image and Moving Picture Image in England, and Ex-Machina and Fantome in France.

Computer animation was also extensively used in the film industry due to its time-saving benefits. Scenes can be produced quickly in wireframe line forms, simple coloring and shading of images, using computer animation to position lights, set camera angles and place actors on the scene. This helps directors to preview a scene rapidly and decide if there are changes that need to be made (Bendazzi, 442).

Thus the possibility of conceiving, producing and exhibiting an animated TV series like *MC* became a reality as a result of these technological developments in computer generated imagery.

1.7 Animation technical production processes

The discussion of the animation process in this section makes use of Paul Wells's book *Animation: Genre and Authorship.* The techniques and processes discussed are similar to those involved in the production of *MC*.

Wells suggests that the processes involved in making an animated film depend on the technique being used. He cites three main factors influencing the production process: the studio producing the animation, the budget and the broadcast context (15). There are common production elements such as pre-production, character design, scripting, and storyboarding, among others; nevertheless, significant differences exist between, for instance, the production of "puppet" animation and cel animation, or between clay animation and computer generated animation. Wells suggests that 3D clay animation may have greater flexibility for the metamorphosis of forms than the solid armatures and wire or wood that make up puppets; however, the virtual wireframes in computer generated images provide a yet more malleable infrastructure for movement and rendering.[4] In addition to these similarities and differences in the technology of animation production, aesthetic and authorial issues are of primary importance.

Wells, in *Animation: Genre and Authorship*, argues that all animated films, like all works of art, must begin with a concept, an idea that asks the questions whose answers are sought in the animated form. "The initial idea may be a desire to tell a particular story; the need to address a particular theme or topic; the imperative to test the parameters of art making for its sake; the urge to provoke,

[4] Rendering is a term that refers to the process of generating an image from a model using a computer program meant for that purpose.

amuse, hypothesize, make a statement or insist upon a point of view" (Wells 16). Once the idea is clear in the minds of the animators, they can proceed to the design stage. This is the visualization stage of the production, known as the pre-production stage, which involves writing the script[5] and the treatment,[6] as well as creating the storyboard.[7]

Model sheets may also be created for each character in the animation, giving that character its particular looks and attributes. This is known as character design, and it is done with the particular style chosen for the film in mind. For example, in the design of *MC*'s characters and their backgrounds, particular attention was given to properly depicting the ethnicities of Pula, Navitha, Josh, Melissa, Marcus and Gogo, and making sure that their backgrounds reflected an African setting. Such models thus capture the overall style chosen for the film. Visual sources are often used because they "do much to enhance the authenticity of the work in playing out the technical dexterity and historically determined meanings underpinning the graphic outcomes" (Wells 17).

These visual sources, Wells maintains, "seek to reference the social and cultural environment in which the narrative of a film may take place" (18). So, in *MC*, the visual socio-historical sources used help to bring out the personalities of the characters and their environment, thus capturing the time, place and historical circumstances that inform the story.

[5] A script refers to the written text of the animated film, including dialogue and 'stage' directions.

[6] A treatment is a detailed step by step documentation of a film script, told in the present tense and describing the story as it happens.

[7] Storyboard: this is a series of visual images displayed in sequence for the purpose of pre-visualizing a film or an animation.

Beyond these, another key aspect of this visualization may be a graphic mode created and established by a particular studio, like the aesthetic approach defined by the Disney studio in its "Golden Era" from 1928 – 1941.

After the exploration of the visual concept through storyboards, character design and modeling, the concept still remains subject to analysis and revision. Decisions made at this stage bear upon the actual execution and assembly of the animation. The final script, for instance, will tell the story with fixed dialogue, giving priority to events that make up the plot, and opening the pre-production up to changes that may be made to the characters and overall design, based on the original visual conception. These constitute a basis for the vocal performances, the music and the sound effects; and for further work on the storyboards, as these define the movements and exchanges that will take place between the characters in the animation. In the course of the making of the animated film, constant attention is paid to the material with a view to revising what needs revision, what needs to be added or removed, and so on. Sometimes storyboards are shot onto film to create a "story reel," to which a soundtrack may be added to give a sense of the proposed film.

This is similar to the animatic,[8] in which rough animation scenes are looked at closely to "see if all elements work together and to eliminate errors before the sequence goes to its 'final line' stage" (Wells 26).

[8] animatic: these are images from a storyboard put together in a sequence in order to have a feel of what a scene will look like with motion and timing (Wells 26).

An editorial team led by a director and made up of the producer, layout artist, production designer and art director then approve the story reel and/or animatic, recommending changes while addressing the sequences in the film and the order in which they should occur.

It is important to pay particular attention to movement, which is the determining factor in the animation process. Movement is an indication of the way in which the animation will meet the requirements of the story being told in the film, or whatever it is that the film seeks to portray through action.

The processes of refining and tweaking before the final animated product is released vary depending on the production process. Video playback is preferred in stop-motion animation.

Motions can be refined and rendered with shapes changed and forms re-configured within the computer in a CGI production process. In other processes, changes may include re-shooting, changing forms by working on the materials, and cutting out unwanted scenes or including new ones.

Wells (27) mentions that as soon as the entire film has been built on a scene-by-scene basis into sequences, and if these sequences "both constitute and consolidate the narrative structure, with

their key animation in place allied to a basic soundtrack," then further work can be done in order to improve the visual and aural effects.

The soundtrack is improved upon by paying attention to the sound effects and the music, and their synchronization with the right images to heighten the visual concepts. Visual effects,[9] which are

[9] Abbreviated VFX or Visual F/X, visual effects are perceived in different ways but basically refer to ways by which imagery is created and or manipulated outside of the live action. Animated film has its own concept of visual effects which are created by the animator to achieve specific imagery and effects within an animated film.

different from character or object animation, are added to the scenes to add to the spectacle, as often seen in full-length animated films (ibid.). Software packages for CG films contain effects that can be creatively used to give the animated film a desired look.

The films are then composited[10] in the computer environment digitally. This is believed to check for consistency in the processes that have been combined in creating a film.

As usual, the director and his team work systematically and consistently through each aspect of the film to ensure that the composite is consistent. Whatever the technique – "cut-out,[11] drawing on film, under-the-camera manipulation of materials – the processes are comparable but individualized, nuanced by the imposition of generic considerations and authorial intent" (ibid.).

Thus, as already mentioned, though the processes and techniques may differ, the result is an exhibition of the idea(s) of an author, conveying a message that is subject to interpretation, and promoting an ideology.

MC, as a CG animated TV series, went through processes of production similar to those described above, and it is to a description of these that we turn next.

[10] Compositing is combining of different scenes or visual elements from different sources and ending up with one image that gives the illusion that those different elements are from one scene. (Wikipedia)

[11] Cut-out animation technique refers to a technique for producing animation from flat characters, props and backgrounds cut from material like paper and cards or even photographs. (Wikipedia)

1.8 The production processes of *MC*

Kharas reveals that he planned the production of *MC* like any other animated production, from the start to the finished tape.

With *MC* already developed by Mfundi Vundla, and the budget secured from the SABC and the Department of Communication through NEMISA, Kharas – as the executive producer of *MC* – decided to use a studio in India known as UTV Logo. He mentions that he was a partner with UTV at the time, and that his own company was called UTV International (Canada). The project proceeded in the context of SABC television's commitment to children's programming in line with government policies in the new democratic South Africa, in order to meet the needs of the South African child.

The concept (see discussion at 1.7, above) of *MC* was born in South Africa. The budget and the broadcaster came from South Africa. The original drawings of the main characters in 2D form were done in South Africa, although Kharas in his interview said the proportions of the characters designed in South Africa were not correct for the purpose of designing the characters in 3D, so they were used simply as references and new characters were created.

The backgrounds were all created in India, directed by Kharas from Canada, with 6 South African students who were undergoing training in India. They helped in researching and designing the costumes for the characters. Kharas mentions that he was determined to make the costumes and backgrounds as authentic as possible, so the team researched each of the South African tribes represented in the stories in order to ensure that the settings and costumes were genuine.

As already mentioned, an editorial team led by a director and made up of the producer, layout artist, production designer and art director would approve the story reel and/or animatic and recommend

changes, addressing the sequences in the film and the order in which they should occur. Kharas had a team consisting of a head animation consultant, 2 animation consultants, 3 studio producers, 14 layout artists and animators, production designers and more than 30 freelancers who worked on the *MC* project.

It is important to pay particular attention to movement, which is the determining factor in the animation process. Movement is an indication of the way in which the animation will meet the requirements of the story being told in the film, or whatever it is that the film seeks to portray through action. Movement in *MC* was achieved by the use of the 3D software MAYA, which is one of the leading software programs in 3D computer animated imagery. It took about 2 years to complete work on *MC*, after which it was ready for broadcast by the SABC.

1.9 The broadcast of *MC*

MC premiered on SABC 2 on Saturday March 26th 2006 at 14H15. The fact of *MC*'s production as the first SABC-commissioned 3D series for children suggests that 3D animation had started to gain significance as an educational and entertainment tool in South Africa.

Some critics believe that the production was poorly handled in view of the fact that it was animated in India, and suggest that there were managerial or policy implementation problems at the SABC, but these issues are outside the scope of this study. *MC* serves to underline the potential of 3D CG animation as an educational and entertainment tool, differing as it does from other forms like the muppet characters seen in *Takalani Sesame* and *Sesame Street*, the 2D animation used in some of the episodes, or pixilation and clay animation.

The *MC* series was a co-production between the SABC, Morula Pictures in South Africa and Chocolate Moose Media Inc. of Ottawa, Canada, and was directed and produced by the Canadian director Firdaus Kharas. It ran for a total of 20 episodes, and is believed to have allowed African children to see themselves reflected in an animation series for the first time (*filmfestivalworld.com*).

According to the *filmfestivalworld* website, "the series celebrates Africa's culture and traditions, while promoting reading as exciting and adventurous." *MC* is further cited as

> Africa's first 3D animated series, the first vehicle to showcase African culture to children around the world, a television series that preserves African folktales, some of which are being lost as the tradition of oral story-telling diminishes, featuring a multi-cultural cast of characters, with the principal character being a young African girl, and captures southern Africa's stunning vistas and landscapes…. (*www.filmfestivalworld.com*).

According to the SABC Education website, the series is based on African legends and folk tales collected from interviews conducted in villages across South Africa. Each episode is broken up into a set-up and an introduction, followed by an African story whose ending usually contains a lesson to be learnt by the target audience, the children. Each episode is self-contained.

This series has won multiple awards. According to the *southafrica.info* website on *MC*, it has attracted recognition from a number of international sources, winning 42 awards in total, including the 2006 Davey Awards announced by the International Academy of the Visual Arts, First Prize in the Animated Television Production category at the 23rd Chicago International Children's Festival (CICFF), the very special Chris Award, awarded by the oldest TV series festival in North America, the Columbus International TV series and Video Festival, the 17th Aegis Awards in the United States, and the Platinum REMI Award as the top entry in the Animated Category at Worldfest in Houston, Texas.

This world-wide recognition positions *MC* as an animated TV series worth giving serious critical attention.

In keeping with SABC's programming policy on children's animated programs (SABC Editorial Policies 15), where themes that could threaten children's sense of security and invite dangerous imitations are discouraged, this TV series seeks to propagate indigenous cultural virtues whilst discouraging the idea that violence can be a form of conflict resolution. For instance, frightening special effects that might seem to glorify violence are creatively avoided in *MC*.

According to the SABC Education website, the animation series was on DSTV, a satellite TV provider that broadcasts throughout Africa, while major American broadcaster HBO also acquired rights to broadcast the series in the USA and Bermuda, making it the first African animated 3D TV series to be acquired by a major American network(*www.southafrica.info*).

MC also addresses UNESCO's concern that children's programs, especially computer-animated ones, are imported from abroad to African countries. This lack of local content is blamed on cost-effective production, lack of equipment and facilities and qualified computer users and animators. *MC* has significant African content and considerable educational potential. The next chapter examines animation and 3D animation in particular, in the context of its uses in education.

Chapter 2 – 3D Digital Technology

2.1 Introduction

This chapter explores the different forms of 3D animation, giving attention to the key animators and researchers who contributed to the development of the 3D form. The characteristics of 3D animation that make it suitable as a medium for cultural representation and education are identified and explored. The relationship between 2D and 3D animation is examined, which is important in creating a context for understanding *MC* as a 3D CG (Computer Generated) animation whose production relied on principles developed by early animators working on 3D and 2D forms. The production processes of *Sesame Street*, another TV series with educational and entertainment aims, are subjected to comparative study in order to understand *MC* as a TV series with similar aims.

Furniss (155) suggests that 3D animation has objects with a body and form because they have height, width and depth. Although she mentions that 2D animation techniques have overshadowed 3D animation for many years in terms of "commercial success and scholarly discussion" (ibid.), the situation is different now in the 21st century as more and more 3D animation is being produced worldwide. CG 3D animation production has become possible because "the development of new digital technologies for image production and manipulation has affected everything from the creation of animated texts, to their distribution, reception, and aesthetic characteristic" (Crawford 110).

Apart from computer generated 3D, the category to which *MC* belongs, other forms of 3D animation have been used in children's programming for television, like *Sesame Street* in the USA and *Takalani Sesame* in South Africa. These include puppets, clay animation, and pixilation.

2.2 3D forms and their origins

2.2.1 Puppets

Puppets are 3D objects made with solid armatures and solid wire or wood. The technique of animating puppets is similar to live action in the sense that 'action' is filmed in front of a camera. This technique of animation, which is the same as the technique used for clay animation, is called the stop-motion or frame-by-frame animation technique. Bendazzi (7) mentions that it was the American Alfred Clark who found out that while filming, the crank of a camera could be stopped, the object in front of the camera adjusted to its new position, and then the camera started again. This was perhaps the beginning of frame-by-frame animation, though the first artist to make objects move was George Melies, the Frenchman who animated letters from the alphabet for an advert in 1898 (ibid.).

Restrictions on the movement of puppets are imposed by the materials used to design them. As Furniss further suggests, 3D figures "have inherent surface texture and are subject to the laws of gravity, but variations in terms of movement and the display of emotion can occur…"(163). It might not be easy to animate a wooden puppet to show a smile or a frown but expression can be achieved through movement, environment, camera angle and framing, and lighting (ibid.). Jiri Trnka, the famous Eastern European puppet animator from Czechoslovakia, interprets the limitations mentioned by Furniss as creative pressures that force the artist to "find a narrative solution more creative than merely showing a smile or a frown" (163). In other words, as Trnka suggests, limitations in animating puppets are an opportunity for new creativity. Puppets made from material such as foam rubber, as seen in the works of Art and Ruth Clockey, and others made from latex as in Trnka's

studio in Prague, have flexible surfaces, meaning that as they are filmed in front of the camera during the animation process and moved, they cannot be accidentally pushed out of shape.

Since animation is about movement, 3D animators not dealing with live objects face issues like keeping their objects from falling over during animation. Wires may be used to create the impression that a character is suspended in the air, but walks, jumps and runs are not easy to animate frame by frame.

Some animated puppet works worth looking at include earlier works that were used long ago to educate the public on a variety of issues. Such an example is an animation known as *Matches: An Appeal,* made by British artist Arthur Melbourne in 1899. It "was a public address inviting British citizens to donate matches to the soldiers fighting in the Boer war" (Bendazzi 7). This is an early instance of a public awareness message being communicated through 3D animated film.

The animator considered to be the master of the genre is the Czech Jiri Trnka. He created popular works like *Song of the Prairie* in 1949 and *The Hand* in 1965. His 1946 film, *Perak a SS* (*The Springer and the SS Men*), was an anti-Nazi movie and could be interpreted as propaganda, both educating the public and conditioning their minds to accepting a political ideology.

2.2.2 Clay animation

As the name implies, clay animation involves animating objects made from clay (Plasticine is often used in place of clay). This technique of animation was obscure until the work of Will Vinton in the 1970s (he actually patented his production process in 1978), but by the late 1980s was a "full-scale, mass media phenomenon" (Frierson 1). Clay animated objects have the advantage of moving in 3D space, creating their own perspective and casting their own shadows (Frierson 2). Clay is animated

with ease, filming one frame at a time, by changing the appearance of the object relative to a previous frame (among other processes). Since it is a plastic medium, clay can be rolled, flattened, twisted, carved, kneaded, folded, and smeared (Frierson 2-3). The weight of clay is an obvious limitation, and it is resistant to deeply saturated colours because the surface of clay soaks up light rather than reflects it (ibid.). Frierson further points out that the softness of the clay means that when it is under hot lights it begins to sag and can easily be pushed out of shape during the animation process. These limitations notwithstanding, clay animation is still widely used today.

