

Institutionen för studier av samhällsutveckling och kultur – ISAK  
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# **The use of Digital Visual Effects in contemporary TV-series**

**An analysis of the use of digital visual effects as a  
narrative device in the television series Doctor Who,  
Defiance and Terra Nova**

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Master thesis in Culture, Society and Media production

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## 1 Introduction

As the camera moves around in the virtual world, the illusion of an attacking alien fills the screen. For a moment the illusion takes over and frightens the audience. This is a typical usage of digital visual effects, where it acts as an enhancement within the image to heighten either the danger or the visual imagery of a new world. Using this type of effect the creators can manipulate the image and build an illusion for the audience that will take them further into the immersivity of the screen. The transparency between viewer and screen is almost forgotten due to the spectacular technological and digital effect that unwinds before the recipient.

That digital visual effects are used as an enhancement within the film-industry is common knowledge, but what else can be done? Is it possible to progress the main plot of a story using digital visual effects as a narrative device? Or do digital visual effects only exist as a technological enhancement and believable illusion of danger, alien planets and zoology?

In this thesis I will explore the use of digital visual effects as a narrative device. To do this I will be looking at the science-fiction genre, and four different TV-series. This will confirm if a new usage of visual effects has been created and being utilized.

### 1.1 Background

Visual effects create the illusion of different worlds within film and TV-industry. When creating and using special or digitally made effects, it is possible to create universes that only exist within human imagination. These illusions are created to enhance the fictional world and make it believable for the recipient. To do this, visual effects are used as a technique to manipulate both the image itself and the viewer. Creating elements within the image and with it, the transparency of reality becomes real and believable for the recipient. This is now a common practice. However, it has not always been like this because the first films ever made were about showing the technological advancement of actual filming.<sup>1</sup> This evolved into journal films, documentaries and even some short films with narrative, for example *The Great Train Robbery*, by Edison Manufacturing Company in 1904.<sup>2</sup> Sound was not yet discovered so the first films was silent and their era thrived for over two decades. In the middle of the

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<sup>1</sup> Michael Rabiger, *Directing the documentary*, Elsevier, Focal Press, 2009, p. 68

<sup>2</sup> David Bordwell & Kristin Thompson, *Film Art: An introduction, Seventh edition*, New York: McGraw-Hill, 2004, p. 469

1920s the first featured film *The Jazz Singer* was shown, and the technological progress had evolved within the industry. Creating a new possible standard where sound could be heard from the screen.<sup>3</sup> This created a new way to see and relate to film and also what could be done in the film-industry. Being able to reproduce sound together with film it brought more complicated narrative to the film scene. With the help of technology, narration and performance were now equally important, just as in the theater, but here within the image. The picture could enhance certain objects or situations that were needed for an emotional response from the recipient, for example the close-up. This could focus on certain objects, body parts or other important details in the film.<sup>4</sup>

The progression and development of animation started out with manipulation of the picture in experimental films, here the negative was cut, carved, painted on or in other ways changed.<sup>5</sup> This kept evolving and the first attempt on a cartoon feature was *El apòstol* in 1917.<sup>6</sup> But it was not until 1928 when Walt Disney created and released the short-animation *Steamboat Willie*, which would make animation being taken more seriously within the industry.<sup>7</sup> In 1938 Walt Disney created a feature animation movie, based on Brother Grimm's fairy tale *Snow White and the Seven Dwarfs*.<sup>8</sup> With that movie animation became a reality within the film-industry, and with it the technology advanced further.<sup>9</sup>

With the technological progress, filmmakers started to use visual means to manufacture different fictional worlds that had, for example: a complete wildlife with a working zoology, or aliens that visited earth.<sup>10</sup> Worlds like this can be seen in films such as *Star Wars* (1977 – 1983), where the planet Dagobah was built solely in a studio without any means of digital work.<sup>11</sup> Another example is *King Kong* (1933) where the creators worked with models and stop-motion technique, to give life to the giant gorilla.<sup>12</sup> In the movie *Avatar* (2009) digital

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<sup>3</sup> The Jazz singer, IMDb, [http://www.imdb.com/title/tt0018037/?ref=fn\\_al\\_tt\\_1](http://www.imdb.com/title/tt0018037/?ref=fn_al_tt_1)

<sup>4</sup> David Bordwell & Kristin Thompson, *Film Art: An introduction, Seventh edition*, New York: McGraw-Hill, 2004, p. 468 - 472

<sup>5</sup> David Bordwell & Thompson Kristin, *Film Art: An introduction, Seventh edition*, New York: McGraw-Hill, 2004, p. 162 - 165

<sup>6</sup> El apòstol, IMDb, [http://www.imdb.com/title/tt0007646/?ref=fn\\_al\\_tt\\_3](http://www.imdb.com/title/tt0007646/?ref=fn_al_tt_3)

<sup>7</sup> Steamboat Willie, IMDb, [http://www.imdb.com/title/tt0019422/?ref=nm\\_flg\\_wr\\_7](http://www.imdb.com/title/tt0019422/?ref=nm_flg_wr_7)

<sup>8</sup> Snow White and the Seven Dwarfs, IMDb, [http://www.imdb.com/title/tt0029583/?ref=mv\\_sr\\_2](http://www.imdb.com/title/tt0029583/?ref=mv_sr_2)

<sup>9</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 239 - 245

<sup>10</sup> Avatar, Creating the world of Pandora, <http://www.youtube.com/watch?v=oCDh5SdxAdo>

<sup>11</sup> Empire of Dreams – The Story of the Star Wars Trilogy [2004],

<http://www.youtube.com/watch?v=QoQ1mOrV8Nc>

<sup>12</sup> David Bordwell & Kristin Thompson, *Film Art: An introduction, Seventh edition*, New York: McGraw-Hill, 2004, p. 164

visual effects were used to create a habitable world called Pandora. This world was made inside a computer program. Both Dagobah and Pandora were artificially created, but in two completely different ways, one with digital visual effects and the other being built in a studio. This is a technique that still is being used in many of today's movies and TV-series, where the creators use both screen technique and a studio set together, to create the world that is shown to the viewers.<sup>13</sup>

When it comes to visualizing a universe of a TV-series to the recipient, the illusion of the digital effects need to be believable, immersive and transparent. Otherwise, the viewer will not accept what is shown to them. In order to reach the audience and get them to react to what was shown; dramaturgy was added into filmmaking. To this David Griffith created film grammar, which is the backbone of film-language.<sup>14</sup> Film grammar is defined as follows:

1. A frame is a single still image. It is analogous to a letter.
2. A shot is a single continuous recording made by a camera. It is analogous to a word.
3. A scene is a series of related shots. It is analogous to a sentence. The study of transitions between scenes is described in film punctuation.
4. A sequence is a series of scenes which together, tell a major part of an entire story, such as that contained in a complete movie. It is analogous to a paragraph.<sup>15</sup>

From its cradle it started out as an eye of the beholder, filmmakers filmed and showed the magnificent wonders of the world. As technology evolved a new era came with it and visual effects started to get more and more focus in the film-process. Now in the 21<sup>st</sup> century the use of digital visual effects is prominent in almost all productions, either as a seeming-less effect or spectacular green screen scenes, such as in *Sin City* (2005).

The hypothesis discussed is: *How are Digital Visual Effects being used within contemporary TV-series?* Asking this question will make it possible to see if a new visual language has started to evolve, where the use of digital visual effects tell the story, either together with film grammar and the dialogue or on its own. To be able to do the analysis, different series will be analyzed, two of the series will be compared and the other two series will work as a point of reference. To be able to test my thesis, a set of questions has been built into a framework that

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<sup>13</sup> The making of the Hobbit, <http://www.youtube.com/watch?v=qWuJ3UscMjk>

<sup>14</sup> Iris Barry, *D.W. Griffith: American film master*, Museum of modern art, 2002

<sup>15</sup> Frank Manchel, *Film Study: An Analytical Bibliography*, Fairleigh Dickinson University Presses, 1990, pp. 96–

will act as a methodical model to answer the hypothesis. A question that will explore the use of digital visual effects compared to narrative storytelling in contemporary TV-series.

## 1.2 Disposition

In this thesis the argument of a new visual language as a narrative device will be discussed and looked at, by analyzing four different TV-series in the science-fiction genre: *Terra Nova 2011*, *Defiance 2013-*, *Doctor Who 1963 – 1989* and *Doctor Who 2005-*. It will be possible to see the use of digital visual effects as a narrator in the image. To do this, one main question has been asked and to be able to answer that question a framework model has been created, this framework model consist of seven different questions: *How are DVFX used as a visual language in the TV-series? What key elements drive the TV-series forward? What influence did DVFX have on the TV-series? How is DVFX used in the series as a narrator? What does DVFX represent in the image? Could the series have been created without DVFX? Techno-enhancement, visual language or hybrid?*

To answer these questions each series has been divided into sections where different parts from each series are looked at. This can be the vignette of the series or scenes within the episode. To make this clear for the reader each analysis is divided into three chapters: introduction, episode overview and questions. After this each question is divided into chapters, with each scene that is going to be analyzed.

## 1.3 Terminology

This chapter will discuss some of the words within the industry. It will give the reader a better understanding of the discussion and the terminology that will be used within the text.

The most common words that will be used are Digital Visual Effects, Computer Generated Imaginary (CGI or CG), Special-Effects and Visual Language. These will be explained in the next paragraphs, for more information and repetition on the terminology. Look at the index chapter.

### 1.3.1 Special effects

Special Effect in the 21<sup>st</sup> century is not the same as it was in early 19<sup>th</sup> century. The technological advancement that has occurred divided special effects into two sections: the **first** works with optical, mechanical, lightning and masks (effects not digitally made). The

**second** is the visual effects that digitally enhance or manipulate the picture in post-production.<sup>16</sup>

### 1.3.2 CGI

CGI stands for *Computer generated Imagery* (also called *Computer generated images*, and is often shortened *CG* or *CGI*), and is an expression used within 3D, animation and computer graphics. CGI is used to build graphical animations such as environments and 3D characters, some of these films are for example *Avatar* (2009), *The Hobbit* (2012) and Pixar's film *Toy Story* (1995).<sup>17</sup>

### 1.3.3 Digital Visual Effects

*Digital Visual Effects* (hereafter shortened DVFX) is a process where the images are manipulated in live action shoots. This is often used together with motion tracking, CGI or green screen to create and manipulate the image to the visual artist's advantage, such as building up a burning city or having a massive alien attack as in the series *Falling Skies* (2011- ).<sup>18</sup>

### 1.3.4 Visual language/Digital visual language

Visual language is used in many different ways. It can be seen in commercials, advertising, movies and TV-series.<sup>19</sup> What visual language means differs depending on its own association and usability, for example the visual language in marketing can exist of sale signs with white and red background. Using red and white together, there is a curiosity created in the buyer of the merchandise and gets the buyer to buy the product. In this thesis, visual language will be used in the sense of looking at the use of DVFX as a language within the image, and the interpretation code that DVFX offers in the scene as a narrative device.<sup>20</sup> Here the visual language is the digital visual effect that is used in the scene and image and it will hereafter be referred to as either visual language or digital visual language.

### 1.3.5 Narrative Device

In the thesis the word narrative device will be used and utilized in the discussion. The word itself will refer to the narrator of the scene, either if it is the script or DVFX. This will also be implemented into the method and the questions that make out the framework model.