In the USA, as Furniss mentions, clay animation became popular due to the efforts of Will Vinton, who patented the *Claymation* process and went on to produce Academy Award-Winning shorts like *Closed Mondays*, which won as Oscar in 1974 (Bendazzi 258). According to Bendazzi, *Closed Mondays* "marked the beginning of *Claymation* (…)for the first time after many unsuccessful attempts and limited uses, clay found a place in animation, to which it brings its malleability and the freedom of interpretation it offers" (ibid.). In *Closed Mondays*, Claymation presents opportunities for metamorphosis "in an amusing, original, unreal atmosphere" (ibid.). *The Gumby Show*, produced by Art Clockey and NBC in 1956 – 1957, was also a "memorable attempt" at clay animation (Furniss 156). When TV came along and created a huge demand for children's programming, Art Clockey gave clay animation widespread visibility by bringing forth a clay star, *Gumby* (Frierson 106). However, instead of clay, which is water-based and tends to dry too fast to be used for animation, *plasticine*, an oil-based clay substance, is used commonly in clay animation.

But long before *Closed Mondays*, in the silent film era, films using clay already existed. Buster Keaton's *The Three Ages* (Metro) was made in 1923; *Monsters of the Past* (*Pathe Review*) was made in 1928 (Frierson 98). According to Frierson, these films made use of animated clay dinosaurs:

Keaton's *Three Ages* animated a clay brontosaurus, while Virginia May presented, in an educational segment for *Pathe Review*, [12] traditional versions of dinosaurs.

The influence of animations like Winsor McCay's *Gertie the Dinosaur* influenced clay animated dinosaurs like Art Clockey's *Trixie* in his *Gumby* series and Vinton's *Dinosaur* (1980), which were all 3D clay animations. Willis O'Brien, in 1915, after watching McCay's *Gertie the Dinosaur* made a film called *The Dinosaur and the Missing Link* in which he used latex-covered armatures due to the limitations of clay, a technique that became a standard for stop-motion animation in science fiction films (Frierson 100). Virginia May's *Monsters of the Past* was one of the shorts at the end of the silent era to use clay, and, according to Frierson, application of the clay technique in educational films as suggested by May's work was not realized until 40 years later (105). This happened when animators like Art Person, Elliot Noyes and Will Vinton produced a series of clay animated educational shorts in the 1970s (ibid.), indicating once again the educational potential of 3D animation.

2.2.3 Pixilation

Pixilation is a 3D animation technique that closely resembles live action. The use of pixilation often produces realistic human movements. While puppet and clay animations utilize inanimate objects that are 'given life' through the process of animation by moving objects frame by frame in front of a camera, pixilation is the shooting of 'live' objects – including people – frame by frame (Furniss 159).

It is not a widely used technique in commercial animation, because of the difficulty of making human actors act frame by frame as well as because of the "highly stylized look of the performance" (ibid.).

[12] The *Pathe Review* was a weekly news magazine for the screen.

Some of the works of Norman McLaren illustrate the use of the Pixilation technique. *A Chairy Tale*, released in 1957, and *Neighbors* (1952) are among his popular pixilation works. According to Furniss, the Bolex brothers used pixilation in a feature-length film, *The Secret Adventures of Tom Thumb,* released in 1993 in England (ibid.). The studio heads Dave Borthwick and Richard Hutchinson explained in an interview that because they could not afford to make models in the short films they were doing in the mid-1980s, they resorted to working with what was readily available, and that the human body was ready-made with all the joints and everything (ibid.).

The next step is to look at some TV programming that has successfully incorporated the 3D animation forms described above – *Takalani Sesame* and *Sesame Street*

2.3 Examples of children's TV programs that use 3D animation

2.3.1 Takalani Sesame (TS)

This adaptation of *Sesame Street* in South Africa is popular children's educational and entertainment program, modeled after *Sesame Street*, the successful children's educational program in the USA (Lesser 234). In this program, drama is used to pass on the educational message. The localization of *TS* (the adaptation of *Sesame Street* to South African local tastes and cultures), according to Tewolde (i), was sponsored by the Department of Education, Sanlam, USAID South Africa, the SABC and Sesame Workshop USA. Unlike *MC*, whose production involved South Africans, Canadians and Indians, *TS*'s production is predominantly South African. Six black South Africans were trained at Sesame Workshop in New York to undertake the localization process of *Sesame Street* in South Africa (Tewolde 14). Cultural diversity is demonstrated in *TS* through its broadcast in some of South Africa's indigenous official languages, with characters that depict the quintessential South African society. A

special character Kami is HIV-positive, a health condition that is a cause for concern in South Africa. *TS* is thus an adaptation of *Sesame Street* that speaks to the unique circumstances of South Africa. According to Vuleka productions, *TS* was broadcast on radio to make sure that the internationally-acclaimed educational program reached even the poorest child who had no TV and relied on the radio for news and entertainment (www.vulekaproductions.co.za/takalani-sesame). The principal 'actors' or 'edutainers' in the program are the muppet characters Kami, Moshe, Zikwe, Kupukeji and Zuzu, all 3D puppets apparently popular with children.

Programs for children provide a useful medium for talking about social issues (Mbogo 18). One of the main social issues raised in *Takalani Sesame*, for instance, is the HIV/AIDS pandemic. A muppet character in *Takalani Sesame*, Kami, is HIV-positive. While some people may argue that HIV/AIDS is not an appropriate topic to raise in a children's program, the program adheres to the SABC's guideline by taking "due care" in presenting it: "in children's programs, due care should be taken in dealing with themes that could threaten their sense of security… " (SABC Editorial Policies 15).

2.3.2 Sesame Street

An important TV series in this context is *Sesame Street*, which combines education with entertainment to teach preschool children from different cultural backgrounds through the medium of television. It is a well-known children's TV series developed by the Children's Television Network (CTW, now known as Sesame Workshop) in the USA. The discussion on *Sesame Street* that follows is indebted to the work of Gerald Lesser in his book *Children and Television: Lessons from Sesame Street.*

It would seem to be useful to examine what went into the production of *Sesame Street* as a TV series designed to educate and entertain children, as a means of shedding light on *MC*, its production and

use as an educational tool meant "to promote a reading culture" (Adeelah interview). *Sesame Street* not only established the importance of children's TV as an educational medium, but it was supported by an enormous quantity of research into questions of effectiveness and representation.

The title *Sesame Street* was decided upon after much thought and is associated with the popular "open sesame" phrase from the *Arabian Nights* folk tales. This is an imagined street in which the inhabitants live in an ideal world full of fun and adventure. The name had to be simple so that young children could remember it. The name *Magic Cellar*, on the other hand, was arrived at after the conception of the program. Telling African folktales to children was "magical" and it was taking place in a "cellar" (Adeelah interview).

Sesame Street had the ability to transport children to places, events, people and ideas they had never encountered before and might well never encounter in real life (Lesser 93-94). *MC* had a comparable capacity to transport children into a world of folk tales where animals are anthropomorphized and interact with humans. Joan Ganz Cooney of *Sesame Street* came up with the idea of creating a preschool television series for children because extensive research had shown that children watch a lot of television in their preschool years, and that those early years (ages 0-6) are the years of most rapid learning in children. Cooney's proposal to use TV to educate preschool children was motivated by a noticeable gap between the school performance of poor and middle income children due to the absence of formal preschool education for inner city poor children. Similarly, in the case of *MC*, Vundla came up with the idea to create the series because he wanted to inculcate cultural enriching reading habits in young children, especially in black neighbourhoods in South Africa (Adeelah interview).

Joan Cooney, a television producer and foundation executive in the USA, put forward her proposal "Television for Young Children: A Proposal" in 1966. From the proposal stage there was planning (which involved researchers, educational psychologists and experienced TV producers), production, and finally broadcast. The idea of using television to teach pre-school children basic cognitive skills like the recognition of letters and simple counting was not at first seen as feasible. However, the success of *Sesame Street* paved the way for producers to make further use of the medium of television to present programming of an educational and entertaining nature to children.

Lesser (239) identifies the characteristics of six "successful ventures in the use of technology in education," as proposed by Professor James Gibbons of Stanford University:

1. The educational program must be planned for a specific *target audience*.
2. *Specific educational objectives* that are relevant to the needs and interests of the target audience must be clearly understood and agreed upon.
3. A systematic *multi-media approach* must be used in which both knowledge specialists and media specialists are employed.
4. Educators who are capable of learning and understanding the *instructional characteristics* of various media must be found.
5. Clear and careful provision for *personal interaction*…must be made.
6. *Evaluation and feedback* arrangements must be made to monitor audience reaction and change the instructional material to suit audience needs. (239)

Although Lesser argues that members of the audience in the case of these programs pay money and undergo instruction in order to get a certificate at the end of watching, in the case of *Sesame Street* the audience watched because of the appeal of the show. It is the argument of this study that 3D animation can draw children to watch just for the sake of the appeal of the animation medium, and in the process educate them. But how exactly children learn is still not very well understood. Many schools of thought agree that learning is rapid in the early years; according to Benjamin Bloom (Lesser 77), the intellectual growth that takes place in a child before the age of 5 is much the same as the intellectual growth that will take place in the next thirteen years. Thus *MC* uses traditional folk tales to deliver moral lessons to young children in the hope that they will become educated on how to conduct themselves in society. But, just how effective can such lessons be, when – for instance – children are made to believe that they ought to be kind, respectful and tolerant in a society that is cruel to its members, even children? This is no doubt a question for another research project altogether.

The makers of *Sesame Street* believed that it was possible to use children's television consciously for their benefit because "television is pervasive, fascinating to children and viewed heavily" (Lesser xxvii). Psychological and educational research was used to convince authorities, parents and the entire country that TV and animation added up to a serious educational tool. These arguments position *MC* as one of such TV programs that children can benefit from.

The idea for *Sesame Street*, as mentioned above, came from Joan Cooney, a TV producer and foundation executive. According to Lesser (3), she held discussions with everyone she thought could be resourceful in providing insight into the possible use of television to teach pre-school children – pre-school teachers, TV and film producers, pediatricians, psychologists and educators who had

studied the development of children. Those involved included creative producers and writers, especially those who wanted to make a long commitment to TV programming for children. Researchers with experience of observing children were asked to invent ways of observing children's reactions to TV, and to convey their observations to producers in a way that they could understand and respond to. People to work with parents and inner city organizations were also needed in order to get children and their families to watch, given that public TV had a bad reputation with inner city dwellers. In the case of *MC*, according to the producer of *MC* Adeelah, one man, Mfundi Vundla, conceived and developed the idea of a television series that would bring African culture in the form of traditional African folk tales to children in the 3-7 years age group. A research company was hired to go into South African villages to collect stories from old people. These were later handed to a team of writers charged with developing scripts for the series. At the time of making *MC*, the use of the television to communicate educational messages to children had already been established, so the writers only faced the challenge of transforming traditional folk tales with adult themes into forms that could be accommodated and understood by young children. There was no need to do a lot of consultation and publicity before broadcasting, as was the case with *Sesame Street*, because the SABC had already, by 2006, been in existence for 30 years, and could reach a large proportion of South Africa's children population. At the SABC 2 channel, where *MC* premiered on March 26th 2006, 16.8 hours were allocated every week to children's programming (Bulbulia 95), and hence there was a high likelihood of the target audience watching.

A process to decide on the educational goals of *Sesame Street* was necessary. To the extent that *MC* failed to get the attention of the South African Department of Education (DoE), its design was not seen as primarily educational (Adeelah interview). The DoE's intervention would have served to

establish whether *MC*'s educational objectives conformed to those of the DoE with respect to children's content.

When the production of *Sesame Street* was being planned, it was suggested that puppets be used in the series – and these came in all sizes, shapes and guises, as Lesser (38) mentions. These muppets had great potential for presenting educational programming in an entertaining way. *MC* was first designed as live action with a bit of animation, but the producer changed the series into a full animation show, using 3D characters. Music was also created for the series, as it is capable of, for instance, drawing the attention of a distracted child to the entry of a familiar appealing character or episode.

After the formation of a National Board of Advisors for *Sesame Street*, seminars were held that ultimately led to the goals of the series. These seminars considered:

- Social, Moral and Affective development
- Language and Reading
- Mathematical and Numerical skills
- Reasoning and problem solving
- Perception (Lesser 43)

Those invited to each of these seminars included preschool teachers, psychologists, film makers, psychiatrists, artists, musicians, children's book writers, performers, sociologists, puppeteers, television personnel and creative advertising personnel. The goals were classified broadly into *Symbolic Representation*, which incorporates the recognition of basic symbols like letters, numbers,

geometric forms and the ability to perform rudimentary operations with these symbols (Lesser 62); *Cognitive Processes*, involving dealing with objects and events in terms of order, classification and relationship (Lesser 65); the *Physical Environment*, that exposes the child to general information about natural phenomena and natural processes (Lesser 68); and the *Social Environment*, where the child is expected to identify himself and other familiar individuals in terms of role-defining characteristics (Lesser 71).

The production process of *Sesame Street* assumed a magazine format to allow flexibility with regard to content. The production staff, whether through intuition or whatever information research on children could give them, developed different production approaches that the research staff used to test on children to see what would get them to watch an educational program and not something else (Lesser 101). This was not the approach taken by the producers of MC, suggesting that research was not a priority. According to Kharas, the Director and Executive Producer of *MC*, the production was planned and executed to the finished tape just like any other animation production, as discussed in Chapter 1.

While government agencies and private foundations provided a budget of $8 million for 18 months planning to produce 130 one-hour episodes of *Sesame Street* that would run for a year, the Department of Communication, through the National Electronic Media Institute of South Africa, together with the SABC, provided an undisclosed amount of funds for the production of *MC*.

Continuing his discussion of children and learning, Lesser argues that a national TV channel – in the case of South Africa, SABC TV – must be able to attract a large national audience. He maintains that this would help to narrow the gap between children from poor families and those from well-to-do

families, because either “poor children would have to watch more than middle-class children; or if poor children did not watch more, they would have to learn more from the same amount of watching as middle-class children” (Lesser 80 – 81). This would imply that in order for children to ‘watch and learn’, the medium of communication needs to be appealing and able to hold their attention.

This is possible through the use of CG imagery, working from 2D drawings to 3D models.

2.4 Computer generated (CG) animation/relationship between 2D and 3D

MC, the case study of this research report, is a CG 3D TV series. It is therefore necessary to look more closely at animation in the age of new computer technologies. In Chapter 1, a brief overview of the history of computer animation was provided. In *MC* the new technologies come together with traditional storytelling to produce a 3D animated TV series that, it is argued, is attractive to children and hence can be appropriated both as a medium for cultural representation for an ethnically-diverse audience and as an educational tool.

An analysis of the manner in which Pixar applied Disney Studio’s 12 principles of animation to their 3D films is presented below, with a view to establishing the inseparability of 2D and 3D animation practices. The success of Pixar as representing a continuation of the Disney vision of animation as an art form with a firm place in contemporary culture is vital, as *MC* was produced on the same principles. The use of the 12 principles goes beyond a mere understanding and application of the principles, to embrace an implicit acceptance of animation as an art form, where character and performance are vital in the narrative structure of the film. The history that follows provides a context for this argument.

In 1974, Edwin Catmull presented a PhD thesis in Physics at Utah on the development of curved surfaces using 3D CGI. Previously, he had produced a 3D CG image of his hand rotating, using a method involving bi-cubic splines arranged into grids. Though a physicist, Catmull said in an interview with Hal Newman at SIGGRAPH 2001 that he had always wanted to be an artist but could not draw, and that this had inspired his love for computer graphics.

After Catmull's graduation, a multimillionaire called Alex Shure from NYIT, the New York Institute of Technology arrived in Utah to look at the computer graphics laboratory. He had made his fortune at NYIT by organizing study programs for returning GIs after World War II.

In 1974 Schure started assembling the Computer Graphics Lab (CGL) at the NYIT. He wanted to produce a computer animated film, and since he never knew what equipment was housed in the Utah lab, he bought everything in it. He then needed someone to manage the equipment, so he hired Ed Catmull to head the CGL at the NYIT. Catmull found that the CGL already constituted half of the staff assembled to realize Schure's dreams, the other half comprising 2D animators who had done characters for *Tubby the Tuba* in 1975. Catmull was later joined by Alvy Ray Smith who had been working with Dick Shoup at Xerox on SuperPaint. In 1974 – 1976 CGL invented the first RGB display, the first computer-controlled video editing, alpha channel, and bitmapping, among other things (Masson, Smith and Heckbert). Research on finding ways of accelerating hand-drawn animation by animating coloring processes led to the CAPS (Computer Animation Production System) project that Pixar later developed for Disney Studios.

Tubby the Tuba did not impress CGL members. Catmull and Smith decided to find a new sponsor. At that time, George Lucas, a significant contributor to computer animation in the 1980s, hired the

entire CGL staff for the SFX special effects division at his company, the ILM (Industrial Lights and Magic),which he later renamed CD (Computer Division).

CD's work on *Star Trek II* piqued Disney's interest in computers, and the then CEO of Disney, Michael Eisner, asked them to develop a system to accelerate the production of animation cels which led to CD's work on CAPS, the first computerized ink and paint system in the animation industry.

At this time, John Lasseter was fired from Disney and Catmull immediately invited him to join them. At CD, Lasseter produced *The Adventures of Andre and Wally B* (1986) which is seen as Pixar's first film. In its production, the 12 principles of animation were fully applied, making it the first time traditional 2D principles were applied in 3D. This led to Lasseter's 1987 SIGGRAPH paper titled *Principles of Traditional Animation Applied to 3D Computer Animation*.

When Lucas decided to sell CD in 1986 for several reasons, Steve Jobs – a co-creator of the Apple Mac home computer – bought the company for $5 million and changed the name to Pixar. As a high-end hardware manufacturer, Apple produced the Pixar Image Computer (PIC) that they could not market but which was a storage device for Disney's CAPS technology and the x-ray data of East Coast hospitals. In 1986, Lasseter produced *Luxo Jr* for Siggraph to generate an interest in the PIC, but the film went on to get nominated for Best Animated Short at the 1986 Academy Awards. Unfortunately, this did not help boost PIC sales. By 1989, Jobs wanted to sell the company, but Lasseter and the team at Pixar produced *Tin Toy* to convince him not to sell. *Tin Toy* went on to win an Oscar.

Pixar applied the 12 Principles of Animation to their films and this has since become an industry standard. These principles were after all developed to produce more realistic animations, with the main purpose being an illusion of characters that adhered to the basic laws of physics. These 12

principles, as outlined in *The Illusion of Life* by Disney animators Ollie Johnston and Frank Thomas are: squash and stretch, anticipation, staging, straight-ahead action and pose to pose, follow-through and over-lapping, slow-in and slow-out, arcs, secondary action, timing, exaggeration, solid drawing and appeal.

2.4.1 Application of the 12 Principles in *MC*

As already mentioned, the use of these principles in 3D animation has become an industry standard. As such Episode 1 of *MC* is examined for the use of the 12 Principles of Animation.

Anticipation is employed throughout the episode. It captures the viewer's attention and gives the him or her the idea that an action is about to happen, thereby preparing the mind for the action to come. For example, when the children are gathered around the table in the cellar and it is suggested that Mr. Zee tells them a story, anticipation is aroused as they nod their approval of the proposal that a story be told. Even without words, the use of *anticipation* in such a case communicates what is going on in the mind of the character. The use of *squash and stretch* is seen with Mazindaba's baby as she moves back and forth while playing, sitting on the ground in the courtyard while her mother cooks. At the beginning of the episode, when Gogo and Pula are walking along the pavement, *staging* is so well applied that you can see the two characters and the surrounding houses and streets and hills in the background. Such staging is used throughout the film. There are no distractions, so the viewer is completely focused on the action and the associated dialogue. Staging adds to the *appeal* of the scene, as the characters and surroundings are colourfully and realistically textured, with vegetation in the far hills and around the houses. Eye movements, body gestures, hand movements, walks and the attire of the characters all add to the appeal. Research was done with respect to the

clothing and the surroundings to make them as authentically South African as possible (Kharas interview).

Although the animation of humanoid characters is complicated compared to the use of simple armatures like the Luxo lamps in Lasseter's *Luxo Jr*, squash and stretch and *timing* help to emphasize differences in personalities since timing, which is the speed of an action, gives meaning to movement. Gogo's movements are different from the movements of Pula and the other children, demonstrating a difference in personality and even age. *Slow-in and slow-out* is demonstrated beautifully when Mr. Zee jumps off the bookshelf while Pula is talking with GG. He slows-out (speeds up/accelerates) as he jumps down onto the globe, and slows-in as he decelerates to a halt while still standing on the globe. GG squashes and stretches as she talks to Pula about humans killing insects. This adds to the 'naturalness' and realism of her anthropomorphized movements.

When the principles of 2D animation applied to 3D are used in a film, character and narrative appear to overshadow technology because the child audience does not interact with GG, for instance as a wall gecko or Mr. Zee as a cockroach, but as real characters, and are concerned with their relationships rather than what they really are in real life. This, I would argue, appeals to the children and helps them to understand whatever lesson the animated film seeks to propagate. *Secondary action* is seen in Mr. Zee's arms as he does not move all of them at the same time as he gestures. *Follow-through and overlapping action* can be noticed on Mr. Zee's antennae as he runs on the globe. This demonstrates a natural action that is seen is real life with insect antennae, further strengthening the argument that when movement is taking place, all body parts do not move at the same time and pace and do not come to a halt at the same time, even when the character stops moving. When Mr. Zee finally stops running, the antennae do not stop at the same time but go past

the stopping point before settling down. The use of pose-to-pose and straight ahead action, though rather different from the way it is done in 2D, is valuable in achieving realistic action in computer-generated 3D employing key frame animation, as in *MC*. The use of *exaggeration*,one of Disney's 12 principles, as observed by Lasseter (41), does not mean an arbitrary distortion of shapes and objects or the making of actions violent or unrealistic, but involves the animator going to the heart of the idea, developing its essence and understanding the reason for it, so that the audience can get the message being communicated. When Mr. Zee is running on the globe, it is an exaggerated movement that conveys his fear of humans. *Arcs* add to the essence of an action as they define the path of movement. The use of arcs in *MC* is extensive and adds to the essence of the actions of the characters, making the animated movements realistic. Thus 3D animation can be used realistically to represent cultural diversity to an audience of children from different ethnic backgrounds (in *MC*), provided the above-mentioned principles are invoked to ensure that the depiction of reality in animation is convincing.

With the application of these 2D principles to 3D, certain characteristics of 3D serve to position it as an entertainment and educational tool.

2.5 3D and its identifiable characteristics

The reason why 2D animation, paper-based and then cel, dominated 3D animation and the American industry during the early years in the history of filmmaking, suggests Furniss (18), is that these were applied around a central theory of Taylorism.[13] Clay or puppet animation requires a lot of effort and labor at the production stage, when objects are moved in front of the camera during filming by a

[13]Taylorism: a theory of management that analyzes and synthesizes workflows, with the objective of improving labor productivity (Wikipedia); it is an assembly-line method of production (Furniss 18).

small crew of animators. But paper and cel animation are also very labor-intensive during production, when animators do key poses or key drawings, and then many thousands of less experienced (and underpaid!) artists spend hours drawing the inbetweens[14] and colouring the thousands of images to be filmed.

The most identifiable characteristic of 3D animation is the 'realism' in the images. Many reasons for this realism can be identified. When Frierson talks about Art Clockey's "trimensional animation," he suggests that Clockey believed 3D animation is real because "it is photography of spatial reality" (24). He says that cartoon animation does not look real because it is abstract. Piaget's theory of child development suggests that children in the pre-operational stage (ages 2 -7) start gaining mastery over language as a communication resource, and as such, a learning resource, but still use imagination and play as tools for making meaning of their world. They cannot conceptualize *abstractly*, but "rely on concrete physical situations to make meaning of their life-worlds" (Baxen 8).

If children at this stage cannot conceptualize abstractly, then, following from Clockey's argument, they may not be able to make sense of cartoon animations because they are too abstract. Even though this study argues for the use of 3D as an entertainment and educational tool, Clockey's view about the abstract nature of 2D does not serve to enhance the realism of 3D or strengthen arguments in favour of its use. Nevertheless, it is unarguable that 3D allows for the use of a rich cinematic language which brings the medium as close to realism as live action.

Clockey refers to an interesting aspect of 3D animation that he calls "trimensional animation":

[14]Inbetweens: intermediate frames generated or drawn between two images to give the appearance that the first image evolves smoothly into the second image (Wikipedia).

> Trimensional animation looks real because it is photography of spatial reality. Cartoon animation does not look real because it is photography of an abstraction….You can see how abstract a cel drawing is if you compare it to a fine detailed drawing by a Dutch Master…. In cartoons they are working with a strong handicap of abstraction; whereas with trimensional animation we do not have that basic handicap. Trimensional animation satisfies our SPATIAL HUNGER without having to resort to tricks that don't really succeed, because our senses feel that the drawing is fake. In this sense, trimensional animation is far more sensual in its appeal. (Frierson 24)

Frierson points out that a photograph of a real space will look more real to us than a photograph of a drawing of a real space. He argues that dimensional animation (3D animation) is movement taking place in real space, and that our "spatial hunger," "our need to read depth into two-dimensional representations of reality…is better satisfied by a dimensional film…" (Frierson 25). Frierson suggests that an audience watching a dimensional film sees a 2D representation of 3D objects like puppets or clay characters, but when they are viewing a 2D film, they are seeing a 2D representation (a drawing) of a 2D representation of 3D objects. He therefore argues that in the case of a 3D film, its projected image is removed from reality only once, whereas in a cel film, its projected image is removed from reality twice, and for this reason 3D animation's "immediacy and presence" is conspicuous.

A number of points listed below, however, provide further possible explanations for the appeal and attraction to 3D animation:

- 3D animation simulates real space. Objects in 3D occupy space and there is space between them; hence a viewer of 3D animation gets a sense of movement in real space and therefore finds it easier to make sense of what is being watched. In Episode 1 of *MC*, the Morula Street sign post is seen further behind as Gogo and Pula are seen from a front medium close shot, emphasizing depth or the "z" axis that creates the third dimension in 3D, adding to the sense of realism.

- Casting shadows creates a sense of realism. As a 3D character moves and its shadow moves with it, there is the satisfaction of seeing movement that appears to be natural. In Episode 1 of *MC*, as Gogo walks along with Pula, the buildings on Morula Street are visible in the background and along the street. An electric pole casts its shadow on Gogo and Pula as they walk past it, talking to each other, and their own shadows are seen behind them. The casting of shadows in 3D animation is one of the aspects of the 3D aesthetic that add to its sense of realism.

- Camera zooms and different camera perspectives allow multiple views of an object, which also adds to the realism. In *MC,* when a book is picked from the shelf, it is seen as a book with thickness and an idea of its size can be inferred because it can be viewed from different camera angles.

- Walks and movements are not cartoony but have weight, making them realistic. The use of rigs in the modeled characters provides a 'skeleton' that helps to achieve these realistic movements. The possibility of 'skinning' these characters, that is, having a 'skin' around the 'skeleton' or the rigs, and the possibility of painting weights,[15] all add to realistic animated movements – walks, runs, jumps, dances and so on.

- Lip syncing that mimics real life speech patterns helps learning, especially for children learning new words and pronunciation.

[15]"Weight painting is an alternate technique for assigning vertices to vertex groups. The user can 'paint' weights onto the model and see the results in real-time. This makes smooth joints easier to achieve". (www.math.sunysb.edu)

- 3D backgrounds, hills, trees, plants in general, water, animals, houses, cities, cars etc., all look photorealistic and this realism adds to the overall appeal.

- Car driving games, for instance, may give children a real sense of driving and navigating along streets in a city which might prove useful later on in their lives.

- Facial expressions in characters together with body language create a level of realism that is not easy to achieve otherwise. But in the case of puppets made of wood, as already mentioned, the masters of puppet animation like Jiri Trnka achieved the equivalent of facial expressions through the use of body language and other creative means (Furniss 163).

- In *MC* Episode 1, as Pula and Gogo approach the door, Mr. Zee and GG, the anthropomorphized animal characters, suddenly appear across the cellar window and only Pula sees them. The look of excitement depicted by a smile and an expression of surprise on her face, alongside Gogo's facial expression shows how much CGI 3D animation can achieve in terms of facial expressions and the use of body language.

- Clothes, shoes, hair, teeth, skin color, etc. all look real, and hence add to the overall realism. This appeals to children especially, who see themselves in the characters and sometimes claim *to be* one of those characters.

2.6 Conclusion

This chapter has attempted to present 3D animation as a tool with characteristics that position it as suitable for representing cultural diversity among children of different ethnicities in South Africa, and for educating them about cultural diversity.

The aims of this research report include an investigation of the themes or lessons and their cultural perspectives in *MC*. It is argued that 3D animation can be used to promote vital cultural values and lessons among children of different ethnic backgrounds in South Africa, a country with a rich presence of diverse cultural groups and backgrounds. 3D animation can be used to re-package cultural values so to teach children, who otherwise tend to gravitate away from indigenous culture towards popular Western electronically-mediated culture, about the value of the former. There is also a need to be able to preserve traditional African folktales so to pass them from one generation to another. Since the tradition of oral story telling has largely been taken over by television and other audiovisual media, 3D animation would appear to be the ideal medium for the task.

Studies have shown that animation can be used as an educational tool. *Sesame Street*, an American educational television program, and *Takalani Sesame* in South Africa, among others, have proved that animation can be used to educate children as "it attracts a large and devoted audience of young children" (Lesser 234). Thus as a 3D animated TV series, *MC* is well positioned to be used for the purposes of educating its viewers. The next step is to assess just how well the program represents traditional African folktales to South African children from different ethnic and cultural backgrounds. Thus the next chapter examines issues of cultural diversity in South Africa as represented in *MC* Part 1.

CHAPTER 3 – CULTURAL DIVERSITY IN *MC* 1

3.1 Introduction

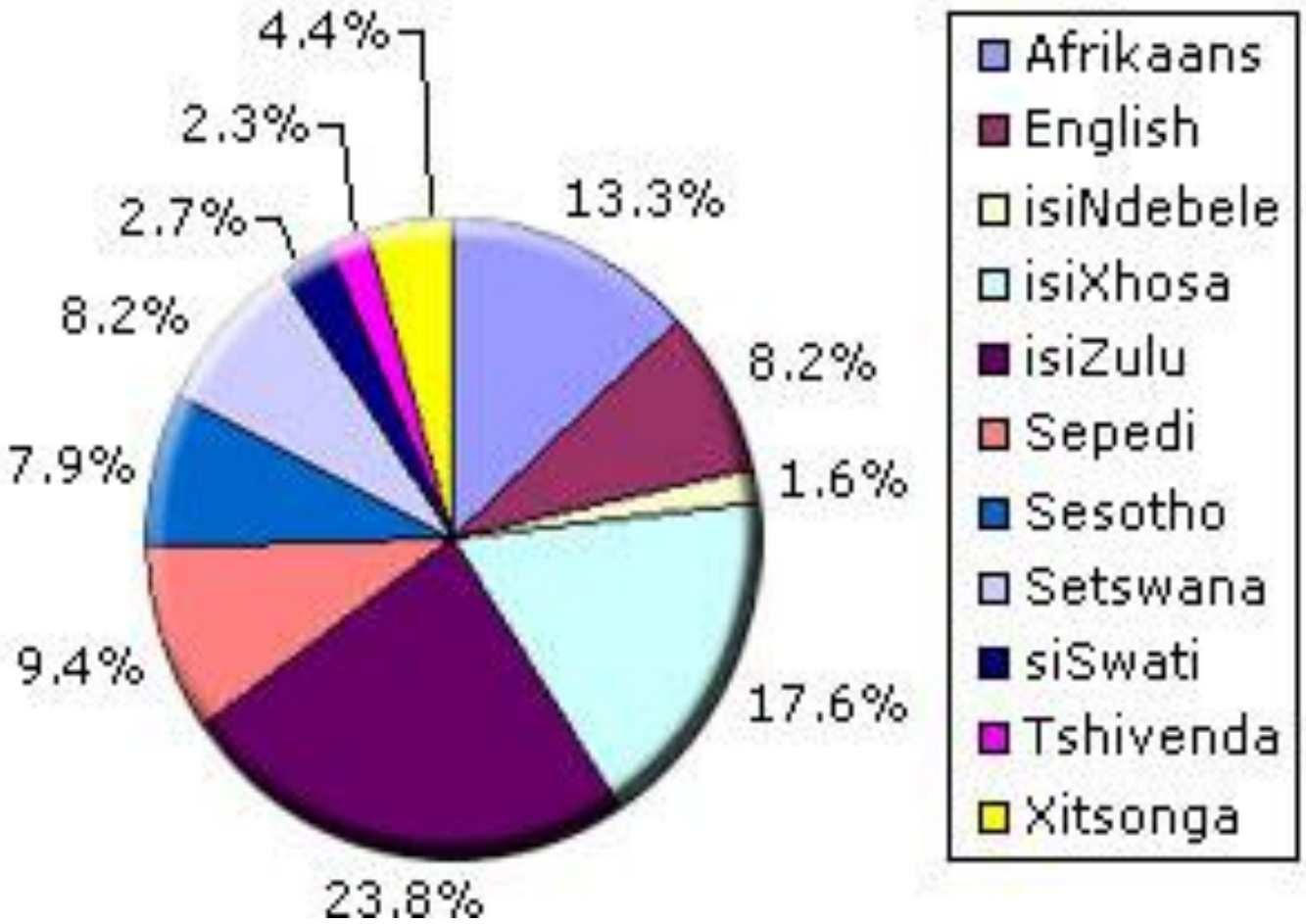
This chapter critically assesses *MC* in terms of how successfully it manages to present traditional African folk tales to an ethnically diverse audience of South African children in the 3–9 years age group using 3D animation.