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<sup>16</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 66, p. 122

<sup>17</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 14

<sup>18</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, preface

<sup>19</sup> Ann Marie Seward Barry, *Visual Intelligence: Perception, Image and manipulation in visual communication*, State University of New York Press, Albany, 1997, p. 2 - 11

<sup>20</sup> Lev Manovich, *After effects, or Velvet Revolution in modern culture, Part 1*. [Spring 2006]

## 1.4 Previous Research

Studies within the field of DVFX in TV-series are not as common as one may think. This is a relatively new area and it is becoming more important, as the technology evolves. One person that discusses DVFX is Shilo T Mcclean, in her book *Digital storytelling: the narrative power of visual effects in film*, she discusses the use of DVFX within film and tries to discover the impact it has on narration. She also discusses related topics such as economics, marketing, and choices of digitally made effects and special-effects. She discusses topics similar to the subjects in this paper. However, she focuses on films whilst this paper focuses on TV-series. Mcclean looks at DVFX and the impact it has on narration such as the storytelling, and in her conclusion she discusses DVFX, not as a narrator, but as a whammo-effect that can be utilized in a meaningful way that enhances the story and the image.<sup>21</sup> Meaning that a new narrative form does not exist, instead it is just a new form of formulaic writing dominated by DVFX within the image. Where the digital visual effects are a tool used to visualize the narrative form, but not as a narrative device only as a special-effect enhancement. The differences of the hypothesis stated in this paper and Mcclean's, is that this paper looks at the DVFX in the image as a decisive narrative device within the visual language and the story that progresses. It also opposes Mcclean's statement that a new visual language does not exist. In this thesis Mcclean's formulaic form will be represented with the word techno-enhancement to easier implement her argument into the discussion.

Another research that has been made is by Lev Manovich *After Effects, or Velvet Revolution in Modern Culture*. He also discusses visual language in this research. The conclusion in his thesis is that a new visual language does exist, and that it started around 1993 with the new computer programs that emerged. His main focus though is more on the cultural basis and uses of visual language than on film and TV-series. In addition to this, he also discusses a *new hybrid visual language of moving images in general*.

These two theories contradict each other, Shilo T. Mcclean states that a new visual form does not exist and Lev Manovich discuss a hybrid and that a visual language has existed since 1993. A third example is made by Greg M. Smith, in his book *Beautiful TV: The art and argument of Ally Mcbeal*, Smith looks at the TV-series Ally Mcbeal and how the creators used DVFX within the narrative. However, in this discussion the primary use of the visual

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<sup>21</sup>Whammo-effect as described by Shilo T. Mcclean in her book, *digital storytelling: the narrative power of visual effects in film*, MIT Press, 2007, p. 227

language, is about heightening and showing emotions from the actors as they react to certain situations within the universe of the TV-series.<sup>22</sup> This is also not only made by DVFX, but music is also used to create emotions and show the feelings of the actors. The DVFX is never used as a device to progress the story, only emotions and feelings. What this thesis will look at is if DVFX is used as a narrative device in the story or if it is a techno-enhancement where the image is just a visualization of the written material.

Other than these two theorists, there are also other examples such as: Anusha Subramanian, *Masters of Illusion*, and Aleksandrs Polozuns *Computer Graphics in Cinematography*, but the discussion in these articles and books is mainly about the VFX work, process and technological advancement. Here, the authors are looking at the technological aspect in, for example: software, use of DVFX in Indian film, acceptance of DVFX et cetera. Neither none of the articles or books focuses on or discusses visual language as a narrative device, such as the previously mentioned research. Another writer is Mitch Mitchell, in his book *Visual effects for film and television*; he discusses the use of visual effects and takes the reader on a step by step basis, through the process. There is also an article in *The Velvet Light Trap* Nr.69 which looks at “*Recontextualizing CGI, Animation, and Visual Effects*”, in this academic journal the discussion revolves around:

How do we understand “animation” today, in light of the increasing application of techniques growing from traditional animation, as it proliferates across all cinematic media platforms and narrative styles?<sup>23</sup>

What neither of these texts has, even though they deal with the same topic, is how DVFX is used in the image with the narration. Is DVFX allowed to have its own digital visual language? Or is it used as a techno-enhancement? This is the core discussion in this thesis.

When it comes to TV-series, there is a lack of research in the use of DVFX within the image and together with the narration, often the research is about narration as a whole, psychoanalytic, or the technical aspects of the DVFX, except Shilo T McLean’s and Lev Manovich’s research. These two discuss the existence of a visual language and the use of it, this is something that will be looked at and discussed in this thesis. Does a new DVFX language exist within the image and as a narrator of the story, by aiding the verbal with

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<sup>22</sup> Greg M. Smith: *Beautiful TV, the art and argument of Ally Mcbeal*, University of Texas Press, 2007, p. 50

<sup>23</sup> Article Project Muse:

[http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/the\\_velvet\\_light\\_trap/v069/69.article.pdf](http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/the_velvet_light_trap/v069/69.article.pdf)

imagery? Is it just a hybrid or techno-enhancement that is bound by the script itself? Or is DVFX in contemporary series intertwining with the narration as a narrative device. In a way where DVFX and script together tell the story, not as a hybrid, but as two separate storytelling devices?

As a theory the hypothesis will utilize Christian Metz's semiotic structuralism, to analyze the use of a visual language. This will be explained in a more in-depth description in the structural semiotics chapter. The use of Metz's theory suits this hypothesis because he looked at the image and how it is projected towards the audience, he also discusses belief in an illusion. Other film theories could also have been used such as formalist or realist film theory, here the frame (image) is looked upon as a window and the recipient looks through it, this is discussed by, e.g. Siegfried Kracauer in his book *Theory of the Film* and Dudley Andrew in his book *The Major film Theories*. There are two aspects that they are discussing, one being alteration and manipulation of film perception by using montage, framing and absence of color or language. The other discussion in their books is the essence of the ability of the cinema to record and reproduce real life and aspects that are invisible for the human eye.<sup>24</sup> These are elements that DVFX can be included in, and their theories can be used to analyze and discuss the visual language and interpretation that DVFX brings to a series. But, these theories will not be used in this thesis; instead Christian Metz's semiotic structuralism method will be used. This will be explained why, later on in this chapter.

Béla Balázs and Thomas Schatz different theories are two other examples: Close up and Genre theory.<sup>25</sup> These two film theorists have two main elements that they discuss, Béla Balázs talked about the unique formal capacities, what he called a new form-language, and here he argued that the medium already had transformed our subjective capacity through visual culture.<sup>26</sup> A term used when visual phenomena shape our experience, for example in art or film. Thomas Schatz, a professor of communication at the University of Texas, talked about a structural and grammatical understanding through genres, by looking at how stories and characters are constructed. He also talked about the unspoken changing agreements between a genre film and its audience, here looking at the expectations from a genre towards

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<sup>24</sup>Thomas Elsaesser, Malte Hagener, *Film theory an introduction through the senses*, Routledge, 2010, p. 13

<sup>25</sup>Timothy Corrigan, Patricia White, Meta Mazaj, *Critical Visions in Film Theory, classic and contemporary readings*, Bedford/St. Martins, 2011, p. 127, p. 454

<sup>26</sup> Timothy Corrigan, Patricia White, Meta Mazaj, *Critical Visions in Film Theory, classic and contemporary readings*, Bedford/St. Martins, 2011, p. 125

its audience.<sup>27</sup> The last delimitation that has been done when it comes to selecting and looking on theories for this thesis is that I am using a film theory instead of TV-studies. The reason for choosing this theory is that Christian Metz, discuss the illusion of film through a psychoanalytic perspective. Here, Metz is looking at values, projection and belief from the frame (image) to the recipient. Although Metz theory is psychoanalytic it fits this thesis, due to the fact that DVFX is an illusion in itself and needs to be believable towards the recipient to become realistic.

The mentioned film theorists discussed film as a communication, manipulation, alteration, formula and language. However, what is important to understand is that the discussion is about the image in the way of contents and continuity, with the narration and the image together with the use of digital visual effects as a narrative device. This is something that easier can be seen with Metz theory together with semiotics, which is also adaptable to TV-series.

## 1.5 Hypothesis and Method

### 1.5.1 Hypothesis

The theory that will be discussed is the use of digital visual effects within the image and its visual language in TV-series, not only as techno-enhancement but also if it helps the narration as a narrative device. Answering the main question: *How are Digital Visual Effects being used within contemporary TV-series?* It will be possible to discuss how affected TV-series are by digital visual effects, and how the visual language is used as a narrative device for the function of the progression of a series' story. Looking at Christian Metz's structuralist film theory, a method based on a framework model has been created and within it a consideration towards TV-series. The structure of the framework model was designed with different questions that are connected to Metz's theory and basic semiotics.<sup>28</sup> Here, the questions are looking at how believable the illusion is made by digital visual effects, the interpretation and symbols that the imagery brings to the narration and the use of DVFX as a storytelling device. Here an alteration of Metz's theory was made due to the fact that Metz discussed film and not TV-series. This alteration will be explained in-depth later on in this chapter.

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<sup>27</sup> Timothy Corrigan, Patricia White, Meta Mazaj, *Critical Visions in Film Theory, classic and contemporary readings*, Bedford/St. Martins, 2011, p. 454

<sup>28</sup> This is a reference to two different books, which discusses Metz theories:

Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982  
Christian Metz, *Film language, a semiotics of the cinema*, Oxford University Press, 1974

The psychoanalysis that Metz addresses has been removed from this paper this is due to the fact that it is not the recipient themselves or the effect towards them that is going to be discussed. The focus will neither be on the reflected values between the recipient and the interpretation within the different TV-series universes. However, the recipient will be accounted for in such a way that they are acknowledged that they exist, this is necessary because DVFX is built on an illusion within the series universe. This means that even though the psychoanalytic analysis will not be looked at and interpreted, the illusion of the effect will still be talked about and the meaning that it has within the image. It also has to be accounted for that a text's meaning (or in this case the imagery) only exists when it is being received, this means that the story exists through the audience. This is an interpretation that each recipient does, but that psychological analysis will not be done in this thesis, this is also something that Metz looked at in his book: *The Imaginary Signifier, Psychoanalysis and the Cinema*. In this book Metz speculates about the psychological effect that images and films have on the recipient. He discusses the meaning of belief, reflected values, voyeurism and also the image itself and the concept of illusion in dreams and within film.

In this paper, Metz theory about the use of the image and the narration will be discussed and utilized, it will then be applied to the use of DVFX within the image and together with the narration. However, the psychoanalytic part that concentrates on the recipient will not be discussed; instead this thesis will use Metz's theory to look at the image and what it represents in the story as a storytelling device.

### **1.5.2 Structural Semiotics as a theory**

As the second part of the method, elements of Christian Metz's structural semiotics theory will be implemented. In his theory Metz looks at the frame (the image) as one unit in five different ways, to simplify his theory, these elements can be seen as follows: image, music, written material, noise and dialogue.<sup>29</sup>

Two of these elements will be used and implemented into the questions that the method consists of, these are: image and written material, except with some alterations. It is important to understand that Metz did not only discuss and analyze films instead of TV-series. His theories are also psychoanalytic; consequently certain things cannot be looked at with the same approach, thereof the alteration of his theory. The first reason for this alteration is that a

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<sup>29</sup> Christian Metz, *Film language, a semiotics of the cinema*, Oxford University Press, 1974, the categorization that is made is done by the writer of this thesis.

film has a beginning, middle and end after a set period of time, whilst a TV-series have a much wider time period to evolve within.

The second part is the psychoanalytic: the main purpose of this paper is not to look at how the subject is affected by the image and the projected values and affects within it. Instead, the purpose is to see the use of DVFX as a visual language within the image as a narrative device. Using parts of Metz's theory, makes it possible to have a wider and more thorough analysis as a whole, due to the fact that he also analyzed the image, the use of it and the progress of narration.