MC is a 3D animated fantasy TV series which, in the same way as *Sesame Street*, presents an imagined neighborhood where the children – supposedly South African children from different cultural and ethnic backgrounds, White, Black, Chinese, Indian and Coloured – live and play. There is a cellar in the house where Pula (one of the children) lives, and it is in that cellar that Mr. Zee, an anthropomorphized insect, transports the children to the world of African folk tales, reading the stories from books.

3.2 Language as an aspect of cultural diversity

Since the crux of this chapter is cultural diversity, a significant consideration is the question of language. *MC* was released in 4 of South Africa's 11 official languages – English, Afrikaans, isiZulu and Sesotho. The demographic profile of South Africa in terms of its languages shows that "according to the 2001 census, 23.8% South Africans speak isiZulu, 17.6% isiXhosa, 13.3% Afrikaans, Sepedi 9.4%, with English and Setswana each at 8.2%. 7.9% speak Sesotho, and the remaining four official languages are spoken by less than 5% of the total population" (www.southafrica.info).

Language distribution in South Africa



Home language	Black	Coloured	Indian or Asian	White	Total
Afrikaans	0.7%	79.5%	1.7%	59.1%	13.3%
English	0.5%	18.9%	93.8%	39.3%	8.2%
IsiNdebele	2.0%	0.0%	0.3%	0.1%	1.6%
IsiXhosa	22.3%	0.3%	0.1%	0.1%	17.6%
IsiZulu	30.1%	0.3%	0.2%	0.1%	23.8%
Sepedi	11.9%	0.1%	0.0%	0.0%	9.4%
Sesotho	10.0%	0.2%	0.0%	0.0%	7.9%
Setswana	10.3%	0.4%	0.0%	0.1%	8.2%
SiSwati	3.4%	0.1%	0.0%	0.0%	2.7%
Tshivenda	2.9%	0.0%	0.0%	0.0%	2.3%
Xitsonga	5.6%	0.0%	0.0%	0.0%	4.4%
Other	0.3%	0.2%	3.8%	1.1%	0.5%
Total	100%	100%	100%	100%	100%
	35.42m	3.99m	1.16m	4.29m	44.82m

Source: (www.southafrica.info)

From the above statistics, one would expect isiZulu, as the most widely spoken language in South Africa, to be the first language of broadcast of *MC*, followed by isiXhosa and Afrikaans. English may be regarded as the *lingua franca* in South Africa, given that it is widely spoken and is the main language of instruction in schools, but the above statistics reveal that only 8.2% of South Africans use English as their main language of communication.

IsiZulu, isiXhosa, siSwati and isiNdebele are together known as the *Nguni* languages. These four languages have many similarities in syntax and grammar. Setswana, Sepedi and Sesotho - also known as Sotho languages, have a lot in common.

According to Adeelah, the producer of *MC*, the SABC – partners of Morula Pictures in the production of *MC* – is mandated to do programming in local languages. She points out that, because of similarities in syntax and grammar, "the choice of local black languages was an easy one" (Adeelah interview) for *MC*. She further mentions that isiZulu was chosen as a language of broadcast of *MC* because all South Africans who speak the Nguni languages understand each other, and it made sense to choose one of this group of languages to represent them all. The statistics above indicate that the total of approximately 45.7% South African children who speak the Nguni languages would understand *MC* when it was broadcast in isisZulu. Similarly, 27.8% of South African children would understand the Sotho version of *MC*, while the Afrikaans version would cater for approximately 13.3% Afrikaans speakers who are predominantly White. Adding these percentages together with the 8.2% English speakers would give a rough estimate of 95% of South African children who would be in a position to understand the *MC* broadcasts (and this does not allow for bilingual speakers of languages not represented).

3.3 The Department of Education

The South African Department of Education (DoE) in its Definitions and Outcomes of Learning Areas, (Curriculum Documents 24-25), present Arts and Culture as a Learning Area that seeks, among other things, to equip learners with an ability to "create, interpret and present works in each of the art forms…to reflect critically on artistic and cultural processes, products and styles in past and present contexts…" (25). An analysis of *MC* should seek to establish how effectively this TV series meets the outcomes of the DoE Curriculum Document recommendations when considered as an educational tool. However, according to the producers of *MC* (Adeelah interview), and the Head of Children Content Hub at the SABC (Goodson interview), *MC* was not conceived and designed as an

educational series in the strict sense of the phrase. The producer of *MC* says they were unable to secure the DoE's participation in the production: this would have required some lobbying, which they were unable to do because of the timing of the production process.

3.4 Theoretical overview and notes on culture

In this chapter, the themes that the series is trying to present are examined. Each of the characters Gogo, Pula, Marcus, Navitha, Melissa, Josh, Mr. Zee and Gecko Girl[16] is analyzed in terms of how they are representative of the many racial groups found in South Africa, and how their chosen age groups help children to identify with them and their experiences, thereby being educated while they are being entertained.

The design and modeling of the characters were done by South Africans, but because the proportions of the 2D drawings were not right, they were used only for reference purposes in the production studio, UTV Logo in India (Kharas interview).

Kharas mentions that research was done into the traditional costumes of each South African tribe from whose cultural repertoire any particular story being told in *MC* derives, so as to make the characters and backgrounds as authentic as possible. To this must be added considerations of the characters' speech (diction, accent and vocal tone) and actions, in order to assess their representativeness as South African children.

[16] Mr. Zee and Gecko Girl are anthropomorphized animal characters whose company the children seem to enjoy. Mr. Zee is the storyteller who reads the stories from books and Gecko Girl is a kind of 'assistant' to Mr. Zee.

Although the 3D animation production technique is employed in *MC* to evoke South African cultural diversity, the animators did not rely on technique alone but also used performance and narrative to deliver the intended cultural messages. It is perhaps necessary at this point to explore the whole notion of "culture" in this context.

The characters' modes of dressing and costumes, as well as their possible ethnicities[17] are discussed, together with their physical appearance, the costume colors used and the design of the backgrounds. Language use in terms of the dialects, accents and modes of speech in the dialogue and the stories told is looked at. Issues of love, courage, sharing, marriage, divorce and honesty that emerge in each of the 5 episodes that constitute *MC* Part 1 are looked at from a cultural point of view – even though these "issues" are better seen as lessons, as will be suggested in the next chapter.

The word *culture* means different things to different people. While a great many attempts have been made by theorists to define culture, a basic sense of the term is conveyed in the notion of those value systems within a society or group of persons that are passed on from one generation to the next, representing a pattern of human knowledge, beliefs and behaviour.

According to Slonim, "culture is a word used in referring to the totality of learned behaviours in the context of a social system. It exists only within the context of human society…" (3). This definition suggests that culture has to do with "learned behaviours" in a human society, a social system; and this research report seeks to demonstrate that 3D animation can be used as a medium of cultural

[17] . Ethnicity denotes a sense of identification with or belonging to a particular group…provides a sense of belonging…patterns our thinking, feeling, behavior…describes a sense of commonality…(Slonim 4-5).

representation in children's programming, that is, to represent learned behaviours in a social context, thereby positioning it as a 'learning' tool.

Slonim goes on to argue that

> culture may be thought of as traditional or learned patterns of thinking, feeling, and acting which become established in an ongoing social group and are transmitted from one generation to another. Cultural norms specify what must be done, what ought to be done, what may be done, what must not be done, and prescribe solutions to basic life problems…. (4)

As suggested in this research report, the tradition of oral storytelling is getting lost and giving way to electronically-mediated western cultures in modern 21st century South Africa. Although some theorists have argued that these western cultures, including TV for example, are not helpful to children,[18] *MC* is positioned as an electronically-mediated art form that has the potential to entertain and educate children through storytelling that teaches "what must be done, what ought to be done, what may be done, what must not be done, and [that can prescribe] solutions to basic life problems," as suggested by Slonim. If oral story telling is getting lost, then 3D animation is perhaps an appropriate way to preserve traditional folk tales and prevent them from dying out completely as it is possible in this medium to see, say, a tortoise speaking. Such 3D animations, once electronically preserved, can always be revisited and aired for future generations.

Since, as Marsh and Millard argue, "it is neither feasible, nor desirable, to arrive at a single definition of the term 'culture', which has been interpreted in many different ways by philosophers,

[18] . Brooky (3-4) , quoted in Marsh & Millard (138), argues that "perhaps the increase in the crime rate, the violence in society, the boredom suffered by children and teenagers (…) are connected to the thousands of not just wasted, but detrimental hours, young people have spent glued to the television".

anthropologists and social scientists over the centuries" (10), the meaning of "culture" should be considered within the context of any given social group. An analysis of cultural themes in *MC* involves looking at "aspects of culture shared by a large number of people" (Marsh and Millard 17) – in this case, groups of South Africans, as defined by language, class and ethnicity. Marsh and Millard suggest that children's popular culture can incorporate toys, games, comics, stickers, clothing, hair accessories, jewellery, sports accessories, oral rhymes, jokes, word play and even food and drink (Marsh and Millard 20), but argue again that these things are 'imposed' on children by adults with commercial interests. *MC* rather uses folk tales to represent cultural diversity to South African children, and attempts to incorporate a culture of play among children from different ethnic backgrounds, although this does not appear to be practically achievable as there could be tensions in terms of languages used.

Stuart Hall argues that "culture is about shared meanings" (Hall 1), and meanings are produced in and through language and representation. Meaning is produced, for instance, when viewers of an animated series like *MC* "*decode* the text according to their particular socio-cultural contexts and experiences" (Marsh and Millard 155). To the extent that the characters in *MC* are representative of different ethnic groups in South Africa, and the folk tales told represent the cultural diversity of the country, the experience for children of different backgrounds of watching the program could be important in creating culture (through the sharing of meaning), as well as preserving it in a more traditional sense.

3.5 Introduction to *MC* Part 1 – characters, costumes and scenery

The introductory shot in all the episodes opens with the sun rising above the horizon, with four African elephants in the foreground – three adults and a baby elephant. The camera tracks a leopard resting on a tree branch and pans down onto a traditional African hut, with a thatched roof, showing what African structures used to look like before the coming of modern building styles and the use of corrugated iron sheets for roofing. Gogo, seen in this opening sequence, a 63-year-old black lady, is a wise, cuddly grandmother who lives above the Magic Cellar where the children listen to stories. She understands what the children feel and how they think and speaks Setswana, isiZulu and English (*sabceducation.co.za*). She is seen seated and dressed in traditional Zulu attire – a spotted sleeveless blouse with colours that look like leopard skin, and a kind of 'turban' around her head with colourful beadwork around and across her face. She is wearing traditional Zulu bracelets of different colours, and a scarf around her waist on a blue skirt. These colours are attractive and give an impression of rainbow hues. On her left hand is a symbol of traditional authority made from an animal's tail. Her dress is clearly Zulu and showcases traditional Zulu attire and colors. Pula, Gogo's grandchild, who is 8 years old and in Grade 3, speaks Setswana and isiZulu. Her parents are recently divorced and she has come to live with her grandmother, Gogo. Charismatic and independent, she creates her own fun most of the time and loves books and storytelling. She is also dressed in spotted traditional Zulu attire and wears colourful beads around her arms and waist. She walks up to Gogo and bows a little with both hands clasped together, a sign of respect for the elderly widely practised in most African indigenous cultures. Slonim (4) suggests "a common pattern of dress" as one of the five criteria that define a culture, here seemingly instanced by Gogo and Pula. The camera then zooms to a chameleon on a tree branch, and then quickly onto a young boy and a huge snake under a tree; then

in a long shot another little boy is seen playing with a lion. These shots of African animals and backgrounds immediately suggest to the viewer that they are seeing some kind of fantasy world in which animals and humans interact and talk to each other. As these shots end around a table where all the children are seated with Mr. Zee closing a huge book, most likely a story book, child viewers will be positioned to imagine that it is indeed the world of folk tales that they have just been introduced to.

Mr. Zee, the storyteller, does not trust easily and is very wise. He loves reading and is good at science and technology. He protects the books in the cellar with great care, together with his friend Gecko Girl (hereafter referred to as GG). Mr. Zee is the voice of reason and caution (*sabceducation.co.za*) and I would agree because he is always counseling the children on how to conduct themselves with each other and their society at large. These establishing shots of *MC* suggest answers to Maureen Furniss's questions: "who made the product?" and "for whom was the product made?" (233). The product was made by Africans for children in Africa, with a view to promoting African traditional folktales, with cultural and educational themes.

GG's curiosity always gets the better of her. She wants to venture out of the cellar world but Mr. Zee does not let her. She sees people for what they are, calls a spade a spade and her naïve nature and curiosity is sometimes touching and revealing (*sabceducation.co.za*).

The other children characters in *MC,* Navitha, Josh, Marcus and Melissa are all in a similar age group. Navitha is of Indian descent and 7 years old. Her facial look and appearance are Indian, and she has the long hair and long sleeveless dress typical of Hindu custom. Her parents want her to appreciate Hindu culture, and she loves Hindu music and fashion. She likes the new world she is experiencing

with her friends and uses diplomacy to get her way. She is always the peacemaker (*sabceducation.co.za*). In a typical modern children's clothing culture, one would expect casual dress with no indigenous cultural note, but that is clearly not the case here. The whitish dot on Navitha's forehead between her eyebrows consolidates her Hindu identity, with the long hair tied into a ponytail at the back. She is modeled, as well as the other characters, to show their ethnic origins. Marcus is 'Coloured', and 8 years old in Grade 3. He speaks English and Afrikaans and loves sports; he loves to lead and is always voicing his opinion out loud (*sabceducation.co.za*). When the children come in contact with Mr. Zee and GG in the cellar, he expresses his dislike for books and his love for TV any time. This suggests that modern technological culture attracts children and as such could be appropriated as a learning tool. When Marcus expresses his love for TV but then ends up saying that books are great after enjoying a good story told from a book, the implication is that play can in fact have a "positive effect on both cognitive and literacy development" (Marsh & Millard 47). Josh is Jewish and stutters. A Grade 1 child, aged 6, he is an artist who crafts things out of junk, and an ideas person who loves to question everything. He lives with his father and stepmother and two half-sisters (*sabceducation.co.za*). His stuttering speech speaks to other children, helping them to understand that it is natural to stutter, and should be accepted as normal.

These children learn together as they play together. The importance of educating children not only in the classroom but also through edutainment is that children poorly educated within the formal system create a poorly educated society, which would in turn negatively affect the economy of the country. Informal education through TV helps to redress such societal imbalance.

Melissa is a young Chinese girl with a round face and blond hair. Her sky-blue dress and low, red sandals are casual but appealing as a mode of dressing for girls in her age group. According to the

creators of *MC*, she is 7 years old, in Grade 2, and wants to be in a profession that has to do with science and nature. She spends her free time when she is not playing with her friends studying at home or in the garden (*sabceducation.co.za*).

The characters in *MC* are designed and developed to appeal to young children, so that the messages that the programs bear are palatable and accessible to them.

3.6 Episode 1 – Where stories come from

In the initial establishing sequence of Episode 1, there is a close shot of a street name on a sign post that reads "Morula Street;" the camera then pans to a long shot with Gogo and Pula walking along the pavement, side by side. The realistic scene bears a close resemblance to most township neighbourhoods in South Africa, and this enables the children watching to identify with the environment where the action is taking place right from the opening shot. The cars zooming past in the background also suggest a modern-day setting, and the realism of their movements and sounds are pointers to what is practically achievable in 3D computer generated imagery, applying the principles of 2D to 3D animation. This scene confirms John Lasseter's point of view about *appeal* in 3D animation, when he says that appeal is "anything that a person likes to see: a quality of charm, pleasing design, simplicity, communication or magnetism" (Lasseter 42). He describes how "your eye is drawn to a figure or object that has appeal," and this is how the design of *MC* works, attracting children's attention with vivid or charming imagery. Children easily get distracted from the main program they are watching by peripheral activities (Lesser 86), so it is important to have appeal as well as strong character animation and narrative to help hold their attention to the TV screen. Pula is dressed in a short-sleeved yellow T-shirt and green pants with low-heeled whitish shoes – the texturing of her clothes is realistic and her black hair and black skin look natural and radiant (this is

achieved at the 3D production stage called *texturing* discussed in Chapter 1). Importantly, Pula is dressed both realistically and appealingly, since the context of *MC* is post-apartheid South Africa, where there is a mixture of cultures, indigenous and modern, African and Western, observable even in children's culture – clothes, shoes, hair accessories, etc. Pula's mode of dressing is popular with post-apartheid South African children of her age group. Her look might attract children viewing the series, encouraging them to identify with the Pula character – even fantasize about being Pula herself – and hence be more willing to be entertained and educated. Pula's childish girl voice serves to further add to her appeal. Her accent is clear and her expression in the English language is good. This is the case with most South African children in post-apartheid South Africa as they are taught in English in schools.

Gogo is dressed in a traditional sky-blue long dress with a headscarf to match the colour of the dress. This type of dressing is typical of modern day South Africa. The length of her dress can be seen to discourage short dresses that expose the body unnecessarily. Gogo's attire might be interpreted as an elderly person's setting an example to youngsters on how to dress in a way that promotes good morals and preserves your dignity as a woman.

Gogo is heard expressing her happiness that her grandchild Pula is coming to live with her, assuring her that she is going to have a lot of fun (*MC* Episode 1). The sound of Gogo's voice and her accent tell that she is an elderly black woman. Her speech is slow, clear and reassuring as she addresses the child. The child is made confident that, even though she might not be living with her own parents (Pula demands to know why they are divorced), she will still have fun in Gogo's house. Gogo, who can be considered as the voice of traditional culture and wisdom, in slow, measured accents tells Pula that these things do happen, and places a reassuring hand on the child's shoulder – a sign of

affection typical of a culture that promotes caring for the young and helping them overcome emotional grief. Gogo assures Pula that her parents still love her very much, in a close shot that emphasizes her facial expressions and lip movements. This kind and wise statement from Gogo might well speak to children viewing *MC* whose parents are divorced. Divorce is common in 21st century modern culture, but children still need the assurance that even though their parents might be separated, they still love their children.

According to Slonim (4), "predictable patterns of relationship and socialization between…mother and child…" comprise one of the five criteria that define culture. We see intimacy and frankness on Gogo's face as she talks to the child, who looks worried in a medium close up shot of her face. These facial expressions are possible because in CG 3D characters, facial expressions together with body language, achieved by proper character rigging and animation, create a level of realism that is not easy to achieve in other forms of animation.

There follows a long shot showing Pula and Gogo in silhouette, using the animation principle of *staging*, a feature of 3D animation that points the viewer's attention to the main action taking place, with no distractions. Gogo continues her advice to her grandchild, telling her that she cannot live with her mother as she would have liked because her mother has to go to work. This informs the child that in society there is a culture of work; that an individual has to go to work or be involved in an activity that generates income for the family, thus inculcating in the child an understanding of the importance of working in order to earn a living.

As Gogo and Pula walk towards the house, the other children are seen through a window. The camera zooms in on them looking out through the window: the expressions on their faces suggest

that they are looking forward to meeting and playing with their new friend. A culture of play is important for children: as Vygotsky has shown, during play children can achieve higher levels of cognition than at other times because they experiment with forms for representing the world, interpreting them according to their own socio-cultural contexts (Marsh and Millard 47). This can have benefits in relation to other skills children can learn, including literacy (46).

Although Pula complains that she left all her friends in her own home town, Gogo assures her that she will have a lot of good friends here in her new home, implying that she will have playmates. When children of different ethnic backgrounds get together to play, in the context of post-apartheid South Africa, the implication is that it is natural for all ethnicities to live side by side and for children to play together unencumbered by feelings of racial difference.

When Gogo announces "home sweet home" (*MC* Episode 1) to Pula, the camera tracks to a front view of Gogo's house, a modest-looking township house with cracks in the walls. A high camera angle reveals the courtyard and a low wooden fence, suggesting that security may not be an issue in this neighborhood, as it would be in a neighborhood with a high fence and live electric wires running round it. The large courtyard also suggests the availability of a playground for children, to assist in their growth, as opposed to the fate of those 'locked up' inside flats with no space to run around and play while at home.

As Pula and Gogo approach the door, Mr. Zee and GG, the anthropomorphized animal characters suddenly appear in the cellar window, though apparently only Pula sees them. Inside the house, there is modern furniture and painted walls with square tiles on the floor, suggesting a way of life that has moved away from traditional culture and acquired modern tastes in interior design. Pula

immediately puts down her bag, opens the cellar door and calls out but no one answers. Cellars are apparently unknown in South Africa but this one in Gogo's house appears to be a study, albeit imagined.

Marsh & Millard (50) suggest that children enter realms of fantasy and desire when they play, exploring issues of independence and agency. They argue that children become key players in events of their own making and that if there is an opportunity to learn from these play experiences, they take on powerful roles, with opportunities for even greater benefits if play draws from their popular cultural discourses. The implication here is that the context in which the post-apartheid South African child finds himself/herself on a daily basis, irrespective of the cultural background, should present opportunities for the child to feel free and explore their world while making meaning of it, having fun and being happy.

Pula's new friends, Navitha, Josh and Marcus have come to visit her. There is a cake on the table, a sign of friendship and celebration in a culture that encourages children to accommodate one another irrespective of cultural differences. Their modes of dressing, hair styles and shoes also are indicative of children's culture and add to the appeal of the characters. As they express themselves in English, their accents are marked by the influence of their mother tongue. Eight voice artists, all South African, were used in *MC*, with two voice directors and one vocalist. This ensured that the series was in every respect as authentically South African as possible (Kharas interview). Marcus in his stuttering voice says that Melissa would not come because she thinks Gogo's house is haunted. Children always have such fears, which are sometimes a result of stories they are told at home, including folk tales, hence there is need always to tell a story in such a way as to eliminate aspects that would be scary to

children. This is what the writers of the *MC* scripts did, in line also with SABC policies on children's programming.

When Mr. Zee opens the first story book to start reading the first story, the picture on the page shows traditional African huts in a typical African hamlet. This helps any child viewer to have an idea of what African houses looked like a long time ago. As the camera zooms in on Mazindaba and her child, a hut is seen at close range, with its grass thatched roof and huge cooking pot on a wood burning fire in front. This reveals a traditional cooking method typical of most cultures in the world, especially in rural, poor or just traditional communities. Mazindaba's child is seen sitting on bare ground and playing, with hills and mountains in the background. The mode of play is different from the type of play that children living in flats with no courtyards would engage in, and reveals to the urban child what rural life looks like. Mazindaba's dress, which appears to be made out of leopard skin, is also traditional and representative of her cultural background.

Bra Turtle takes Mazindaba and her child to meet the King and Queen of the spirit world to get stories. When they walk into the presence of the King and Queen, Mazindaba bows her head in an act of obeisance to authority. This is a common practice in traditional African cultures and indeed, cultures the world over, although this is losing its place in the face of modernity. The King and Queen speak to her kindly and grant her request, suggesting the role that those in authority ought to play in the lives of their subjects. The mode of dressing of the King and Queen is colourful, attractive to young children and representative of South African traditional cultural attire.

3.7 Episode 2 – The Tortoise and the Elephant

Episode 2 begins with a long shot of the children playing in front of Gogo's house. The two boys are playing soccer while the girls are seated, probably because they are not interested in playing, or because they see soccer as a 'boys thing'. This scenario showing South African children from different ethnicities and cultural backgrounds playing together is one of *MC*'s characteristic ways of representing cultural diversity as "normal," while using the enhanced realism of 3D animation for this educational purpose. Marcus hurts Josh while they are playing together, and Josh runs off, no doubt annoyed. The scene then moves to the cellar, a place dominated by the presence of books and the reading of books, and a reminder of the main idea behind the conception and creation of *MC*: the encouraging of a culture of reading among young children. African culture and tradition most of the time portray men as warriors, a role that assumes the use of violence in solving problems. When Mr. Zee says to the children that humans should learn that brains are better then brawling, he is referring to a cultural and social phenomenon that requires serious attention.

"The Tortoise and the Elephant" is a story set in a mythic time when animals had human voices and could walk like humans. This kind of fantasy, to which children are drawn, is easily achievable in animation. To realize such a story in film is ironically also a good way of preserving cultural values that are in danger of being drowned in the 21st century flood of technology.

There is a running competition between Elephant and Tortoise to determine who would own and eat the *morula* fruits that Tortoise had gathered. The elephant is huge, strong and fast and naturally, would be expected to win the race. But the tortoise is slow, cunning and intelligent. Tortoise comes up with a brilliant plan to win the race. A question might arise here as to whether the depiction of

the trickery and lies that are part of the tortoise's plans does not encourage a culture of dishonesty among children. At the same time, it is abundantly clear that the use of wisdom wins the 'races' in life, as opposed to the use of force, as embodied in Elephant's attitude. Such a message might be handy to children growing up in a post-apartheid South Africa, where a lot of young people resort to the use of force in hijackings, armed robbery and muggings to wrongfully and unlawfully get what they want. The elephant ends up weeping after losing the race, making it clear to young viewers that those who believe they are strong and engage in bullying and intimidation usually end up as losers and in tears, having suffered defeat.

The camera zooms in on the tortoise in front of a heap of *morula* fruits. The background of rural scenery provides a salutary change of view for children who live in cities, where all they see is buildings, cars, roads and technological gadgets. It also evokes the existence of another environment outside of the city centres that urban children are accustomed to, portraying the diversity of the country also in terms landscape and habitat. The modeling, texturing and animation of the elephant and the rabbit are a display of the revolution that the invention of the computer brought to the world of animation through computer graphics, computer simulations and computer animation (Bendazzi 439).

At the end of the episode, the children divide *jaw-breakers* among themselves in a spirit of sharing, a gesture that discourages greed. This scene is accompanied by South African folk music, a soundtrack that emphasizes the 'Africanness' of the story as a whole.

3.8 Episode 3 – Shakutara

At the beginning of Episode 3, Pula is seen sitting on the lower step of the stairs in front of Gogo's house. Navitha and Melissa arrive and Pula tells them her father is coming to take her out for the day. According to Slonim (4), "this predictable pattern of relationship" between father and daughter is one of the criteria that define culture. Pula's father is running late because he is still at work and she is not happy about it. GG complains to Mr. Zee that adults should not break their promises. She is feeling sorry for her friend Pula, and as she speaks she uses the expression "eish," which is popular South African slang and a clear marker of a shared cultural identity. But wise Mr. Zee tells her that adults would usually have a good reason for not keeping their promises, and are not allowed to leave work at any time they want to. The lesson here seems to be that children need to learn to be patient, especially with their parents, and to understand that parents would usually have a good reason for not keeping a promise. Mr. Zee nevertheless tries to console her with a story, assuring her that it would make her happy because stories have the power to make you cry or laugh and be happy. This reinforces the idea that stories are valuable and that the cultural activity of storytelling is worth preserving.

The story begins with the camera tracking and zooming through trees to reveal a 'holy' man sitting under a tree next to the house where he lives with his daughter Shakutara, "the kindest and most beautiful girl in the whole wide world."

Shakutara, dressed in a colourful outfit that is representative of the Hindu culture, is seen fetching water from the river, which she offers to a stranger, dressed in similar colourful Hindu attire, arriving on horseback. Inasmuch as this encourages kindness even to strangers, it is not perhaps a gesture

that ought to be encouraged in post-apartheid South Africa where children and women are targets of violent crime and rape.

The marriage ceremony between King Bashurata and Shakutara is simple and traditional, and they receive the blessing of the holy man, Shakutara's father. The King offers Shakutara a ring, which is a symbol of love and commitment to a relationship as practised by most South African cultures. The combination of two different modes of marital commitment evokes cultural diversity in marital matters.

In this episode we see that the King's royal advisers, dressed in colourful loin cloths and wearing bracelets and masked faces that portray their particular culture, are furious that their King has run off with a "simple maiden" – an appellation that suggests discrimination against the young lady Shakutara. When the King's advisers finally find him in the forest with Shakutara and suggest he comes back to his palace where his services are needed, the King tells Shakutara that he has to go because there is a lot of work for him to do. The King's advisers call him by a royal name, '*saya*,' a sign of respect in African cultures as a King may not be referred to by his real names. Back in the palace the King is kept busy, a sign of the commitment of any leader to his people in every culture. But the King's chief adviser is delighted that he has won his 'battle' against the young lady Shakutara, and later returns and steals the magic ring given by the King to Shakutara. This will cause the king to forget her forever. This violence against a young lady is committed by a male figure, an adviser to a king, a ruler of people and a custodian of the culture and traditions of a people. Clearly he is intended to be a shameful figure, a negative example for young viewers.

At the end of the episode, the king is reunited with his love Shakutara, while Pula's father arrives to fetch her. Mr. Zee concludes that when you truly love someone, you will not forget him or her. These are aspects of culture that are affected by learned behavior, just as aspects of personality are shaped by experience, as this story suggests. The presentation of the King as a man in authority whose community depends on him to sign papers and make decisions that affect the entire community is a vital cultural lesson to children in understanding traditional African society.

3.9 Episode 4 – Birds of Clay

Episode 4 begins with the children seated around a table in the cellar and playing a game. Pula, who owns the game, throws the dice twice while the others throw only once. She argues that the game is hers so she has a right to throw more than once. She is depicted as showing greed, a characteristic typical of most children at some stage. The game, on the other hand, is a part of the children's play culture and its use here encourages children to play games in a group, which is good for their social and cognitive development because they are experimenting with forms and interpreting them according to their own socio-cultural context (Marsh and Millard 47).

The setting of the story shifts to Lesotho, and the characters in the story are immediately recognizable as Lesotho nationals because of their traditional dress, a vital criterion for identifying a culture. The subject of discussion is famine, and the landscape is modeled with little vegetation so as to depict drought and a lack of food. A woman's voice sings a traditional song suggesting to any listener and viewer the location and setting of the story being told. When a young girl asks her granny why there is no grass for the animals to eat, the granny, usually the voice of wisdom, tells her a story about a great mistake all the people of the world made long ago. The farmers go to consult

their King, who is dressed in leopard skins, as is the case in present day Lesotho. (It is a practically universal cultural practice for subjects to go to their leader when there is a crucial problem to be solved.) The story reveals the need for people to share and not be greedy, as the consequences of their greed may come back to haunt them. Similarly, the consequences of taking wrong action taken against someone as a result of hatred could lead to one's own suffering in the future. It was the effort of one little girl who made clay birds and prayed to the Great Spirit to transform them into live birds, that things turned around. She had to give up a dream of owning her own pony so that the Great Spirit could turn the clay birds that she had made into live birds. Such an attitude encourages children to learn to give up their personal needs and luxuries in order to meet the needs of others.

Pula has a change of heart after listening to this story and promises to share all she has with her friends fairly, much to Marcus's amusement.