The recipient that Metz also uses in his discussion is debatable, this is because the recipient is subjective and not constant, which means that the interpretation that is made by the recipient comes out of that individual's values and identity. This is also called subject positioning and has been discussed by Jacques Lacan. In the book *Jacques Lacan* by Sean Homer, the full extent of Lacan's career is covered and discussed. Here, Lacan refers to three different orders: The Imaginary, The Symbolic and The Real. Under the imaginary order Lacan discusses imagination and deception, something that DVFX can be seen as and that correlates to Metz's theories. But due to the fact that the analysis only looks at the visual as a language and the implementation of it, the discussion of identity projected by the recipient is not needed.

However, it needs to be clarified that the audience discussed within this paper, is a viewer that looks at the image and what that image says and the illusion it brings throughout the episode, is what the analysis will revolve around. To be able to do this the considerations that have been made is to include only two elements from Metz's concepts, which are Image and Written materials. Also, to this a third alteration has been added and made, which is in written material and the category dialogue. It is important to understand and know that this has its own category in Metz's discussion. To make it easier to implement it into this discussion, dialogue will not be separated; instead it will be included with the written material category. An alteration of the category image is also made; when Metz discusses the image he refers to the whole part of the image (frame) that the audience looks upon. To this camera movement and actions within the frame is looked at, considered and analyzed. In this thesis the image will represent the digital visual effects that are implemented into it, this is because the hypothesis is not looking at the use of film grammar, but at the digital visual language used and implemented as a narrative device. Even though these alterations have been made, Metz

theory is valid. Not only because the DVFX is an illusion that is implemented into the image that the viewer is supposed to decode. The recipient needs to believe the illusion and Metz's discussion within this field is applicable. The concepts used with alteration in this thesis are as follows:

**Written Material** will be used as the narration of the story, the script, and it will also include dialogue in the sense of lines that drive the narrative forward.<sup>30</sup>

**Image** will be the digital visual effects and the digital visual language that is being used within the frame (image) itself, its implementation and the auditory effects that are used within the series. The word image will also be intertwined with DVFX.<sup>31</sup>

Metz's theory could also be used to discuss the entire TV-series, from episode one until the last and by doing so, utilizing his theory to examine and analyze all aspects of the TV-series. This is something that is not needed for this analysis, the most important use of the theory is to look at the image and see the use of digital visual effects within the image and how it affects the narration and the series' universe. It can also be discussed if Metz's theory is the best to use, especially because this is a TV-study and not a film-study. The discussion that Metz has about belief in an illusion within the image to create the fictional universe fits this paper. To this the visual language with the help of digital visual effects can be implemented into his discussion to see if there actually exists a digital visual effect language that acts as a narrative device.

### 1.5.3 Method

The method used is a framework model with questions based on Metz theory. In the method two different sections exist where the first is an analysis of each individual series and the second being a comparative analysis.<sup>32</sup> The reason to why the structuralism film theory will work for this analysis, even though it has been altered, is because the theory looks at the image and how it is built within the story.<sup>33</sup> This will be useful in the discussion of digital visual effects, where the image is being altered or getting certain elements implemented into it. Metz also discusses the narration and how it progresses throughout the film itself. To take

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<sup>30</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982, p. 183 and Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974, p. 31

<sup>31</sup> Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974, p. 64 - 75

<sup>32</sup> The questions for the framework model can be seen in the next chapter

<sup>33</sup> Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974, p. 31

this into account for an analysis of a TV-series is important, where every episode has a narration which is supposed to play out over a set period of time (often around 24 episodes). Studying the narration is needed when it comes to analyzing the visual effects since the narration in TV-series will always be important. The question is how the digital visual language is used with the narration and by itself as a narrative device. Metz theory is used to look at the illusion and the interpretation of the digital visual language within the image.

The method that is used consists of a set of questions that relate to Christian Metz's film theory.<sup>34</sup> The questions will be used in two different sections: the first will be about the TV-series as individual series. Here, the questions will look at the use of digital visual effects within certain images of the series; image is in this sense the image wherein the effect resides, and also see if the digital visual effects help drive key elements of the narration forward.

The second part of the analysis will be concentrating on the TV-series as a whole and discuss the different uses and drives that digital visual effects either give or take away from the narration. In the second analysis a comparison between the series will be made and discussed, here the TV-series will be compared and looked upon to be able to see if a new form of digital visual language does exist. Using a framework of questions based upon the structural semiotic film theory, it will be a thorough method to use within the analysis. And makes it possible to see how digital visual effects are used within the series, together with the image and narration.

### **Framework model 1:**

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**How are DVFX used as a visual language in the TV-series?** This question will focus on the use of digital visual effects as a visual language in the image and as a narrative device.

**What key elements drive the TV-series forward?** Here, the use of digital visual effects will be focused and looked upon, and see if it is either the written material that drives the story or if the visual language is the narrator or if they work together.

**What influence did DVFX have on the TV-series?** This question will look at the influence the visual language has as either a narrative device or techno-enhancement.

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<sup>34</sup> Daniel Chandler, *Semiotics: The basics*, Routledge, 2002 and Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974, p. 67 – 74

## Framework model 2:

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**How is DVFX used in the series as a narrative device?** This question will look at all four series and see how the DVFX is used in the sense of narrating the story and what differs between them.

**What does DVFX represent in the image?** This question will look at the visual language and what it represents in the image and the illusion itself. It will see if the visual language creates a believable illusion in the frame, which helps drive the narrative.

**Could the series have been created without DVFX?** This will discuss the use of DVFX and if the series can be created without it.

**Techno-enhancement, visual language or hybrid?** Here, the discussion will revolve around the use of DVFX either as a visual language, techno-enhancement or if it exist a hybrid of the two elements.

### 1.5.4 Material

The first two series that are being compared is *Doctor Who* (1963-1989) and the re-launch of the TV-series in 2005. The reason to why *Doctor Who* was chosen is that it launched 1963 and became the flagship for the TV-channel BBC, the show was then cancelled in 1989 and re-launched in 2005, sixteen years later.<sup>35</sup> This will work as an ideal example for this thesis. Using *Doctor Who*, I will be able to discuss the direct differences in the use of visual effects between 1963 and 2005. In addition, it will be possible to see if a visual language already existed or if it started with the evolution of digital visual effects in the early 1990s, this can be seen by the use of effects in the TV-series. For example: the different representation of the alien races in the original series versus the re-launch 2005. In this comparison the technological development will also be accounted for.

The second TV-series is *Terra Nova* which was released in 2011 as an experiment from FOX entertainment. It is a series that was mainly driven by Digital Visual Effects and CGI.<sup>36</sup> This TV-series will make it possible to see the differences in the use of DVFX. As the last series to be analyzed is *Defiance* which was launched 2013, time of this writing, it is also a series

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<sup>35</sup> Jill Lepore, "The man in the box; fifty years of Doctor Who", *The New Yorker*, 11:e November, 2013, p.56 - 63

<sup>36</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT Press, 2007

driven by DVFX just as *Terra Nova*, here the creators also connected the TV-series to an MMORPG, Massive Multiplayer Online Role Playing Game, so that the viewer cannot only watch the series they can also play it.<sup>37</sup> Another aspect is that all series exist within the science-fiction genre. This is a genre that uses digital visual effects in a wider extent than other genres do. It will therefore be easier to analyze and see if a new digital visual language is being used within the image (frame) to progress the story.

*Defiance* opens a discussion of the different ways TV-series are being marketed today something that might seem new, in fact has been going on for a while. It is a marketing strategy called transmedial franchising or cross-marketing. This is a phenomenon that is getting bigger and bigger and many of today's TV-series are using different platforms to extend the background of their shows or even to move the story further.<sup>38</sup> In *Defiance* the TV-series is influencing the MMORPG-game and constructs the main story of the game depending on how the series evolves, something that is very new and effective. This was in a way done with *Doctor Who* where the TV-show was cancelled 1989, but the *Doctor Who* universe lived and flourished during the sixteen years it was cancelled.<sup>39</sup> Both fan based and industry movies, comic strips and graphical novels were made and the universe itself never rested, when the series started again BBC could take advantage of those transmedial platforms for their re-launch of the series.<sup>40</sup>

These four TV-series will be the main source for the comparison, it will provide an insight on the use of special-effects as a visual language and how the creators use DVFX to enhance the credibility of a TV-series. To be able to make a methodical analysis and comparison TV-series using digital visual effects within them have been chosen. Using the above-mentioned series in this analysis, it will be optimal to answer the thesis this paper has, and it will also show the direct involvement of digital visual effects within the image as a digital visual language.

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<sup>37</sup> David J. Gunkel & Ann Hetzel Gunkel (2009) *Terra Nova 2.0 – The New World of MMORPGs*, *Critical Studies in Media Communication*, 26:2, 104-127, DOI:10.1080/15295030902860195

<sup>38</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT Press, 2007, p. 171 and Jill Lepore, "The man in the box: fifty years of Doctor Who", *The New Yorker*, 11:e November, 2013, p.56 – 63

<sup>39</sup> Neil Perryman, "Doctor Who and the Convergence of Media: A case study in Transmedia Storytelling"

<sup>40</sup> Neil Perryman, "Doctor Who and the Convergence of Media: A case study in Transmedia Storytelling"

### 1.5.5 Purpose

The purpose of the paper is to see how digital visual effects represent the visual language within the narration of a TV-series, and if a visual language as a narrative device is present. Exploring this will make it possible to see if a new DVFX language exists. A question that can be asked is: why is it important to see how DVFX is used within TV-series? Looking at how visual effects are (re)presented and implemented into the scene together with the narration, it is possible to find out if a digital visual language is being used. Is DVFX being used as a narrative device? If it is, will it create a new form of narrator where the image becomes the storyteller for the audience, either alone or together with the written material?

Now a consideration of film grammar has to be made, the reason for this is that certain uses of images within a film or series have already been created and are used on a daily basis. This has also been discussed and analyzed by film scholars for decades, some of these critics are Dziga Vertov, Thomas Schatz and Sergei Eisenstein.<sup>41</sup>

What needs to be noted is that the discussion in this thesis is about the digital visual effects as in the use of digitally made effects and how it is used in the image, both by itself, with the narration and as a narrative device. This is a relatively new subject, special-effects and visual effects have been used before to enhance the image, but today in the 21<sup>st</sup> century, they are becoming the basis for a series' creation. Visual effects have gone from being either the means to show off certain spectacular scenes within films, or by being a backdrop for the scene. It is not until now that the use of DVFX is the dominant element of a series. Looking at series that use DVFX makes it possible to see if a new visual language has been created, if it is developing and how it is represented by DVFX within the series themselves. This makes the thesis important for the industry and for creators of film and TV-series. It will also help the industry because if a digital visual language does exist, it can be utilized in a much broader perspective than it is right now. This also opens up new ways of creating a series in post-production, where the image can act as a narrative device without having to shoot the scene or explain it through text.

Analyzing and looking at how DVFX is used both together with the narration and by itself (in the image and as a narrative device), makes it possible to see how visual effects are allowed to both affect the series, and the interpretation of different scenes within the image. It will also

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<sup>41</sup> Timothy Corrigan, Patricia White, Meta Mazaj, *Critical visions in film theory, classic and contemporary readings*, Bedford/St. Martin's, 2011, p. 257, p. 262, p. 453

be possible to see how narration and DVFX work together to enhance and drive the story forward.

That DVFX is altering the manner that TV-series are being made is a fact. What needs to be looked at is how the image is used to deliver certain information. Is there a visual language that depends on the interpretation by the recipient? Does the implementation of the visual create or take away, from the series, experience and the immersitivity it might give? Or is it just whammo effects? All these questions are intended to get answered in the thesis by looking at the series and their use of DVFX.

## 1.6 Problems, Concepts and Delimitations

There are some limitations to the study, for example the absence of economy to proper marketing TV-series and technological advancement throughout the years. Some of these limitations are of practical reasons, for example the globalization and world economy, this is not something that will be discussed because it is not needed, a lot of series have existed that only survived for a season or sometimes only half a season, one example of this is *Firefly* (2002-2003) which after thirteen episodes was cancelled due to the poor number of viewers.<sup>42</sup> Another reason that marketing, economy and distribution will not be discussed is, even though it exists and has an impact it does not affect the use of digital visual effects in the image. Effects can always be used, what the economy can affect is how well made the effects are, such as in *Andromeda* (2000-2005) where the digital visual effects may seem inadequately made, but the TV-series still ran for 110 episodes.<sup>43</sup>

Another aspect that has to be considered is the development of technology, in the field of special-effects a lot has happened since the beginning of the 20<sup>th</sup> century, CGI has evolved and the use of analog effects is not used as much, this is being handled by computers and visual effects programs.<sup>44</sup> Even though the technology has advanced, visual representations and effects were used in TV-series in the 60s, for example the beaming-effect in between the different planets and the starship Enterprise in *Star Trek* (1966). Though the difference and limitations of it still needs to be explained, it will not influence the comparison that is being

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<sup>42</sup> Firefly, IMDb, [http://www.imdb.com/title/tt0303461/?ref=mv\\_sr\\_1](http://www.imdb.com/title/tt0303461/?ref=mv_sr_1) and Internet article: <http://nerdapproved.com/news/former-fox-president-explains-why-firefly-had-to-be-cancelled/#!o2puO>

<sup>43</sup> Andromeda, IMDb, [http://www.imdb.com/title/tt0213327/?ref=mv\\_sr\\_1](http://www.imdb.com/title/tt0213327/?ref=mv_sr_1) and [http://www.imdb.com/title/tt0213327/companycredits?ref=ttspec\\_sa\\_5#specialEffects](http://www.imdb.com/title/tt0213327/companycredits?ref=ttspec_sa_5#specialEffects)

<sup>44</sup> Brie Gyncild, *Adobe After Effects CS4: Classroom in a book*, Adobe Press, 2009 and a note: Computer Generated Images, see chapter terminology for a in-depth explanation

made. The special-effects used represent a visual imagery within the story itself, to this TV-studio in the 60s had the limitation of the budget and visual effects development such as green screen and motion tracking. The consequence of this was that a TV-series universe needed to be built in studios. In contrast, to now in the 21<sup>st</sup> century were a TV-series' universe is mainly built as a hybrid with both studio and in computers and visual programs.<sup>45</sup>

Using Christian Metz's theory makes it possible to see how digital visual effects are used as a narrative device. However, by altering his theory and by taking away the psychoanalytical part also create problems. One of these has been discussed and it is the audience that looks upon the image. Here, the value and projections that the recipient puts upon the interpretation of the image is not taken into consideration, the analysis revolves around the image itself and how it projects the story towards its audience. Having this limitation of Metz's theory loses some of his concepts, but it also helps the analysis since there is no need to consider the audience and its reflection onto the image. Instead, the focus can be on the DVFX and how it is used to progress the story. Another limitation is the perspective of image and written material that is being used within the analysis. Here, Metz looked at the individual category when he analyzed a film. He also looked at the whole image and not only certain aspects of it. This has been altered to fit this analysis by creating two separate categories which include more information than it usually does. Doing this does limit his theory, at the same time it also opens it up to be used within TV-series. Now by using a film theory within a TV-study is not usual, but since the paper is about the (digital) visual language within the image and the use of it as a narrative device, Metz theory suits this thesis because he discusses the belief in the illusion of the image towards the audience.<sup>46</sup>

Using parts of Metz's theory with the limitations discussed, a framework model has been built with a set of questions. These questions connect to his theory, but by limiting and doing alterations in the theory, it also affects the questions, which could have a broader perspective than they have at the moment. This limitation also creates an opportunity to narrow the research and effectively look at the main question, and by doing so see if DVFX is used as a narrative device within the image.

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<sup>45</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 185

<sup>46</sup> Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974

To do the analysis properly, limitations about the series also had to be done. Four TV-series were chosen, *Terra Nova*, *Defiance*, *Doctor Who* 1963 and *Doctor Who* 2005. To be able to see the different representations in the use of digital visual effects, two of these four series are a direct comparison from the same TV-series' universe.<sup>47</sup> Using *Doctor Who* will make it possible to see and make a comparison of the use of the visual language as a narrative device, not only in contemporary series but also historically. The other two series have a story that uses digital visual effects within its universe and will be used as a point of reference. Using these four series together, it will be possible to make a full analysis of the use of digital visual effects as a visual language in the image, and with the narration as a narrative device within TV-series.

The analysis itself does not only have a direct comparison, but also two series that only exist because of the technological development.<sup>48</sup> The reason that *Defiance* and *Terra Nova* were chosen is that the narration has a concentration on digital visual effects. Here, both series use a narration that involves some sort of visual language and that is something that is needed to be able to discuss the hypothesis.<sup>49</sup> Another limitation in the series that has been made is that they are in the science-fiction genre. Other series and genres exist that use DVFX and can be used in this discussion, such as *Ally Mcbeal* that has been discussed earlier. Where the visual effects can and are acting as an enhancement, though it will be hard to see when the visual language actually progresses the story. Using the science-fiction genre will make it easier to see when the visual effects act and progress the story as a narrative device than in any other genre. One example of this is in the drama-genre where the use of DVFX is not a focus or used in the extent that it actually can be seen, it often works with seaming-less effects such as eliminating objects or replacing the sky.<sup>50</sup>

Other series exist that also could have worked as a comparison, this is for example *Falling Skies* (2011- ), *Supernatural* (2005- ) or *Fringe* (2008-2013), but because of the high necessity of digital visual effects in *Defiance* and *Terra Nova*, they are an ideal example to use in this paper. Two more series have had their premiere at the time of this writing and both

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<sup>47</sup> Doctor Who 1963 and Doctor Who 2005-

<sup>48</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 8

<sup>49</sup> With this the author of the thesis mean, that the plotline would have been hard to visualize without the use of DVFX, because both plots are set in the future and has elements that would cost too much to build with mechanics.

<sup>50</sup> Seaming-less effect: This is a word used within visual effects terminology. When an effect is used to change the image but not in a noticeable way for example: hair color, shoes, sky or other things.

of them uses DVFX within the narration, these two series are: *Marvel Agents of S.H.I.E.L.D* (2013- ) and *Almost Human* (2013- ). The reason for this is that a full season will not be finished before this paper is done, the choice to only mention the series was made instead of having them in the analysis. Another consideration that has not been taken is the nationality of the series, *Doctor Who* is a British TV-series, *Defiance* is made in Toronto, Canada, but counts as an American production and *Terra Nova* was made in Australia and counts as an American/Australian production.<sup>51</sup> There is no value or consideration to this at all in the paper since the origin of the series does not affect the use of visual language within the series or the genre, and the only reason that these series have been chosen is because of their use of DVFX.

With the computer and the technical leap from the end of the 1970s to 2000 everything changed and visual effects as a medium are used more than ever, not only in movies and TV-series, but also in news, talk shows, commercials and even sports broadcasters create illusions and fake environments (this is often called digital inlays).<sup>52</sup> The main reason for this is that it is easier to use this technique and it has become more available than it was before, not only for the industry itself but also for independent filmmakers. This has influenced the business in such a way that the increase of making series that use digital visual effects has evolved significantly.<sup>53</sup> To be able to see the use of digital visual effects and how the visual means are used within TV-series, this hypothesis will not discuss the industry itself. The focus will be on the use of digital visual effects within the TV-series as a visual language, and with this, make a comparison between the series. This paper will look at the selected contemporary TV-series to see if a new digital visual language has been created.

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<sup>51</sup> Collected information from IMDb: Doctor Who [http://www.imdb.com/title/tt0436992/?ref=fn\\_al\\_tt\\_1](http://www.imdb.com/title/tt0436992/?ref=fn_al_tt_1), Defiance [http://www.imdb.com/title/tt2189221/?ref=fn\\_al\\_tt\\_1](http://www.imdb.com/title/tt2189221/?ref=fn_al_tt_1), Terra Nova [http://www.imdb.com/title/tt1641349/?ref=nv\\_sr\\_1](http://www.imdb.com/title/tt1641349/?ref=nv_sr_1) and Doctor Who 1963 [http://www.imdb.com/title/tt0056751/?ref=fn\\_al\\_tt\\_1](http://www.imdb.com/title/tt0056751/?ref=fn_al_tt_1)

<sup>52</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT Press, 2007, p. 66 - 67

<sup>53</sup> Ibid

## 2 TV-series

In this chapter a brief description of each series and what they are about will be presented, this is necessary to understand the analysis itself and shed some light on the plot of each series.

### 2.1 Doctor Who, history from 1963 - 2005

*Doctor Who* has the same platform since the start and the re-launch of the series, with some exceptions. The story of *Doctor Who* is vast and the first time the audience meets the Doctor he is an old grumpy man with only science in his mind. He is accompanied by his granddaughter and they have taken residence on earth, so that she can attend school and learn something about humans. The story then evolves when the two teachers follow her home, which happens to be a junkyard where the Doctor's ship has landed and is disguised as a blue police box. Here, the two teachers get caught and forced into the Doctor's spaceship, called the TARDIS. The Doctor gets angry and instead of releasing them, he transports them all to another time and planet, here the adventures of *Doctor Who* starts. After this, countless adventures are thrown in his path always making him choose what decision to take and how to solve the problem. To this the Doctor has a complex life story and an internal struggle to always try to do good, but every choice he makes, always ends up in a tragic solution, either for himself or the alien he fights against. Adding to his mystique is that the protagonist only goes by the name of "the Doctor", something that gets the recipient to wonder what his actual name is.

It is hard to only in a couple of pages grasp the entity of *Doctor Who*, for fifty years the story has evolved and taken the recipients to exciting places, making it a vast story that has used the transmedial universe to market itself.<sup>54</sup> What can be said is that for a series that has existed for so long, the narration of the plot has grown and evolved into something new. Here, the creators are mixing the old and new universe of *Doctor Who* and let the story progress over space and time. This can be seen in the fifty-year anniversary episode where three Doctors work together, letting the recipient get a glimpse at what has been in the past and what shall come in the future. Another thing that needs to be emphasized is that the Doctor can regenerate and change himself. This means that the creators can change the actor who plays the Doctor without having to kill or end the series. The TARDIS is also something significant for the series, this is the spaceship that the Doctor travels in, and TARDIS stands for *Time and Relative Dimension in Space* and is his main transportation.<sup>55</sup>

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<sup>54</sup> In the time of this writing *Doctor Who* had its 50<sup>th</sup> anniversary episode.