3.10 Episode 5 – The Hare and the Jackal

Episode 5 begins with a debate on whether it is good to tell lies or not; or whether it is perhaps okay just to bend the truth a little to protect oneself. The topic of discussion has arisen because a cellar window has been broken by Marcus and Josh, and they are not initially willing to admit their guilt. Mr. Zee then tells them the story of "The Hare and the Jackal." The hare had been taught by its mother always to tell the truth, a life lesson appropriate to the role of a responsible mother in the life of a child within their particular socio-cultural context. But faced with imminent death, the hare had to bend the truth a little to save itself from being eaten by the jackal.

3.11 Conclusion

The description of each of the characters Gogo, Pula, Josh, Marcus, Navitha and Melissa presents a diversity of children from different backgrounds, which impressionistically mirrors the demographic profile of South African children. But even though they are different from each other in terms of their personalities and cultural backgrounds, they still enjoy the traditional folk tales together, play together and interact with each other. In each of the episodes, the costumes of the characters, the backgrounds and the speech, including the accents and popular slang, are a representation both of the ethnic group from which the particular story has been taken and of the tolerant and accommodating multiculturalism within which ethnic identity exists in South Africa today.

The next chapter analyzes educational material in *MC* Part 1.

Chapter 4 – *MC* as an Educational Tool

4.1 Introduction

This chapter focuses on those aspects of *MC* that might be considered educational. Even though the producers of the program say that it was not originally designed as an educational program (Adeelah interview), *MC* nevertheless has a clear didactic orientation.

As Bulbulia puts it (19), the political economy of the media "*focuses on media content as representations of reality*" (emphasis mine). Lesser (xxiii) mentions that aside from sleeping, the one activity that children engage in most of the time is watching television. If a television program like *MC* is construed as a representation of reality, to the extent that it addresses the very real issue of cultural diversity, then children as viewers can benefit from it. Among other reasons, "the success of *Sesame Street* convinced many people that it was possible both to produce entertaining programming for children and at the same time to make that programming beneficial to them" (ibid.). In the South African context, programming for children as defined by the SABC Education Children's Hub includes delivering programming that promotes the intellectual, spiritual, emotional and physical development of children and advances their potential contribution to nation building; distributing content aligned with SABC platforms and channels SABC 1, SABC 2, and SABC 3, and including SABC radio, and other stakeholders, that is innovative, accessible and offers choices to children ; implementing an inclusive approach in programs with emphasis on disability, language, and the rural/urban divide so as not to just have programs for urban areas all the time; and to develop animation capacity so as to deliver quality locally produced animation for children (Goodson

interview). The chapter begins with a review of what theorists have said about education and animation.

4.2 Theoretical perspective

Most children learn by observation and listening, which does not require direct teaching for efficiency. Thus in animation, implicit attitudes and values like kindness, tolerance, honesty, and sharing are communicated indirectly through the actions of the animated characters (Lesser 80).

Marsh & Millard maintain that the "media (have) the power to educate and inform (…)" (6), and studies have shown that animation can be used for educational purposes. *Sesame Street*, as already mentioned, an American educational television program, among others, has proved that animation is a fit medium for educating children as "it attracts a large and devoted audience of young children (…)" (Lesser 234). Thus *MC*, as a comparable 3D animated TV series, certainly has the potential to serve an educational purpose. This chapter will examine *MC* in order to identify what is educational in the series, even though, according to SABC Education (Goodson interview: 2010), *MC* was not originally conceived and commissioned as an educational program.

MC is an animation designed primarily for children of the Grades 1-5 age group, which is educationally advantageous because these early years comprise "the period of most rapid learning" (Lesser 76). Lesser argues that the earlier we reach out to children, the better, as this accelerates their development. More specifically still, in a DVD entitled *How Children Learn*, San Luis Obispo argues that "all cultures for thousands of years have noticed that at about 6 years of age, children are ready for and desirous of a new kind of learning experience." This precisely is the age group targeted by *MC*, and "new kind of learning experience" that it has to offer. With the advent of modern

technology, many children are drawn to hi-tech culture that influences their lives in areas like clothing, hair styles, play, and computer games and – as Mittell has noted (34) – it is children for whom animation appears to have particular appeal. Because of the inherent appeal of the medium, then, an animated TV series like *MC* may have great potential to be educationally useful (see also Wells 233).

Animation has in fact been used as an educational tool since the 1950s in the USA (Mittell 34). Khairezan (2002) suggests that "students who learn from animation have greater self-esteem and motivation; [they] may retain information and sustain the learning process." These arguments position animation in general and 3D animation (because of its spatial characteristics) in particular as a medium apposite for education, because, children "are, in fact, as active in their meaning-making in relation to television as they are when reading books or magazines" (Marsh and Millard 140).

With reference to *Takalani Sesame's* Statement of Educational Objectives, it is worth mentioning Piaget's theory of child development and Vygotsky's socio-interactionist theory. These two theories basically aim at suggesting how children learn. The Piagetian theory offers a framework for understanding the nature of human development during childhood while Vygotsky offers perspectives on how and under what conditions learning takes place (Baxen 7). Piaget suggests four stages of development for the child: 0 – 2 years which he calls the sensori-motor stage; 2 – 7 years, the pre-operational stage; 7 – 11 years, the concrete operational; and 11 – 15 years, known as the formal operational stage. Piaget suggests that children in the pre-operational stage start gaining mastery over language as a communication resource, and as such, a learning resource. At this stage, Piaget suggests further, children use imagination and play as tools for making meaning of their world; they cannot conceptualize abstractly but "rely on concrete physical situations to make meaning of

their life-worlds" (Baxen 8). Children in the concrete operational stage, however, also belong to the age group being examined in this research. They are beginning to gain more control of their environment as they accumulate experience of the world. Here, they can "conceptualize, make deductions, create logical connections and explain their physical experiences, and make inferences" (Baxen 8).

Vygotsky proposes that "social interaction plays a fundamental role in the development of cognition" (*psychology.org*) and that "how and what children learn is contextually bound and as such, culture-specific" (Baxen quoting Piaget 8). He emphasizes the role of language in learning and the specificity of the cultural context in determining cognitive development.

Because 3D animation purports both to represent the world realistically and to interpret it in a way consonant with the artistic vision of the producer, it is a medium capable of appealing on a variety of levels. Watching *MC* may be an experience different for a ten-year-old from what it is for a six-year-old, but no less valid in educational terms.

Khairezan, quoting Kearsley (2002) maintains that "students who learn from animation have greater self-esteem and motivation; may retain information and sustain the learning process." Quoting Reeves (1998), he argues that "animation learning can stimulate more than one sense at a time and that may be more attention-getting and attention-holding" (4). In terms of Vygotsky's conditions for learning to take place, the child's interaction with content on TV typically occurs in a secure and less threatening environment than the school classroom. Thereafter, it is the content of the material and the way it is presented in relation to context that matters.

The research questions asked in this study are: can 3D animation be used as a supplement to the classroom by helping to educate children through popular media forms? To what extent can 3D

digital technology in the form of animation (among other forms of animation) be used in educating children on issues of culture in a society? In other words, echoing Mayer and Moreno, "we aim to understand how animation can be used in ways that are consistent with how people learn" (88). This study is therefore attempting to examine how well *MC* represents traditional African folktales to a diverse audience of South African children from different ethnic backgrounds, using 3D animation as an educational tool.

It is worth noting that in the Western Cape in 1992 the Children's Rights Charter was drafted and as such, South Africa places the needs of children high on its political agenda (Bulbulia 3). Children's needs are given first place throughout the government's programs, services and development strategies (ibid.). The DoE in South Africa is committed to ensuring equal educational opportunities for all South African children. And the DoE, as an arm of government, supports programming for children on TV that is deemed to be educational.

MC presented traditional African folk tales in such a way as to be educational for its young viewers. In the analyses that follow, what is considered educational is deduced from the stories as they are told, even though each story is designed to present particular moral lessons.

4.3 Episode 1 – Where Stories Come From

In Episode 1 the establishing shot is a street in the neighbourhood where Pula is going to be living with Gogo, her grandmother. The first image in the shot, a close-up of a sign post with the street name, *Morula Street*, suggests the need to be conscious of where one is at all times. Incidents of children missing their way home from school or children being kidnapped and taken to unknown destinations are common. A child who pays attention to and takes note of street names will likely

recall where s/he came from, and where he or she is at any point in time. As Pula and Gogo walk along the street talking, they are passed by only two cars. But the fact that there is not much traffic does not mean that they should walk on the main road, hence they walk along the pavement, not only because it is intended for pedestrians, but because it is safer for pedestrians, reducing the possibility of being knocked over by a passing vehicle. This is important in South Africa, where many of the road accidents are suffered by pedestrians.

As they walk along, talking, careful consideration has been given to language, especially the tone. Gogo is telling Pula in a soft, calm and loving voice that she is happy Pula is coming to live with her. Although Pula's response is not a happy one, especially when she asserts that she wants to go home, asking Gogo why her mother and father had to get divorced, Gogo, in the same vocal tone, explains the situation in a way that helps Pula make meaning of what is going on between her parents. As Baxen has pointed out with regard to *Takelani Sesame*, "(adults) explain events and things happening in the environment in ways that allow children to make meaning of their experiences" (13). Children learn from interaction, especially if the one they are interacting with is more knowledgeable or competent than they are. This, according to Baxen, supports the active participation of children in their own learning (ibid.). When Gogo tells Pula that she will have a new life full of adventure in her house, it could be implied that Gogo is saying she will have an opportunity to play. As already mentioned in Chapter 3, children can learn from play. When Gogo announces their arrival at her home, there are subtle voices of birds and sounds of 'nature' heard in the background. The adventure begins almost immediately as Pula spots Mr. Zee and GG through the cellar window. The creatures immediately arouse her curiosity, children being naturally curious and drawn to fantasy worlds. She drops her bag as soon as she enters the house and heads for the cellar to look for Mr.

Zee and GG, reminding us that children are curious because they want to know and understand the world around them and make meaning of what they see or hear. Her curiosity is further emphasized by her looking around and appraising the contents of the cellar, while Mr. Zee hides himself since he is afraid of humans. GG's observation that humans are those who kill insects, who gas and squash them, evokes a feeling of sympathy for her and as such acts as a lesson to children not to kill animals. She further tells Mr. Zee that when she closes her eyes she is hidden from the view of any human. Mr. Zee replies to GG that you cannot hide by closing your eyes. This is typical of children, who may hide their faces and not be aware than their whole bodies are still visible. It is important especially in a situation where a child is expected to hide from child stalkers and other criminals who abduct children for various nefarious reasons. Or, a child may simply need to hide when there is an abnormal activity taking place around where s/he is.

The children in the neighborhood who are supposedly South Africans of different ethnicities are in Gogo's house to welcome Pula with a cake. It is a sign of friendship and an important lesson to children in the new South Africa that they are all one people in one nation and are not expected to live separated from each other on racial grounds: this is the implication of the fact that these children to all be found living together in the same neighborhood. The wide ethnic and racial variety represented by the group of children is not entirely realistic, but it is entirely possible in imagined neighbourhoods encountered in fantasy worlds. What matters is that the viewers absorb and internalize the "naturalness" of the situation portrayed in relation to the plausible setting and the action.

The story told in Episode 1 is read from a book. The view expressed by Marcus as the children enter the cellar to look for the creatures, that books are boring, is a view believed to be held by many

children, especially in the 21st century when technology is taking over almost every aspect of children's lives. However, these children enjoy a good story and at the end Marcus is heard acknowledging the usefulness of books. It is an encouragement to read, with the implication that the future population of the country will be more literate and society will be a better place as those who are educated are less likely to turn to crime and other societal vices. *Bra Turtle* takes Manzindaba to meet the King and Queen of the spirit world and on arrival she bows before the King and Queen as a sign of respect, showing that children should respect those in authority: their parents, older siblings, teachers, government authorities and generally those in positions of responsibility in a given society. The kind response of the queen to Manzindaba at the end of her story suggests that those in authority are not there to bully and lord it over their subjects but to speak kindly to them and give fair consideration to their requests (Manzindaba's request to be able to get stories for the human world is granted). Mr. Zee ends up by telling the children that stories are for all the children in the world to share, thereby subtly introducing the advice not to keep good things, physical or otherwise, to oneself, but to share them with others. Episode 1 ends with a celebration of friendship among the children and Mr. Zee and GG, which again models appropriate, constructive behavior.

4.4 Episode 2 - The Tortoise and the Elephant

Episode 2 begins with a high camera angle. The children are seen playing in front of Gogo's house. The three girls are seated while the two boys are playing soccer. When children of different genders play together, there is an implicit lesson of gender 'equality'. That is, children are encouraged to play together with each other irrespective of their gender. This will help to prevent them from developing sexist attitudes.

The girls walk away from Marcus after he hurts Josh while they are playing soccer, as a way of expressing disapproval of his rough manner of playing. In the cellar Marcus is still being blamed for what he did to Josh. In a South African nation where violence is endemic, there is a need to educate children to shun a culture of violence. This sequence is in accord with one of the Editorial Policies of the SABC on children's programming that discourages depictions of violent behaviour or requires that they be appropriately "framed" (15).

There is an important health lesson for children when Navitha offers jaw-breakers to Pula and Navitha. When Pula complains about her teeth not 'liking' the sweets, Navitha advises her to suck the sweets and brush her teeth afterwards. This seemingly unimportant statement from Navitha references both a major cause of dental problems and standard dental care behaviour. Children need to be educated on the need for dental care at an early age as this will save them a lot of trouble when they are older. Pula cautions Marcus not to play so roughly, a lesson every little child needs to learn, as unnecessary falls and bruises that can lead to hospitalization should be avoided. The theme continues in the scene in the cellar, where GG wants to fight with Marcus for playing roughly with Josh, but Mr. Zee's timely intervention prevents this. He gives them a little lecture on avoiding violence as it is not the answer to problems. It is ironic and humorous that it takes an insect, Mr. Zee, to point out that the human race should learn that brains are better than force, an idea that would make the world a much better place if children could all grow into adults with it in mind. The story of the Tortoise and the Elephant that follows helps to emphasize the point of using one's brains to win life's battles as opposed to using physical force. When the Elephant uses his strength to take Tortoise's *morula* fruits, this is typical of bullies (like thieves, hijackers and bullies in schools) who wait for others to toil and acquire possessions, just for them (the bullies) to come and appropriate

what they never worked for. The calm and friendly tone adapted by Tortoise as he argues with Elephant over the fruits further illustrates the need to not meet violence with violence, the eye-for-an-eye principle. This is an important lesson for children: to always maintain self-control when confronted by a bully (as happens all too often in our primary schools). Navitha emphasizes after the story that any problem can be solved without fighting, with which they all agree. An important lesson on the use of the mind to solve problems emerges. A guilty Marcus also makes peace with Josh, demonstrating that people do not necessarily have to become enemies when they have a disagreement, and can apologize for doing wrong and expect the ones they wronged to forgive them, as Josh forgives Marcus.

4.5 Episode 3 - Shakutara

Episode 3 begins with a sad Pula waiting for her father to come and take her out. Mr. Zee has to comfort her by reading another story. The beginning of the story describes Shakutara as a kind, beautiful girl. That kindness is immediately shown when a stranger shows up on horseback and Shakutara offers a drink of water to the stranger and his horse. Her behaviour here models hospitality for the young viewers of the program. Her marriage soon afterwards to the "stranger" (whom she only later discovers to be a king) has the implication that people only get married when they love each other, and not for selfish reasons like greed for material wealth, which is common in 21st century society. King Bashutara gives Sahkutara an expensive ring as a sign of his love for her, implying that we can give good gifts to people we love. Shakutara's father comforts her when King Bashutara leaves, making obvious the role of a parent figure in the life of a child. This has a message for young children to always turn to their elders for comfort. The comforting elder can be seen as a real source of solace, for which drugs and other forms of destructive habit that children have been

known to turn to when they are broken-hearted are a substitute. As the King's advisers tie him up with a lot of work, the King is unaware of the evil plan of his chief adviser to destroy his marriage with Shakutara. In this wise, children are being taught to understand that not all those who are close to you and pretend to be loyal friends are necessarily honest and genuine, even though the episode appears to focus more on marriage then this underlying lesson. The love-at-first-sight encounter between the King and Shakutara that ends in a quick marriage ceremony does not portray well to the young viewers issues of courtship and other important points to consider before marriage.