<sup>55</sup> Scott Cavan, Mark Wright: *Whoology: Doctor Who the official Miscellany*, BBC books, 2013

## 2.2 Terra Nova

*Terra Nova* was an experimental CGI and DVFX TV-series from FOX television with Steven Spielberg as producer. The series takes place in the year 2149 A.D. and earth has become overpopulated and polluted.<sup>56</sup> This has created a parental control for all families. James “Jim” Shannon, a policeman, and his wife Elisabeth Shannon, a highly decorated doctor, violate the parental control of having a family of five instead of four. Jim assaults one of the officers to save his daughter and this gets him arrested, and he serves two years in Goladprison. In the meantime, scientists discover a temporal rift that permits humans to travel through time and into a parallel world. This starts a pilgrimage for people for a new life on earth, which has not been destroyed. Elisabeth Shannon is one of the individuals that get selected with family to venture through the temporal rift since she has extensive medical knowledge and is a prime asset. Before she leaves, she visits Jim in the prison to tell him what has happened, and helps him escape; Jim succeeds and goes through the temporal rift and into a new life.

85 million years back, they are welcomed by Commander Nathaniel Taylor. As they arrive and are counted in Taylor understands that Jim has travelled through the portal illegally and arrests him, but Jim manages to convince Taylor that he can be an asset because he used to be a policeman and has certain skills that can be of interest to the colony. After a while Taylor agrees and Jim is set free. What no one knows is that a group of rogue-separatists called the Sixers threatens the colony and everything that it stands for and they are not the only threat in this time. Huge dinosaurs and the local wildlife are a constant threat that needs to be dealt with. But the colonists are determined to settle a new life in this time and create a better world than the one they came from.<sup>57</sup>

## 2.3 Defiance

*Defiance* is a TV-series that uses transmedial marketing in a new and different way. The TV-series and the MMORPG Game *Defiance*, cross over into each other’s universes. What the players do in the game are things that happen within the story, and it allows for more in-depth understanding of the universe itself.<sup>58</sup> This is a new way of telling a story and also gives more depth to the series and the game, if the recipient both plays and watches the series.

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<sup>56</sup> Terra Nova, IMDb, <http://www.imdb.com/title/tt1641349/>

<sup>57</sup> Article, Terra Nova, <http://www.tv.com/shows/terra-nova/>

<sup>58</sup> Defiance, <http://www.defiance.com/en/series/news/where-game-meets-show>

The series tells the story about a futuristic world where Earth has been terra-formed by aliens who arrived from the Votanis System.<sup>59</sup> A solar system located on the Perseus Arm of the Milky Way galaxy, the system had two stars Vysu and Sulos and five different planets belonging to the races: Castithans, Irathients, Indogenes, Sensoth, Liberata, Volge and the Gulanee. The races lived by themselves and had some contact with each other, except the Gulanee which none of the other races even knew existed.

The two prime races in the TV-series are the Castithans and Indogenes, which are two races that have had a lot of diplomatic influence on the rest of the galaxy. In addition to this the terrifying Volge is added, which is a race everybody fears. All the races go under the same name in the series and are called Votans.<sup>60</sup> The reason to why the Votans travelled towards earth was because that the Indogenes in the year 3502BCE (BCE being the Votan time calculation) started tracking a rogue star heading their way and it was on a collision course with their star system, if the star hits it would mean that a stellar collision would occur and wipe out all life. All they had was a little time to prepare all the races for evacuation on a big fleet called the Ark. The news was not taken well by the different races and it took some time before the building of the Ark started. In the year 3458BCE the races could no longer ignore the fact that their solar system was doomed so they started to prepare to leave their home, new technology was discovered and invented such as hyper-sleep, life support, and terra-forming. 3175BCE The Votans discover the Gulanee on the planet Gula, as they were looking for a new power source powerful enough to be able to power the Ark. They agreed on the terms that if the Gulanee helped collecting natural resources, they would get space aboard the spaceship. It would take until 3006BCE until the Ark was finished and they could leave their star system, which was destroyed moments after they left it for earth.

In the year 2000 the Ark is first spotted heading towards earth. Fearing a widespread panic if people would know that aliens exists, the governments of earth keep it a secret. The world leaders start to work together and secretly form the Earth Military Coalition, EMC, under one banner. If the aliens are dangerous and a threat to the people of earth, EMC will fight against them. After this a series of technological breakthroughs within genetics, engineering and transportation takes place. In 2007 amateur astronomers discover the approaching aliens and they try to get the information out, but fails. This is mainly because the EMC works towards

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<sup>59</sup> Terra Forming is a technique which means that the planet or place of habitat is changed and adapted towards the new habitants own environment. <http://www.defiance.com/en/series/world-of-2046/invasion-timeline>

<sup>60</sup> Defiance, timeline, <http://www.defiance.com/en/series/world-of-2046/invasion-timeline>

silencing all information about the aliens leaking out. In 2013 they cannot keep all information in and it reaches the public, the first Ark appears in April that year.

Between the year 2013 and 2046 the aliens are first granted a provisional membership to earth and get a small patch of land set aside for them in Brazil, until further discussion between humans and Votans takes place. In the years that follow there are different riots and outbreaks until one day the Votan diplomat Onulu Toruku is assassinated on live television. This ends the negotiations between humans and Votans and a war breaks out called the *Pale Wars*. The *Pale Wars* goes on for several years and, when the conflict is at its worst moment, the entire Votan fleet mysteriously explodes in orbit and fragments of the ships starts to fall towards earth, something that will be called the Arkfall, and continue to rain down on earth for decades. As the Arks falls towards the earth, so does the Votans technology and the fragile terra-forming machines start to change the earth's surface with the impact. This creates a completely new earth that becomes a hybrid of a Votan and Human world. The war ends in 2031 and new cultures start to pop up as Votans and Humans begin to settle the new land. This brings the recipient to 2046, when the protagonist Nolan and his partner Irisa arrive to the town of Defiance.<sup>61</sup>

### 3 Analysis Individual TV-series

The first section of the analysis is going to take place in the following chapters, here the first episode of each TV-series is analyzed and broken down to answer the questions:

1. How are DVFX used as a visual language in the TV-series?
2. What key elements drive the TV-series forward?
3. What influence did DVFX have on the TV-series?

Each question will be used to look at certain sections and scenes of the TV-series to see how and if a visual language is present, and does it help to either narrate the story or if it just works as a techno-enhancement of the scene and the universe of the TV-series. To this each chapter is divided into sections. First, an introduction of the scene, then an episode overview and after that an analysis of the questions, to this a short summary is concluding the analysis of each series.

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<sup>61</sup> Defiance, timeline, <http://www.defiance.com/en/series/world-of-2046/invasion-timeline>

## 4 Doctor Who 1963

### 4.1 Introduction

The visual language in *Doctor Who* uses two different effect-elements: sound and special-effects, this includes for example: a car moving into the junkyard, the door closing inside the police box as the actors have entered, and in the end when the TARDIS moves through time and space.<sup>62</sup> For this analysis, the main focus will be on the time travel scene and the vignette. These two scenes represent the essential use of special-effects.

### 4.2 Episode overview

The episode starts in school with Susan Foreman, one of the protagonists and the Doctor's granddaughter. The two teachers Barbra and Ian are worried about her because she has been acting strange, so they follow her home to talk to her uncle about her behavior. As Ian and Barbra arrive at the destination all they see is a junkyard, as they enter they find the Doctor and a blue police box. Ian and Barbra start to talk to the Doctor, and in the middle of the conversation they hear Susan calling out for him inside the blue box. The two teachers force themselves inside the box followed by the Doctor. When they are inside, they realize that the box is bigger on the inside and that it is a spaceship, before they get any chance to leave, the Doctor starts the machine and travels through space and time.

### 4.3 How is DVFX (special-effects) used as a visual language in Doctor Who?

#### 4.3.1 Vignette

When the series starts it shows an optical light streak over the image that goes into a moving pattern, in the pattern the title of the series appears. The title then moves backwards as optical lights move around the image accompanied by the *Doctor Who* theme music. The image then becomes transparent and goes into the first scene where a policeman walks around a junkyard.

What can be seen in the introduction is that it is built to create curiosity, by using optical effects together with sound design there is a mystery. The vignette itself does not say anything about the series at first glance, but it tells a story. It is just hidden from the viewer at the start. When the first time travel is presented in the series the same visual images that were shown in the vignette come back, but with one extra element introduced, and that is an image of the doctor and his companions transparently appearing into the image. Using optical effects together with sound-effects and mixing the title within the effect itself the vignette becomes a

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<sup>62</sup> The TARDIS is the name of the spaceship that the Doctor uses to travel through time and space, as mentioned in the TV-series chapter.

visual language towards the recipient. Here, the image is allowed to become a symbol for certain aspects that will be introduced later on within the narration. The vignette has a clever way to introduce the viewer to the series and it is filled with optical effects, creating an interest in the recipient of what it may represent.

What can be seen from the first look of the vignette is that it is a gateway for the viewer to start asking about the series and what it can be. To this it later becomes a representation of the TARDIS itself and an element in the series. This effect is not driven by the visual as it seems at first glance, but by the narration and sound. The image itself does not represent a visual imagery and the time travel aspect and the effect in the scene can be made without the visual language. Here, the written material and the sound-design are the two things that create the scene. The visual is just an enhancement and a bridge to get from one scene to the next. The vignette can at first glance be seen as a visual language, in the time travel scene. However, it is not essential for it and therefore the image never becomes a narrative device of that scene. It is an element that shows what happens, nothing else. Here, the image could have been used as a narrative device instead of just a bridge to the next scene, by toning down the sound-design and letting the image drive the scene.

#### 4.3.2 TARDIS (Time and Relative Dimension in Space)

As the Doctor starts the TARDIS a mechanical item appear in the middle of the room from the instrumental board. To enhance the effect and make it look like the actors are moving, the camera starts to shake accompanied with a sound that creates an illusion of the TARDIS moving. To create this effect, the image first goes into a mixture of images, optical light and sound-effects as seen in the vignette. Doing this, enhances the illusion that the actors are moving through time and space. It also connects the first opening image of the episode to this scene, and those images will now represent the space and time travel. When the TARDIS goes through time and space the image is always enhanced the same way with optical and sound effects. This creates a visual and auditory language that can be connected to the next image. When the scene ends and the TARDIS have stopped, the image shows a different view. Here, the visual imagery shows that they are not on earth anymore; instead they are in a strange environment. The episode is introduced by an image of a desert-like landscape, which is presented with a transparent fade in after the last visual time travel effect. Included in this image is a shadow that is looking upon the TARDIS.

With these effects, what today can seem to be diminutive effects, the universe of *Doctor Who* was created by the use of special-effects that were mechanically built or optical. To this the sound also became an effect that enhanced certain aspects of the series, such as the TARDIS. What can be seen is that every effect that is used has their part in the mystery of the episode. It either enhances the image or is used in the background. The only time this does not apply is when the TARDIS moves, here the visual effects have more space in the series and also have an own visual language. Using the resources and technology of that time, the developers managed to create a world that does not exist. Were they took the recipients on a journey through time and space in a creative illusion that is believable. Within the visual and auditory language *Doctor Who* stated a code that every time the TARDIS moves through time and space the effect will be the same, opening up solutions for the developers to actually move the TARDIS without always using the image-effect.

Stating this, a social code is created within the *Doctor Who* universe for the viewers to react to every time they hear the auditory effect or sees the image-effect.<sup>63</sup> For the audience the illusion is believable. Even if the spectator only hears the sound of the TARDIS it will be connected to the Doctor and the Time Travel-effect, making the first time travel scene

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<sup>63</sup> Daniel Chandler, *Semiotics: the basics*, Routledge, second edition 2007, p. 165

important as a visual and auditory representation for the Doctor himself. At the same time, just because the series has this one effect it does not have its own certain (D)VFX language, the series could still be made even without the effects themselves. Even though the effects play a part in the visualization of the series and enhance some of the scenes, it never represents anything else than the TARDIS. Here it is not a visual effect that creates the connection of time travel, but an auditory effect. This means that the visual representation of the move through time and space is more of a sound-design than a visual imagery.

#### **4.4 What key elements drive Doctor Who forward?**

In *Doctor Who* it is obvious that narration is the main part of the dramaturgy in the story, the dialogue is the element that constantly drives the plot forward. The visual effects are secondary and the effects only appear when it fits the narration. This also challenges the scriptwriters, making them construct an episode that can work even without special-effects within the scenes, after that the effects can be implemented where it will highlight or enhance the experience for the viewer. Even if the visual would not be in the image the dialogue and the narration can still tell the story, it would not be as influential when it comes to the move through space and time, but the story could still be told. It also shows how important the narration is for a series. If *Doctor Who* would only use effects to drive the narration it would not be as effective as it is now, it would also differ in the quality of the series itself.

With strong narration together with visual enhancements within the image, it becomes believable for the viewer. What have to be accounted for is also the technology of that time, here they use the means they have to create the universe of *Doctor Who* and with that the costs of building the different locations, aliens, etc. This also has to be considered since the costs differ from creating it in a studio or in a computer. Though narration is the key element of the series it is the use of both narration and special-effects that make *Doctor Who* complete.

#### **4.5 What influence did DVFX (special effects) have on Doctor Who?**

As discussed in previous chapters, the use of effects is more of a highlight for certain elements than a specific effect. The connection between the statement of the visual use of the image and the sound when the TARDIS goes through space and time is an effect to consider. Here, the viewer gets connected both through sound and image to the TARDIS and when it moves, making the effect real and plausible. This also makes it possible for the developers to utilize either one or both effects in the episode, making either the same statement that they

move, or others, such that the TARDIS disappears or gets stolen. However, this is the only time that the effect has its own representation, and this is not by visual means, but with sound, making the use of the image not needed for the statement.

As it has been concluded the narration is the main driving point of the series, making the use of special-effect non-needed for the narration to be told. The use of special-effects in the series also heightens certain aspects that in some ways affect it. To make it easier this can be described as follows:

1. The narration and the dramaturgy of the series create a believable universe. The driving point is the actors with long dialogues and/or monologues.
2. The special-effects in the image and through the auditory enhance the illusion and the belief of the series. However, it is not needed for the narration to be told.
3. The visual special-effects that is used in the series does not have its own language or representation, they are always an extension of a scene, dialogue or the situation.

Breaking it down shows very clearly that the use of the image and the effect it has on the series is only by enhancing certain scenes. It never represents an own visual language as a narrative device that drives the scene forward or delivers important information to the viewer. This shows that the influence that special-effects have on the series is only for an enhancement purpose and nothing else.

#### **4.6 Summary Doctor Who**

Even though the technology has advanced rapidly, it can be seen that special-effects is being used. Instead of just the image itself it is the image together with sound that makes up the special-effects. With the use of image and sound a convincing illusion is created and heightens the expectations for the audience. Here the utilized effect works with the narration and only exists because of it. It has a place and a purpose in the narration, making the effect non-vital for the series due to the fact that it can be removed. As the previous break down showed, the purpose of the special-effects is only to represent certain aspects that are needed, such as the TARDIS, aliens, planets, etc. It is never utilized in a way where the special-effects have their own visual language as a narrative device. To this sound has been added to help the special-effects and to strengthen certain parts of it.

*Doctor Who* uses strong narration to build the episodes and to this visual and auditory effects are added to heighten certain aspects in the show. The image is never used as the narrator, but it still has some visual representation. Working together it creates an illusion for the viewer and enhances the image and experience of the series itself, making the implausible plausible.

## **5 Doctor Who 2005**

### **5.1 Introduction**

This analysis is going to look at the first episode named “Rose”. In this episode the recipient gets a re-introduction to the doctor and his adventures. It also sets the scene for the rest of the season and the Doctor’s first companion. In the analysis two certain scenes will be concentrated on, the first one being the vignette of the series and the second one being the scene where the doctor has been captured by aliens. These two scenes use the most DVFX and will represent the episode in the analysis. To this, other scenes will be discussed, although the above-mentioned scenes will be the focus for the analysis.

### **5.2 Episode overview**

The episode starts with the protagonist Rose, as she wakes up the viewer gets to follow her in a regular day of her life. As she quits her job for the day Rose realizes that she forgot to leave the money deposit to the security guard. She goes back into the store and takes the elevator down to the basement. As she comes down, strange things start to happen. All of a sudden, she is locked in a room and mannequins start to attack her. Here, the Doctor enters, as he saves Rose from a certain death the two of them manage to escape the building and destroy the aliens. After their encounter, the Doctor disappears and leaves a confused Rose. Then, the episode progresses to a re-encounter between Rose and the Doctor as he discovers that the aliens were not stopped. The two of them go out to find the alien commander and stop the invasion. They manage to do this and as the episode ends, Rose joins the Doctor in his travel.

## 5.3 How is DVFX used as a visual language in Doctor Who?

### 5.3.1 Vignette

The opening of the first episode introduces the recipients to a CGI made wormhole. Different colors emit from the wormhole and in it a blue police box appears travelling through it. After a while, the first wormhole disappears and the police box goes out into space for a split second. A virtual camera moves with the police box and it enters a new wormhole with different colors than the one before. The blue police box disappears in the wormhole and the credits of the actors start to come towards the screen, after the two first names a CGI number plate flies towards the screen with the name of the series and the first episode. This fades into an image of the moon and earth. A virtual camera moves in on earth and flies through the atmosphere and lands on an alarm clock in the protagonist's house. Here, the picture changes from DVFX to live footage and the introduction ends.

Using DVFX in the vignette lets the DVFX give away some facts about the series that are specified to the audience, the interpretation of the ship and that it is in space cannot be misinterpreted by the viewer and it can also not be done as it is without using DVFX. As the vignette ends it goes over to a CG made image from space looking down towards earth, this image strengthens the earlier statement that has been done by the vignette and that the ship has landed on earth. When the image, via a virtual camera, moves forward, it rapidly enters earth's atmosphere and lands in the protagonist's house. Using the alarm clock in this way means that the image can transfer from CG to live footage almost completely invisible.

Different things can be seen in the introduction of the episode, especially the use of DVFX to make certain statements: where one of them is that the Doctor is on the way. The second is that the situation takes place on earth and the third statement is that Rose is important. All this can be interpreted by the start of the episode and everything is made with DVFX, giving the effects a representation and code within the series, through DVFX the image represent and visualize a story towards the viewer. Decoding the image while watching the episode the recipient understands that the Doctor is the protagonist, he is also the protector of earth and he can travel through space and time. The recipient does this decoding by the sequence of the images unfolding before them, just as Metz discuss image and structuring-images when he discusses cinema and syntax this can be seen here. Where the DVFX acts as the narrator and

sets up the scene for the recipient, here the digital visual language becomes the narrative device towards the recipient.<sup>64</sup>

Though it is only in this scene where this happens, for the introduction of the episode, the digital visual language has an influence to the universe of the TV-series and the belief in the created illusion. However, as the episode progresses the use of the visual language disappears and becomes more of a techno-enhancement. This shows that the use of DVFX as a narrative device is present, but not fully utilized throughout the episode.

### 5.3.2 Captured by aliens

The Doctor has been caught by the aliens invading earth, as he is held prisoner he talks to the alien in command, trying to make them understand that they do not have to invade earth. In this scene the Doctor is presented to the viewer as if he is in danger with no possibility to escape, to this the visual language enhances the danger by having the DVFX effect of the alien itself in the screen and his henchmen that are made in costume. Here, the scene uses both DVFX and costume to set up the contents of the scene, the costume made henchmen is holding the Doctor while he is talking to the DVFX made alien commander.

In this scene the DVFX never represents the digital visual language as a narrative device. The scene could have been done without showing the commander and instead made visible through narration, for example letting the protagonist present a monologue in a close-up. But by using effects in the scene, it not only enhances the illusion of danger towards the Doctor himself, the alien can also be visualized to enhance the tension of the scene. If the director of the episode had done a close-up monologue with only the doctor and perhaps the two henchmen, the effect would not have been as effective. Adding the DVFX element and actually showing the alien, it creates a more dramatic tension of danger and it also quells the curiosity for the viewer of how the aliens look like. The DVFX visualizes the aliens and by so representing them as well, even though only by looks. It does not make any statement or drives the narration further. All it does is enhancing certain aspects of the scene itself.

The episode then goes on for about forty minutes mixing both DVFX and real live footage, such as masks and other non-DVFX creations. The balance of DVFX and Special-effects is effectively utilized and also shows that not everything has to be made with CGI, at the same time the main parts of the image use DVFX. This can be seen in for example the scene where

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<sup>64</sup> Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974, p. 67-68

Mickey, Roses boyfriend, is caught by the evil aliens. Here, a dumpster is coming alive with the use of DVFX and the viewer gets to see Mickey first get glued to the dumpster with his hands and then eaten by it, something that would have been hard to do without the use of DVFX.

The visual language in *Doctor Who*, is a mix of live action and DVFX. The image itself is using both CGI and special-effects elements to represent an interpretation of danger, fiction and alien technology. This makes the visual language a hybrid between special-effects and DVFX, in addition to this the written materials is added to deepen the narration, there is also the use of sound to enhance the effects. This is through an extra implementation and also something that could be seen in *Doctor Who* from 1963.

Organizing the content of the first episode of *Doctor Who* cannot as easily be made, mainly due to the fact that the only actual use of DVFX is in the vignette and the introduction of the episode and this can be made without DVFX. With the introduction the recipient gets introduced into the universe of *Doctor Who* and his adventures. This does not rely on DVFX; instead it is the written materials that make up the scene.<sup>65</sup> Other than that the episode can progress without any use of DVFX at all, the narration of the story uses DVFX to enhance certain parts of the episode, for example the scene where a building explodes. This scene could be done off screen and let the actor react to the sound itself instead of the image. At the same time there is a visual language within the series itself, the representation of the main protagonist, the doctor, is the blue police box, a prop and with it is a visual representation when it goes from one place to another in the image, this is made by a transparency effect, something that cannot be done without using effects. In addition to this the DVFX helps the viewer to visualize the places to where the narration takes them, making the DVFX a visual language of the interpretation of the different places and aliens that the protagonists meet. With this a visual language can be seen that is constantly used within the series, by blending DVFX and special-effects together there is an interpretational language created in the image and by so towards the viewer. However, DVFX is not used as a narrative device in the series; it is the written material that drives the story.

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<sup>65</sup> Thomas Elsaesser, Malte Hagener, *Film Theory: an introduction through the senses*, Routledge 2010, p. 35-40

## 5.4 What key elements drive Doctor Who forward?

### 5.4.1 Vignette

In the vignette there is not much of written material, as it has been stated in the previous chapter. Here, the use of the image tells the story and progresses the narration further. Since the lack of narration in the vignette, such as dialogue, the images have been given the space to tell as much as they can. This however, can also be seen as a complement to the narration itself, the introduction may lack a wall of text or voice over, but it is still working together with the narration. Only difference is that it is using the images as a narrative device instead of text or words. Here, a digital visual language can be seen as the key narrator of the series progress, by only using images different statements can be made (as discussed in the previous chapter), these statements are only made by images and the recipients own interpretation of it.