4.6 Episode 4 - Birds of Clay

Episode 4 begins with a long shot of the children seated around a table in the cellar, playing a game. The importance of play for children has already been mentioned in the previous chapters, with the understanding that all forms of play are important because they help children to learn (Marsh and Millard 46-47). The game the children are playing is a model for behaviour in real life because there are rules that must be observed for the game to be a game. There is an argument because Pula insists on throwing the dice twice instead of once, on the ground that the game belongs to her. This argument and its sequel conduce to a lesson for the viewer on the importance of not being greedy. As suggested by Baxen, children are egocentric, seeing the world from their point of view and not really caring about nor understanding other people's viewpoints (11). Mr. Zee tells himself that Pula needs to learn an important lesson, and he intends to teach her that lesson by telling the children a story. The implication here is that stories have lessons embedded in them. A bird flies into the cellar through the window and the children are all agitated, but the event demonstrates to them that birds are gentle and should not be harmed. Children have been known to throw objects at birds and in rural areas they are killed for food or even just for fun. If children grow up with an understanding

that birds should not be harmed then it is beneficial to the country, because certain species of birds found in South Africa are not be found elsewhere in the world. Birds attract tourists who come to do bird watching and scientific research, thereby generating income for the State.

The story begins with the little girl Palesa and a man on horseback talking about famine. The point of their discussion is underlined by background scenery that is completely barren, with bare hills and dry ground. Such images serve as a way of teaching young viewers to recognize a natural situation like drought by looking at pictures that depict that situation. Children are once more taught the need to respect those in authority when the farmers go to their Chief to ask for permission to kill all the birds because, according to them, the birds were eating their seeds. Even though the Chief tries to convince the farmers to let the birds eat some of the grain because birds are friendly, the farmers prevail on their Chief to have him permit them to kill the birds. Then locusts come in swarms and eat all the crops, as there were no more birds to eat the locusts. The emerging lesson here is that one wrong action taken against someone as a result of hatred could lead to one's own suffering later in life. In the course of Mr. Zee telling the story there is a suggestion by Marcus that in nature everyone must share. Children need to learn this important lesson of life because greed or the inability to share leads to a life where people do not care for one another, which can be a cause of misery, especially for the weak and poor in society. The greed of the farmers got them into trouble when the swarm of locusts landed and ate their entire crop. Children are being educated on the consequences of bad deeds, which could refer to any activity that society frowns upon, like stealing, willful destruction of property, and an unwillingness to help those in need.

A turning point in the story is when Palesa works the whole night to make clay birds that she intends to ask the Great Spirit to turn into live birds because she has a desire to help her people. If all

children are made to see the importance of helping people in trouble, then there is a possibility that when those children become adults they will be willing to build a society where the needs of everyone are taken into account, making the world a better place. Praying to the Great Spirit has a religious connotation to it. While not everyone may be religious, most humans have some belief in a Higher Being, whatever name they choose to call that Being. And the one big lesson at the end of the day is that there is an unseen *force* with the power to make things possible that are impossible in the eyes of humans, like turning Palesa's birds of clay into live birds.

Giving up owning a pony in order to help her people is a lesson in 'selflessness' that Palesa demonstrates, with an implicit message for children to know that it is a worthy thing to give up one's personal comfort and luxuries in order to meet the needs of others. That is called kindness.

4.7 Episode 5 - The Hare and the Jackal

The last Episode of *MC* begins with a lesson on thoughtfulness and avoiding panic in the face of an unpleasant situation. Mr. Zee and GG are alone in the cellar and GG tells Mr. Zee to stop and think each time he loses his glasses. Many people do not have the patience to stop and think calmly when faced with loss or a disturbing situation. When Marcus and Josh break the glass of the cellar window, they try to hide the truth, and a lesson for children that emerges here is that it is wrong to lie. Even though the story that follows promotes the need to bend the truth a little, especially in the face of danger, the need to own up to one's mistakes is unmistakeably endorsed.

The hare asks the jackal if he has ever considered being a vegetarian. This statement could confuse children into thinking that a carnivorous animal like the jackal could become herbivorous if it chose to. However, in a culture of *braais* and excessive meat consumption like the South African one, this

could serve as a lesson on healthy living for the average child. The hare also tells the jackal that is important to drink lots of water every day. The importance of water in the human body cannot be overemphasized. Water is life, goes a popular saying. According to a UN report on water, "lack of access to water for meeting basic needs such as health, hygiene and food security…inflicts enormous hardship on more than a billion members of the human family" (UN xix). As the jackal consents to the hare's invitation to have a drink of water, there is a concomitant suggestion that whenever one is given good advice it should not be ignored.

At the end of the episode it is agreed that the hare lied, but only in order to save its life. The message comes out there that as long as one is in the way of death or harm to oneself, it is acceptable to lie. Mr. Zee makes a point of stressing that it is only in times of danger that one is allowed to hide the truth. His point will discourage children from making a habit of lying.

Gogo's reaction to the breaking of the cellar window by Josh and Marcus is a good suggestion on how to treat anyone who accidentally does something wrong. Adults do not necessarily have to scream at children who make mistakes or are naughty, but should talk to them gently and help them to see where they went wrong.

4.8 Conclusion

To have children depicted as talking and accepting each other's point of view can deliver an important message: to accept another person's point of view and put yourself in their position is vital to meaningful co-existence.

The educational lessons arising from or depicted in *MC*, as discussed in this chapter, together with the issues of cultural diversity discussed in Chapter 3, lead to reflection on the way forward for

animation in present day South Africa. Television sets are found in almost all South African homes, and with the coming of the Digital Terrestrial Television (DTT) soon, children will be exposed to more animated content, especially from overseas countries. South African broadcasters will need to be more creative in delivering educational content in order to keep their own audiences.

The next chapter explores these issues in depth, and includes some personal reflections and suggestions for animation in South Africa.

CHAPTER 5 FINDINGS AND RECOMMENDATIONS

5.1 OBSERVATIONS/RECOMMENDATIONS

In this concluding chapter, I present my findings on how effectively *MC* represents traditional African folk tales to an ethnically diverse audience of South African children in the 3 – 9 years age group, using 3D animation for educational purposes. I also present my recommendations on a possible way forward for animation as a vehicle for entertainment and education in the 21st century, in a South Africa that is very much part of the current global digital and communication revolution.

MC is a computer-generated 3D animated TV series for children. An overview of the history of animation and computer generated images, together with an account of the technical production processes involved in producing a 3D animated film (and *MC* in particular), helped to establish a context for the *Magic Cellar* series.

MC was conceived in South Africa, with South African children and the cultural diversity of the country in mind. Even though the co-production brought in expertise from Canada and India, realism in the representation of South Africa and authenticity in the rendering of the African folktales were prioritized, as can be seen in the character and environment design and the dialogue featured in the series. (It must perhaps be conceded that in Episode 3, Shakutara, the setting and the costumes look Indian; even though the protagonist represents that ethnic group in South Africa, it would appear that the modeling by Indian animators influenced the style of the animation.)

There was a concerted and generally successful attempt to portray the cultural diversity of the country. *MC* uses fantasy to advocate unity in diversity within South Africa. The coexistence and friendship between South African children of different ethnic backgrounds, as depicted in the TV

series, is vitally important in the new democratic South Africa, a country with a history of racial discrimination. Such a message, especially for children, is crucial to building a non-racial South Africa where friendship and coexistence between different races is encouraged. Although the portrayal of all races living in a township neighbourhood may not reflect a widespread reality, *MC* nevertheless convincingly represents an increasingly prevalent social phenomenon, of South Africans children of various ethnic backgrounds going to school, playing and reasoning together.

Television has the capacity to transport children to fantasy worlds where they might never have the opportunity to go personally, and *MC* presents a happier, sweeter side of life to children living in a township. By its keeping out the harsh realities of South African life, it could be argued that *MC* is misleading children by misrepresenting the realities of life as it is in the country and in the townships. But it might also be argued that since children are known to learn by modeling through watching and copying others (Lesser 84-85), showing them a TV series that teaches a positive attitude and morality would also teach them what the world or their society would be like if people treated each other with respect and lived together as one people.

MC was produced in English, Afrikaans, Sesotho and isiZulu. The use of only 4 out of 11 official languages raised the question of how many South African children could be reached by the series, given that not all South African children in the target age group might be able to understand or express themselves in the languages used. Fortunately, as far as the African languages are concerned, either Sesotho and isiZulu is intelligible to the vast majority of South Africans. As seen in the different characters in *MC*, Pula speaks Setswana, isiZulu and English, Gogo speaks English, isiZulu and Setswana, Navitha is Hindu and speaks English, Marcus speaks English and Afrikaans while Josh (Jewish) and Melissa (Chinese) speak English. It is however not clear how the 'allocation' of languages

to the different characters was done and how this impacts on the story within the episodes. Josh and Melissa, for example, speak English. But, in an isiZulu broadcast of the episodes, they would be heard speaking in isiZulu, apparently unmarked in such a way as to indicate their home language.

Since its release in 2006, *MC* has garnered as many as 42 tokens of international recognition from international film and animation festivals. This gives the impression that the world really appreciated this product of South Africa. One cannot but ask why *MC* has not inspired in South African animators a desire to produce many more such products. There may be a lack of passion about 3D animation in the country; or the high costs of production of animated films may be prohibitive; or there may be insufficient numbers of capable, creative people in the industry, or simply a lack of motivation because of little or no backing from potential sponsors. There have been numerous attempts to launch animation series in South Africa, but all have apparently been frustrated by a lack of budget and support, particularly from the national broadcaster. There is also the question of producing a South African product that could be localized in other countries, as is the case with *Sesame Street*, which has been localized in more than 120 countries worldwide. Goodson, the Head of the children content hub at the SABC, alleges that the high cost of animation production is the major reason why there is little animation produced in South Africa. She also believes that there is no other broadcaster in the world who has to produce content in 11 official languages: and this, together with the shortage of skills, the need to make programs for different age groups, and insufficient numbers of people with the capacity to produce the required amounts of animated content for broadcast to children, all contribute to there being little animation production in South Africa (Goodson interview). However, I believe there are indeed South African animators who have the capacity to produce animation for children, but lack the necessary financial backing.

The 'South Africanness' of *MC* lies in the fact that the characters in the series represent children from the major ethnic and cultural groups found in South Africa. According to Kharas, the Executive Producer and Director of *MC*, research was done and South African students studying in India were involved so as to make sure that the characters and environment were as authentically South African as possible (Kharas interview). This makes *MC* truly South African. At the same time, the fact that the modeling of the characters was done by Indian animators suggests that the character types may be more universal than they might at first appear to be.

Much has been written on the attraction of children to the medium of TV and the animation so closely associated with it. 3D animation, according to Khairezan (2), "seems to attract learners' attention and increase their motivation to learn." Among other children's programs, *Sesame Street* has proved that TV programming and the use of muppets (animation) "attracts a large and devoted audience of young children" (Lesser 234). Lesser further argues that periodic liberation from duty and the expectations of others may be responsible for the freedom children experience while watching TV, a freedom that gives them an opportunity to learn from it, without having to please teachers or parents, and with no threat of humiliation (22). The power of animation to entertain and educate children on a variety of issues cannot be underestimated. 3D animation portrays living beings – in this case, the characters in folk tales – in a more realistic manner since they look more like their natural counterparts, than other forms of animation, largely due to the medium's special characteristics, as discussed in Chapter 2.

The Head of Children Content Hub at the SABC reports that the organization's research has shown that animation is children's favorite form of programming. If the SABC could afford it and had the capacity for it, it would aim at making half of its output for children consist of animation. "If children

are entertained by something and they love watching something, then it's easier to educate them while entertaining them; then you can teach them all sorts of things through animation, and it may not only be purely entertainment" (Goodson interview).

Dating back to the early days of the Saturday Morning Cartoons, Mittell (34) remarks that animation "garnered quite high ratings with both children and adults…but with particular appeal to children." He points out that Leon Schlesinger, the founder of Warner Bros Cartoons, stated in 1939 that cartoons (2D animation), were an excellent entertainment for young and old, but more importantly, the favorite genre of motion picture for children (38).

These claims are further substantiated by the fact that children were "the focus of intensive marketing efforts since well before the rise of the broadcast television system, (although) media conglomerates only turned the full force of their attention towards maximizing the potential revenue streams provided by children-as-consumers with the onset of the cable age" (Mittell 59). It seems reasonable, then, to say that if media conglomerates could throw their weight behind children's animations as a business concern, they would tap into a large enthusiastic audience and could take advantage of the situation for their own gain. Revenues generated in the region of $1 billion by Fox through the merchandizing of *The Simpsons* showed that animated television programming for children was good business, and implied that the audience for which the programs were made is drawn to the animation art medium as such.

In South Africa, animation for children on the SABC started shortly after the beginning of television broadcasts in the country in January 1976. A popular example of animated film was the Afrikaans children's variety program *Wiellie Wallie*, featuring puppets, which was broadcast from the launch of

the SABC. The objective of the SABC for children's programming was to inform and instruct in an entertaining way, as mentioned by Shapurjee (57). Children's programming is regarded as programming produced specifically for persons aged 0 – 6 years and 7 – 12 years, which is educational and made from or for their point of view, and broadcast at times of the day when they are available in substantial numbers to watch. Research shows that animation is widely appreciated and enthusiastically received by these age groups, which means that animation and 3D animation in particular can be recommended as educational tools because children enjoy watching and can learn at the same time.

This is a huge and significant audience. Figures for population distribution in South Africa, according to Bubulia (9), show that 33% of South African children are aged 0 – 5 years and 40% are aged 6 – 12 years.

This study also seeks to find out if 3D animation could be used as a supplement to the classroom to educate children. This means a substantial portion of the population of South Africa could learn through the use of the medium of animation. Given that the South African population is made up of city and rural dwellers, the issue of the receipt of TV signals by every member of the population as well as the affordability of a TV set by every household cannot be over-emphasized if this medium is to be used for the benefit of all the children in the country. It is therefore of the utmost importance and urgency that in this digital age , the government should ensure that television signals are received by all South Africans and consequently that animated educational programs will reach all the children who care to watch. It must be recognized that currently there are children who have no access to TV reception and there are many who do not even have TV sets at home. Then there are those whose parents can afford DSTV who are exposed to subscription TV, with whole channels

dedicated to showing only children's animation. If watching TV and learning from it has any influence on the performance of the child, especially the pre-school child, would their interactions with other children or their performance in class be different and better due to more exposure to educational animation on TV? That is a possible research topic worth looking at.

If animation has been seen universally as a medium of education, part of its success has been due to its use of fantasy. Fantasy is important in the lives of children aged 0 – 9 years, and even above. My thoughts about the acceptability of *MC*'s traditional African folk tales to non-black children in South Africa would hinge on the argument that both fantasy and animation appeal to most children, irrespective of the content. Digital media like the TV and cell phones abound in this age and almost every child has access to one or the other, and the image is hugely important. As time goes by, digital technology will become more accessible and affordable to many more families for their children, meaning that watching levels of images on TV or cell phones will increase. And so animation too will be more available to many more children. Therefore, South Africa needs visionaries in the animation digital space who will come up with programming for children that will educate and entertain. This is crucial in order to avoid a situation in which foreign programs will 'take over' the minds of South African children, leading to their possible alienation from their own cultural values.

According to the Head of programming for children at the SABC, animation is a vehicle and the SABC's mandate and goal is to "advance the spiritual, intellectual, emotional and physical development of children, by offering them programming that is innovative, accessible, and offers choices." Animation is a genre of programming that can be used to provide anything from pure entertainment to formal education; it is a means to an end, and a genre of programming that really appeals to children. The Head of children's programming stated that the SABC had not been able to

explore fully how animation could be used for children. But then she suggested that as platforms diversify, and as platforms multiply, as platforms explode, essentially, as we are enter a world of DTT, digital terrestrial television, there will be a need for quality animation for children. In the last 10 years the number of television sets owned has exploded in South Africa; in the next 10 years a similar trend is expected, which means that eventually there will be a full saturation of television access in South Africa. In the next 10 years it is also expected that DTT would have rolled out across the country, which means that just about everybody will have access to 50 TV channels, not just 4 as at the present moment. When children have this access, they are going to choose programming that is most appealing to them and that is going to be animation (Goodson interview).