The creators however, have made it so that the interpretation cannot be mistaken for anything else than what they want to say, they do this by using familiar symbols within the image: for example by using a vignette that relates towards the old series, colors and effects that can link to wormholes or space, and in it the blue police box which states that it is travelling. To this there is the same *Doctor Who* theme music that always has been used, after the vignette the image shows a planet which can be interpreted as the moon and the CG camera pans through it towards another planet that can be interpreted as earth. Here, a clear visual language is used to narrate the story and set the scene, after the introduction it intertwines with the written materials and becomes an enhancement effect for different scenes. This shows that a hybrid exists within *Doctor Who*, and it also shows that the image and the written material are intertwining to a certain degree with each other. However, this is only in the vignette. For the rest of the episode the DVFX goes from being the narrator to becoming a techno-enhancement effect to visualize different things, such as the alien commander.

### 5.4.2 Captured by aliens

In this scene the leading format is the written materials, with the set-up and the content of the scene it shows that narration is the key element. Although the DVFX is visualized it is the written material that progresses the story further. Having a monologue with the aliens, the Doctor tries to convince them to leave earth. In this scene the doctor stands before the alien commander, in the background the viewer sees Rose, Mickey and the blue police box. The tension of the scene increases with flashes to the city and its habitats, where the camera shows the mannequins rampage through the city killing people. This goes back to the doctor and his attempt to stop the invasion.

Everything in the scene and the progress of it is driven by the narration and the dialogue of the doctor, he represents everything that is good as he fights for both, earth and the survival of the alien species. Letting the written material unfold and drive the story the core element becomes the narration. To this the visual effects enhance what the narration already represents and presents to the viewer. What can be seen is that everything is intertwined with the narration itself and every effect has a purpose that fits the written material. As it has been discussed in the previous chapter certain scenes could have been made without the use of any visual effect, but here the purpose of the effect is the enhancement of the image and by so the narration. This creates a series that uses narration to drive the plot forward instead of only relying on visual effects; a core element is created that the viewer can follow. With this the effects can then be used to visualize the narration in the image.

### **5.5 What influence did DVFX have on Doctor Who?**

The influence DVFX has had on *Doctor Who*, is noticeable. It is both a bystander and a representational visual language. It is used to enhance the effects in different scenes and it gets room to tell a story with the use of digital visual language as a narrative device. Could the series be made without the use of DVFX? Yes, the use of the written material and the progress of the episode and its narration do not revolve around visual-effects. Using DVFX in the series is allowed to evolve and tell a story with images, something that shows some of the power of digital visualization.

### **5.6 Summary Dr. Who 2005**

It is clear that in *Doctor Who* the effect of DVFX is intertwined with the narration, even though the visual language of DVFX is not necessary for the written materials, it is still an element in use throughout the episode. Using DVFX to enhance and visualize certain scenes the effects in *Doctor Who* have a split language. As it can be seen in the beginning the DVFX represents and becomes the narrative device of the scene, telling a story with DVFX images and progresses the narration. After this the DVFX transfers itself over to enhancing the different scenes, and the DVFX becomes a techno-enhancement bystander for the written material. This is a trademark that also could be seen in *Doctor Who* from 1963, where they used strong written materials and the effects as an enhancement in the scene.

## **6 Terra Nova**

### **6.1 Introduction**

In the analysis the focus will be on the introduction (vignette) and approximately fifteen minutes into the series. The reason for this is to be able to do a full analysis of the narration, DVFX and the image. The introduction scenes go together in a sequence in such a way that they affect each other, in this certain scenes will be closely looked at such as the Vignette, launching bay, and Goladprison.

### **6.2 Episode overview**

*Terra Nova* starts with an overview of earth from space. The virtual camera then enters the atmosphere and flies over a CG made city into a corridor where the camera focuses on the protagonist Jim as he is walking home. As he comes home the family is subjected to a search of family members. This is because it is only allowed to have two children and a family of four. As the inspectors find the family's third child, Jim attacks the policemen and gets arrested. This sentence him to a place called Goladprison. After two years, his wife gets an offer to join the pilgrim journey to Terra Nova, a new place of hope. She helps her husband to break out of prison and he joins them. As they arrive at Terra Nova, Jim is captured and thrown into a cell. This is until Commander Nathaniel offers Jim freedom if he helps keep the order in the colony, Jim accepts and they start a new life on Terra Nova.

### **6.3 How is DVFX used as a visual language in Terra Nova?**

#### **6.3.1 Episode introduction**

At the beginning of *Terra Nova* the viewer is met with an image of a CGI made moon, looking down towards a polluted and desert-like earth. The image moves slowly forward with the virtual camera and holds the image, there is no editing or cutting it is all a sequence of DVFX images. As the camera enters earth it flies over a polluted city, the camera moves towards a building and as it enters the image focuses on the protagonist. Here, the first clip is made in the image, when the image goes from DVFX to live footage it is so invisible that they merge together, making it hard to see what is real and what is, DVFX. The first impression the viewer is introduced to is an image representing a visual language that tells a story. Here, the use of DVFX is represented as the visual language to progress the narration without using written materials such as text or words. The visual images used are not just inserted to enhance. They have a purpose, the DVFX acts as the narrator and set the tone of the series.

When the camera enters the atmosphere and shows the surface of earth and the virtual city, the visual image further strengthens the thoughts that the recipients have about earth and the set-up of the scene. Using symbols in the image, such as the American flag in the beginning, a message is sent to the viewer without using any written materials. This is an intellectual way to set up the scene. Instead of using a voice over or wall of text the creators let the visual representation overwhelm the recipient within the image itself. Doing this, the image becomes the narrating device of the story; the DVFX represents the universe of *Terra Nova* and everything that has happened within that universe. Without the effects in the scene it would not be as efficient to tell the same story. Here, the visual language progresses the narration and intertwines with it, the scene is not just one image on earth as a light brown dot in space with the moon as a landmark. It is a whole sequence that starts with an extreme close up on grey dirt-like surface, which as the sequence progresses turns out to be the moon. Then, as the camera continues to travel towards earth the viewer gets enough time to read the image and merge with it to understand what has happened.

In the scenes nothing has been said neither with words or text, all information delivered to the recipient is through a visual language of interpretation, with the editing together with CGI. No narration is needed making the use of DVFX a visual interpretational language towards the recipient. The viewer interprets the footage of the moon and the desert-like earth as if something bad has happened through the symbols that the viewer is used to seeing, for example the NASA pictures visualizing earth where it is shown as a blue gem floating in space.<sup>66</sup> As the episode progresses the recipient get more scenes where a digital visual language is used as a narrator, one of these scenes is a holographic billboard on a building. It gets some acknowledgment, but the camera only halts for a second at it. And the recipient draws his or her attention towards the screen that delivers the information. Afterwards, it goes over to the Shannon family as they exit a train. In this scene the use of DVFX is made to explain what kind of place Terra Nova is and when it was discovered, the viewer also gets some of the mechanics on the time travel from the holographic billboard.

Using DVFX to give the recipient this vital information, the recipient not only sees the visual effect, but they memorize what it says, making the DVFX a visual language that the spectator will bring with them as they continue watching the series. Here, the use of sub-codes is inscribed within the image, just as the social code that could be seen in *Doctor Who* and the

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<sup>66</sup> NASA, <http://earthobservatory.nasa.gov/IOTD/view.php?id=885>

auditory effect of the TARDIS.<sup>67</sup> Using the holographic billboard as a deliverer of vital information, it becomes an anonymous speaker and a voice over for the narration, but with DVFX. Just as Metz discusses the disavowal and structures of belief, he is also discussing the problems of belief in cinema; the same problem exists within *Terra Nova* and becomes even a larger problem.<sup>68</sup> Here disbelief is the core of the series, with the time travel aspect in *Terra Nova* it needs to become a structured belief for the recipient and for the illusion of the series.

This is important for the narration of the series that the viewer is fully immersed and accepts what he or she is told within the universe of the series.<sup>69</sup> This belief is created in the series not with the written materials, but with DVFX, which is an unusual way to give out crucial information. Especially in a series that deals with science or as in this case, time travel, where there is always a need to explain the details on how it works to make it believable for the recipients. This is usually done by using a wall of text, voice over or a character that represents science, such as Doctor Emmet Brown in the *Back to the Future* (1985) movies. But in *Terra Nova* this crucial information is given to the recipient through the use of DVFX and in that digital visual effect as a commercial billboard, making the world more living. Here, the use of DVFX as a visual language sets-up the scene and give out important details that explains the core mechanics of the series, without having to create an extra set-up scene for it.<sup>70</sup> Instead the creators let the visual image do the introducing of the why, how and when into one image, making the DVFX representational and a visual language within the series, and by so letting it become one with the narration itself.<sup>71</sup>

Doing this does create some complications for the narrative, by letting DVFX deliver information that describes a crucial part of the main plotline, and by doing it on a holographic billboard that represents a commercial board, the narration sets-up the universe of *Terra Nova* and can easily be misread or misunderstood.<sup>72</sup> In this scene only some information is given, the viewer's get the answers of why, how and when, but no in-depth information of the mechanics of the time travel. For the narration of *Terra Nova* this is not needed, and the

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<sup>67</sup> Daniel Chandler, *Semiotics: the basics*, Routledge, second edition 2007, p. 193

<sup>68</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982, p.73

<sup>69</sup> Ibid

<sup>70</sup> With this the author of the thesis means a certain scene that explains how the time travel works and when it was discovered.

<sup>71</sup> This connects to the set-up: the why represents why something is as it is, the how represents how it is done or has become and what it is and the when is the timeline of when it happened, or the turning point of the event.

<sup>72</sup> Set-up means introducing the world, characters, and objects - the different things that will have an impact on the series universe and by so on the plot that drives the story.

holographic representation of the time travel information is enough. However, it could have been narrated more clearly to heighten the narration of the story. The visual language and representation of this information in the use of DVFX for this scene, is a way to help the narration tell something that otherwise would have needed to have a specific scene. Now it is instead delivered to the recipient in one image.

DVFX can also misrepresent information which can be seen in the scene of Goladprison. As it is presented for the recipient the CGI made prison shows a horrible place that looks like a destroyed facility, to this the viewer is also presented to earth's filthy polluted sky that lingers over the prison with no sunlight coming down through it, and behind the prison almost cloaked by the fog skyscrapers stand tall and ghost like. The image represents a closed place together with the written material and the recipient recognizes the place as a prison.

With the help of DVFX the Goladprison is interpreted as a place of hell with no escape, the image also shows a part of earth that has not been seen before, once again strengthening the narration that earth is destroyed. There are however, some inconsistencies in the written material and the image, also why Goladprison is important. In the written material (plot), Goladprison exists because Jim punches a policeman and gets sentenced to prison for it. But it does not represent or help the written material further. Jim still gets to go to the colony in Terra Nova with his family, even though he breaks into the time bay and illegally goes through the portal, and the only reason he needs to break-in, is because he escapes from Goladprison. A misunderstanding is formed within the narration mainly because it is Elisabeth that gets the offer to travel to Terra Nova and not Jim, this can be seen in the following table:

1. Jim punches a policeman because they have a family of five instead of four, and by having that the family breaks the law. Jim is sentenced to Goladprison.
2. A couple of years pass and Elisabeth gets an opportunity to travel to Terra Nova, she goes to Goladprison to talk to her husband and to deliver a surgical tool, which is a laser so he can escape from the prison and join his family.
3. The family goes to the time bay and waits for Jim, Jim has escaped and the recipient sees him breaking into the time bay, collecting their youngest daughter that they have had to hide and goes to Terra Nova.
4. As they arrive at Terra Nova, Jim is taken into custody by Commander Nathaniel Taylor and shortly after he is set free to join the colony.