For many years there have been small comic strips, the funnies, drawn in newspapers. It is still a popular practice today. But, to see these comics come alive on the screen is exciting. Stories that grandmothers tell their grandchildren about the tortoise and the hare and other animals that most children have probably never seen, garner a lot of excitement and arrest the attention of children when suddenly they find Tortoise and Lion or Monkey having a conversation or a fight or interacting in an animated film. In this way, the moral lessons that are usually the goal of these stories get communicated to children in a more 'realistic' manner. But the tradition of oral story telling is gradually diminishing. And there is a chance that it might disappear, given the 'taking over' of children and their time by TV and cell phones and video games.

Hence, animation in general and 3D animation in particular could be a means of preserving our African stories, traditional and modern: a way of documenting them and making them accessible to audiences anywhere. But how is this to come about? Animation is expensive to produce and skilled animators are not available in great numbers in South Africa. Goodson believes that the ideal

situation for animation in the case of the SABC as well as other broadcasters would be through co-productions, partnerships and inventive business models. There is also a need to develop expertise in the country, because there are many fine storytellers who are keen to do animation but lack the requisite skills. Animation is not just about creating the figures and animating. It is also about telling a story, as Wells (16) points out. A balance is therefore required between storytelling and animation technique in order to produce content that can hold the attention of children in South Africa.

Therefore, it is suggested that we begin in the school system, by introducing media literacy as a core part of the curriculum. Just as important is an investment in art education and an early introduction to specific animation skills. Government and companies should provide the necessary funds and create opportunities for more South Africans to be trained as professional media people, especially as animators. For South Africa to find its place in the global digital era and enable its children to live with and measure up to the expectations of this age of information explosion, appropriate education is necessary.

That an actor who plays the part of a villain in a soap opera gets insulted or has stones hurled at him in town because the man on the street cannot differentiate between the villain in the film and the person, indicates that there is an urgent need to start now or a generation will be losing out on a new digital trend that is global. There is a need to start immediately in terms of the technology, maybe through the government lowering taxes on digital equipment to make them more affordable to all and sundry who may be interested; in terms of media literacy, the introduction and teaching of media-related subjects in our schools, first by attracting and training more animators in the higher institutions who would in turn be charged with teaching media literacy to children in our schools.

So, South African children may come to depend upon animation to keep in touch with their traditional folktales and learn the morals and customs of their particular cultures. Animation is a medium that can take the mind of a child into a fantasy world far more splendid than might be achieved using human actors. The characteristics of 3D animation make it absolutely appropriate as a medium to exploit for the benefit of children.

The use of animation in mainstream film making could help enhance the narrative, and add realism to the story told, especially if aspects of fantasy are depicted therein. This, together with an examination of the concentration levels of children exposed to animation in schools would constitute a topic for further research, as already mentioned.

MC is a TV series for children. It is intended to educate them on cultural issues through the use of story telling. Oral story telling is an African tradition that has existed for as long as Africans have lived. The commissioning of an animated TV series for children by the SABC, with the support of the Department of Communication, would be an important show of government support for the use of 3D animation as an educational tool. More research into the proper and most cost-effective ways of harnessing of the educational potential of this medium is necessary in South Africa, in keeping with global trends.

South African broadcasters also need to gear up as technological advances are developing by the day. The coming of DTT will mean the availability of more TV channels and consequently more animation for children. The broadcaster will need to produce high quality programming otherwise, when children have a wide variety to choose from, they will prefer to watch overseas programming as opposed to local programming. There will be a need to conduct research into what South African

children want, and to produce animation that can meet those needs. Goodson mentions that the SABC is developing channels for children only, which they are testing at the moment on 0 – 6 year-olds and 6 – 12 year olds. This is a step in the right direction, to provide South African animators with a platform to showcase their works for the benefit of children in South Africa.

5.2 Conclusion

In Chapter 1 I examined the history and origins of animation, looking at key names that pioneered the industry abroad and in South Africa. The technical production processes of animation and their use in the production of *MC* were looked at, as were the history of children's animation on television and the computer generated imagery used to produce *MC.*

Chapter 2 explores 3D digital technology, three forms of 3D animation, and briefly examines successful children's programming in *Takalani Sesame* and *Sesame Street*, while comparing *Sesame Street* with *MC.* The relationship between 2D and 3D animation is examined (as both processes are utilized in creating *MC*), the application of the 12 Principles of animation in *MC* is considered, and then the characteristics of 3D that make its use as an educational tool realistic are identified.

Chapter 3 is an analysis of the representation of cultural diversity in *MC*, focusing on 3D animation as an educational medium. Each of the 5 episodes of *MC* and how well they represent cultural diversity in South Africa is examined.

Chapter 4 analyzes *MC* for educational content. Dialogue and action are analyzed with a view to identifying the educational messages in the folk tales that are told to the children.

Chapter 5 presents my reflections and comments on animation in South Africa, as well as the views of broadcasting authorities, and suggests possible ways forward for South African animation in the new digital age.

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APPENDIX I LIST OF DIAGRAMS: *MAGIC CELLAR* PART 1

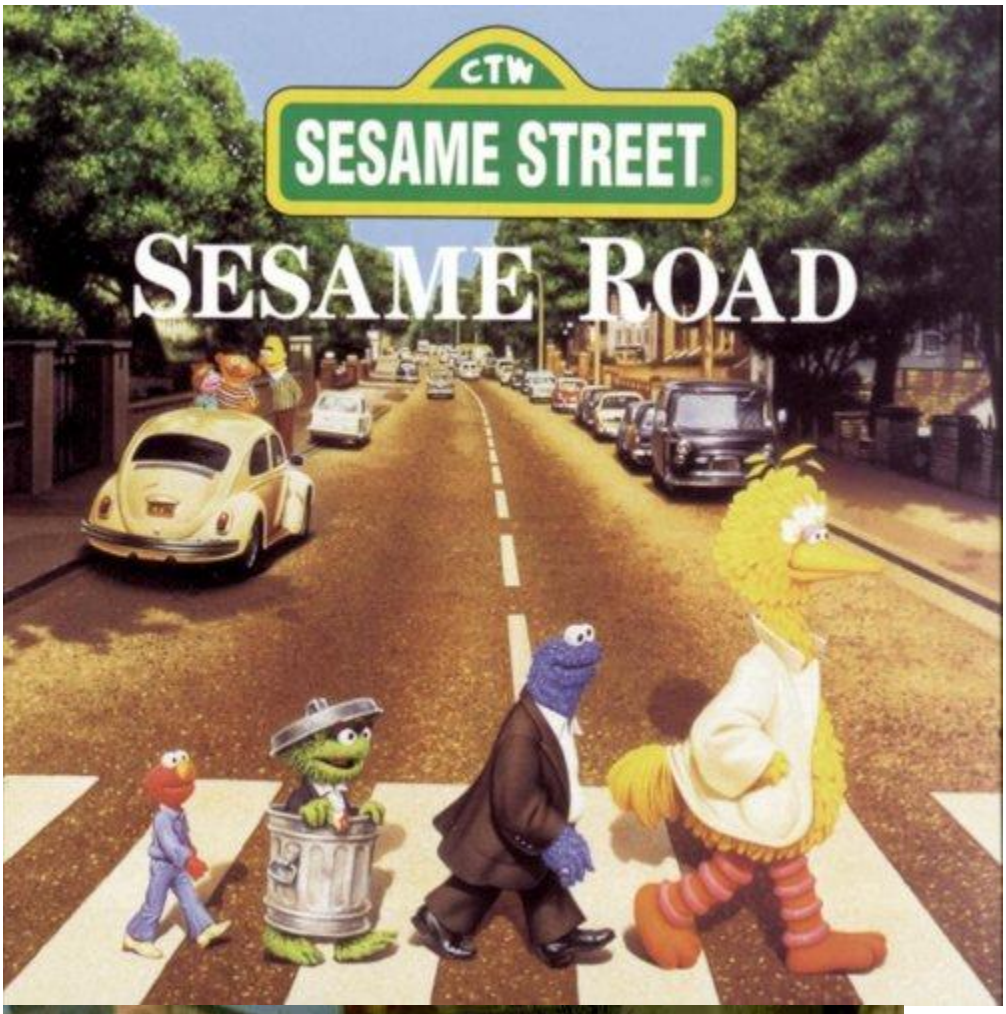








APPENDIX II LIST OF DIAGRAMS: *SESAME STREET*





APPENDIX III ***TAKALANI SESAME***





APPENDIX IV

INTERVIEW CONSENT FORM

Title of the Project: 3D Animation as a Medium of Cultural Representation and Education: A Case Study of *Magic Cellar* Part 1.

Course: WSOA , Research Report, Digital Arts.

I**nstitution**: University of the Witwatersrand, Johannesburg, South Africa.

Date: December 2009.

Project Outline

This is an empirical research that focuses on *Magic Cellar* Part 1 as an example of a 3D Animation TV series that can be used to educate children and represent the different cultures in a culturally-diverse society such as South Africa.

I intend to bring out the educational and cultural lessons in the 3D animated TV series which was the first of its kind to come out of Africa.

This study seeks to argue that 3D animation, to which children are drawn, can be used as an educational tool.

I,……., hereby agree to be involved in the above-mentioned research by granting the researcher an interview, and I

give my permission for the interview to be recorded on a voice recorder:_____

give my permission for my name to be cited in the documentation:_____

give permission for the information to be made public when the report is published:_____

As a participant, I am aware that I can withdraw from this study at any time with no consequences.

Signature [Interviewee]_____

Signature [researcher]_____

APPENDIX V Proposed Interview Questions for Production Personnel involved in the SABC TV series *Magic Cellar.*

1. Where did the idea of creating a 3D TV series for children originate from?
2. What could have been the motivation? (Did the idea come from a desire to educate, entertain or to compete with foreign programs?)
3. What were the goals and objectives of *MC*?
4. About the planning: who was involved? (educational researchers, educational psychologists, educationists, TV producers, animators, writers)?
5. How was the project funded?
6. Was research carried out before the production? I mean, did you decide and know exactly what it was that you wanted to use *MC* to teach children and did you research in order to decide how exactly to go about it?
7. Before production, how did you deal with the challenges of representing traditional tales to an ethnically diverse population of children?
8. What went into the actual production of *MC*? How was the production planned and executed? who were the main players? What production techniques were used? How long did the production last?
9. Before starting broadcast on Saturday March 25, 2006 at 14:15, what were your expectations?
10. Why did you choose the name *Magic Cellar*? Did you think about what meaning the words 'magic' and 'cellar' would convey to children?
11. I understand there are up to 20 episodes. How did you decide the way forward? Did you gather feedback from the viewers to help improve on the quality of the program? Did any parents/teachers/ well-wishers contact the SABC to comment on the effects of the program on their children? Are/were there any unintended effects on children that resulted from watching the series that you know of?
12. Were there any audience surveys conducted? If so, what were the results.
13. Did you receive any feedbacks and reviews? If so, did you use them to improve on subsequent episodes?

14. How was Magic Cellar distributed? The series got a lot of international recognitions, how did information get out there about it?

Alternative Questions

- Who came up with the proposal to do the series MC and how did it happen?
- How did the co-production happen…did South Africans go to India, Canada and vice versa?
- Who was the target audience and what themes were you interested in? what were the expectations of the creators in terms of what the target audience would gain from this series?
- who wrote the folk tales, from where and how were the stories collected?
- Who did you consult at the preparation/planning stage? Children, educationists, writers, psychologists, artists, researchers, DoE, SABC Education, TV and film producers, early childhood educationists..who else?
- how did you deal with the challenges of representing traditional African tales to an ethnically diverse population of children? [the folk tales are African, what were your thoughts about the way White, Chinese or Indian children would receive these African folk tales?]
- were there differences in the way you dealt with the different languages? Or was it the same in all the languages so as to avoid one language dominating? Was there a print component for all the 4 languages English, Afrikaans, isiZulu, seSotho? How did you ensure the language spread given the demographic profile of SA? [how did u do that research and analysis?]

Appendix VI Animation Pioneers/ diagrams/ *MC* producers



WALT DISNEY DEC 5 1901 – DEC 15, 1966

(www.tbkusa.com/walt-disney.jpg)



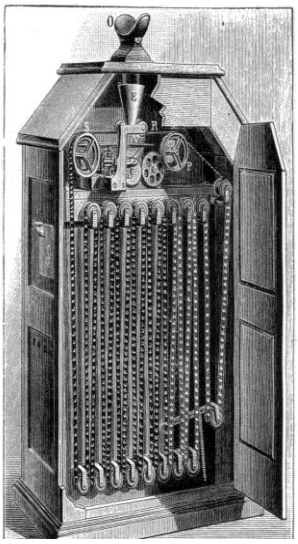
GEORGE PAL 1908-1980

(www.awn.com/ /heaven_and_hell/PAL/IMAGES/GPPAL3.JPG)



WINSOR McKAY 1879 – 1934

(blog.mlive.com/chronicle/2007/11/McCay1.jpg)



THOMAS EDISON'S KINETOSCOPE

(educ.ubc.ca/…)



The CINEMATOGRAPH

(http://upload.wikimedia.org/wikipedia/commons/2/2f/Oscillograph_Cinematograph_Camera.png)



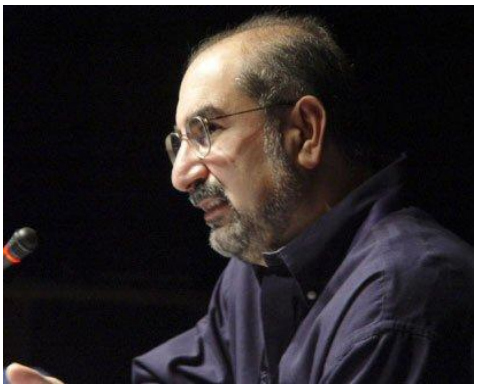
MFUNDI VUNDLA (www.morula.co.za)





James Stuart Blackton 1875-1941(www.americancorner.org.tw)

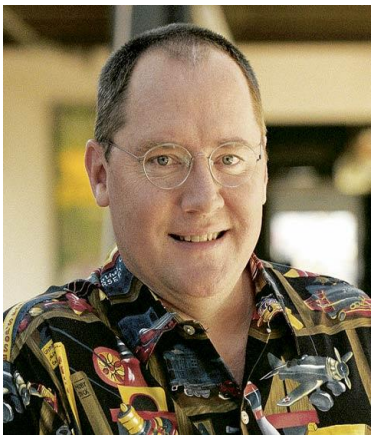
ADEELAH CARIM PRODUCER MC (www.morula.co.za)



FIRDAUS KHARAS (www.chocmoose.ca)



HANNA BARBERA (upload.wikimedia.org/wikipedia/en/9/91/Bill-hanna-and-joe-barbera.jpg)



JOHN LASSETER

(images.suite101.com/668177_com_johnlasset.jpg)



Mickey Mouse

(http://www.disneylandpostcards.com/images/Mickey-Mouse.png)

APPENDIX VII SABC EDITORIAL POLICIES

- Broadcasters are reminded that children embrace a wide range of maturity and sophistication. In interpreting the Code, it is legitimate for broadcasters to distinguish, if appropriate, those approaching adulthood from a much younger, pre-teenage audience
- Broadcasters may not transmit material that is unsuitable for children at times when large numbers of them may be expected to be in the audience
- Broadcasters are to exercise particular caution, as provided below, in the depiction of violence in children's programmes
- In children's stories portrayed by real-life characters, violence – whether physical, verbal or emotional – may be portrayed only when it is essential to the development of a character and plot
- Animated programmes for children, although they are accepted as a stylized form of storytelling that could contain non-realistic violence, may not have violence as their central theme, nor invite dangerous imitation
- In children's programmes, due care should be taken in dealing with themes that could threaten their sense of security, such as the portrayal of domestic conflict, death, crime, or drug abuse
- In children's programmes, due care should be taken in dealing with themes that could invite imitation, such as the use of plastic bags and dangerous household products as playthings, use of matches, and other hazardous physical acts

- Children's programmes may not contain realistic scenes of violence, or which create the impression that violence is the preferred or only method to resolve conflict between individuals
- Childrens programmes may not contain realistic scenes of violence that minimize or gloss over the effect of violent acts. Any realistic depiction of violence should portray, in human terms, the consequences for its victims and its perpetrators
- Children's programmes may not contain frightening or otherwise excessive special effects that are not required by the story line. (*SABC Editorial Policies* 14-15)