5. The only time that Jim's past comes up is through the son, who is angry with his father.

As seen in the breakdown step one to three is not needed to progress the story. Even if Jim had not punched the policeman the family had gone to Terra Nova, because it is Elisabeth that gets the opportunity not Jim. Instead, the action scene could have contained how the family had to sneak in their youngest daughter into the facility to get her with them, something that currently is intertwined with Jim's escape.

There is also the manner of Jim's escape. The visual interpretation of Goladprison, is that the prisoners are held in small rooms with tight security, making it hard to escape. Despite of this, Jim a policeman that stands for law and order, and not a criminal who is easier to interpret as someone who has been captured before, and thus got earlier experience in escaping, manages to escape from the prison. Here, the representational social code which a recipient is used too, gets misrepresented.<sup>73</sup> The use of a visual language has been incorrectly used to make a statement and by so, making the written material struggle with what the recipient should accept and should not accept, this also shows how important it is that the narration and DVFX work together in the image, such as in the holographic scene earlier discussed.

The use of DVFX in the series is extent and even the smallest things represent something in the everyday life in the *Terra Nova* universe, one of these things are the ID-badges. This is another example where written material and image represent different things. As the family enters the facility with the time rift they have to be cleared, to get cleared they need to show their ID-badges. As they hold up their ID-badge, represented as a small glass like information tablet, they get scanned and the ID-badge goes from transparent glass to an image of the person and information about them. As the family is being processed they can move on towards the launch platform inside the time bay. Here, the written material and the image work together in some parts, as the scene progresses the image shows that this is a necessary step to get forward towards their new home and to meet up with Jim, who is, breaking into the facility. But the dialogue in the written materials differs from the visual language. In the visual language the scene tells the recipient that when the ID-badges go from transparent to blue, with a white line on the right side and a photo in the middle, the person is processed and can move on to the launch bay. But in the written materials the recipient hear a guard call out

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<sup>73</sup> Daniel Chandler, *Semiotics the basics*, Routledge second edition 2007, p. 153 - 157

that all people that have a red badge can proceed to the launch bay. Here, the written material differs from the visual interpretation that has been set-up for the viewer, just as Goladprison had a visual interpretation that differed from the written materials.

The reason for this is that the image as a narrative device tells the recipient that the time bay has a high security and potential danger for Jim as he tries to enter it due to the security check he needs a correct ID-badge. But the written material breaks the illusion of danger when the image differs from what the narration says, making it hard to feel any emotions towards the situation itself. As Metz discussed that the story itself needs to be believable for the recipient, so that the viewer feels the emotional turmoil that exists within the image and believes the illusion.<sup>74</sup> This can then be enhanced with DVFX to create an illusion that corresponds to the written material and expectations of the recipients. Here, both the narration and DVFX need to work together in the image for it to succeed and become believable for the recipient. In the example of the Goladprison this happens, the DVFX enhances the image and the recipient understands the scene, but it is not necessary for the written material. It is the same thing with the holographic commercial board, which presents crucial information on the time travel. But in the ID-badge scene the whole illusion gets shattered for the viewer, especially when the scene itself is a build-up for Jim as he breaks in.

When the visual interpretation for the recipient is that the family is cleared and processed it heightens the danger for Jim, particularly when the color red is a symbol of danger.<sup>75</sup> When the recipient sees Jim's family gets pass the guards and the blue color on their badges, it means that they are safe, but Jim is still in danger. This heightens the scene and the recipient awaits Jim's entrance to see if he manages to get in. Then, when the guard within the written material, says that everybody with red badges can proceed into the time bay, the recipient's interpretation gets confused and the illusion of danger disappears. Making the scene unbelievable for the recipients and thus the viewer does not feel an emotional connection towards the family; just as Metz discuss the importance of the illusion and belief in it for the scene.<sup>76</sup>

Even though some misrepresentations exist both within the written material and the image, the visual language of *Terra Nova* is clear. The creators have taken use of DVFX to utilize the

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<sup>74</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982, p. 71

<sup>75</sup> Daniel Chandler, *Semiotics the basics*, Routledge second edition 2007, p. 147 – 160

<sup>76</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982, p. 71-74

universe of the series and to create the world. In this world the DVFX has its own visual language that makes the recipient interpret with the image instead of just the written material. In the first episode the recipient is introduced to this visual language, by making this establishment early there is sub-code created for the recipient that the visual language is always constant. To this the DVFX helps create the illusion and taking away some of the disbelief that it has towards the recipient, making the *Terra Nova* universe believable.

#### **6.4 What key elements drive Terra Nova forward?**

The image is one of the key aspects within the TV-series and with it the narration. In *Terra Nova* the DVFX is used to enhance important details and crucial information, the visual language represents the universe and makes an interpretational representation of it. Thus, making the recipient aware of certain details that otherwise would have needed either a specific scene, wall of text or images where a voice over explains what has happened. In *Terra Nova* all of these things are used and with that the creators use DVFX as their language to visualize the things they want to highlight. In some scenes this is intertwined with the written material and with the image and in other scenes there are some inconsistencies (as discussed in the earlier chapter). However, as a visual language the DVFX is used to enhance the experience of the TV-series universe' for the recipient. It also makes statements that otherwise could not have been made equally well. This shows that one of the main key elements is the use of the image as a narrative device, helping the plot to move forward. To this the written material is either present or intertwined with the image. This makes *Terra Nova* a hybrid that uses both image and written material to tell its story.

One of these elements is the holographic billboard in episode one, as it has previously been discussed it is unusual to use a DVFX-effect in the image to present vital information to the recipient. However, in *Terra Nova* it fits the narration and plotline that is presented for the recipient making the illusion of *Terra Nova* more acceptable. This is only one of the representations that DVFX has within the TV-series, but it is one of the most noticeable effects. Here, the DVFX not only presents a core element in the series, but it is also a statement of earth and the social life in 2149. The recipient gets an indication of the world that the creators are building, and it fits the narration. Both written material and image work together to make the universe of the TV-series work. And it is the use of both elements as a narrative device that progress the series, though the series rely more on the DVFX as a narrator to implement important details instead of just the written materials.

## 6.5 What influence did DVFX have on Terra Nova?

The use of DVFX in *Terra Nova* is extent and the show could not have been executed the way it has been without it. This shows that the visual effects are very important. The creators can with the help of DVFX, build up both a futuristic and a lost world where *Terra Nova* exists and then set the tone of the hazards it has. The image is important in the series due to the fact that it helps provide both information and emotional attachments for the recipients and towards the series. When it comes to the DVFX it helps driving key elements of the story as a narrator, for example being able to create the dinosaurs that inhabit the wildlife and the time rift itself that is the driving point of the series.<sup>77</sup> Having these elements in the series' universe they need to be believable as an illusion to the recipient, here the implementation and use of DVFX need to create a wild life and zoology that is realistic.

Without these effects the series would not have been able to exist, making the use of DVFX crucial for the series itself. It also creates the form of techno-enhancement that Shilo. T. McClean discuss, where the effects are implemented into the scene and drive it forward, but only as a visual enhancement, where the written materials still decide the plot of the episode. At the same time, a hybrid exists, due to the fact that in the scenes discussed the DVFX is the narrator and intertwined with the written materials. Both are needed to create a realism that the recipient will believe and feel an emotion to. Just by looking at the dinosaurs in episode one it can be seen that the DVFX has an influence in the series and the universe, to this the written material works with the image to create a believable world.

## 6.6 Summary Terra Nova

From FOX network *Terra Nova* was an experimental TV-series that took use of 21<sup>st</sup> century technology within digital visual effects.<sup>78</sup> This makes the DVFX one of the main purposes of the TV-series. As discussed *Terra Nova* used a hybrid of both image and written material to tell its story, even if the main purpose of the series was to work with DVFX it became intertwined with each other. That DVFX had a high influence is also something that is clear and it can be said that *Terra Nova* started something that is probably going to get bigger within the industry, Only in 2013 three series influenced by DVFX have launched: *Marvel Agents of S.H.I.E.L.D*, *Defiance* and *Almost human*. To tell a story with the help of visual means can be difficult. As the analysis has shown even though *Terra Nova* used and had a high influence of DVFX the written material was one of the key elements. Making the

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<sup>77</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 217 - 229

<sup>78</sup> Internet article, Terra Nova, <http://screenrant.com/terra-nova-canceled-season-2-aco-157895/>

narration a hybrid of both image and written material, at the same time the image became the narrator in certain scenes and in others it became an enhancement of the scene itself, letting the written material drive the narration forward.

Sometimes the visual interpretation of the scene and the image with the written material became confusing due to a difference within the narration, for example Goladprison and the time bay, except these scenes the balance between image and written material worked well and created a believable universe for the recipient.

Now the discussion of a techno-enhancement instead of a visual language in *Terra Nova* is complicated. This is due to the fact that in some scenes the DVFX only visualize the written material and in other scenes it becomes the narrator of the scene and gives out information that enhances the illusion and the belief of the universe itself. Doing this the DVFX becomes a visual language and the narrative device of the written materials in the image, either by itself or intertwined with the written materials. This shows that techno-enhancement exists within the series but also that DVFX works as a narrative device.

## **7 Defiance**

### **7.1 Introduction**

For this analysis there is going to be two different components in the first episode: Vignette (introduction) and the Battle of Defiance. In these scenes different elements and expectations can be found that is important to the analysis.

### **7.2 Episode Overview**

In the first episode the viewer quickly gets to understand who the two protagonists are, Nolan and Irida. To this an explanation to what has happened to earth is introduced by Irida. After this, the story starts when Nolan and Irida are looting the debris of one of the alien ships, here they find an intact power source, but before they can get away with it they get attacked and shot at. When they flee, Irida gets shot and this leads them to the safe haven of the town Defiance, when they are in the town Nolan gets hired to find the murderer of one of the powerful men's sons. As Nolan chases after the killer, he reveals a plan to destroy Defiance and leaves it defenseless for the dangerous Volge. Nolan and the mayor gather the people of Defiance and mount a defense, they manage to chase away the Volge and Nolan is elected the new law keeper of Defiance.

## 7.3 How is DVFX used as a visual language in *Defiance*?

### 7.3.1 Vignette

In the opening scene of *Defiance*, the recipients are presented to a CGI made universe with earth surrounded by alien spaceships hovering over it. After a short while, a voice over starts to explain some of the things that happened, it is one of the protagonists who describe how earth was before the aliens came, as the voice continues the image changes from CGI to live footage, where the recipient sees a park and ordinary life taking place on earth. The protagonist voice over silences and the recipients get to see a boy looking up towards the sky and over him the alien spaceships start to enter the atmosphere of earth. The boy is pulled away by his mother and the image cuts to the next scene, showing earth thirty-three years into the future terra-formed.<sup>79</sup> Now the CGI image shows the wreckage of different alien spaceships, floating above earth. The voice over comes back, and explains what has happened to earth, and then gives a brief explanation of the Votans own star system. This goes over to a CGI image showing a spaceship falling towards earth. The recipients get to see how it enters the atmosphere and then the image goes into a CGI made terra-formed earth. A car is shown and the camera focuses on one of the protagonists inside the car, it is the person who has introduced the recipients to the story, Irisa. After this the second protagonist, Nolan, is introduced.

The opening statement in *Defiance* uses both written material and the image to proclaim what has happened. The visual language towards the recipients is clear with the CGI in the image, it tells a visual story to the recipient, and to this the written material underlines what the visual language narrates and strengthens the narration further. The use of the voice over also fills in a number of blanks for the recipients on some of the questions that might be asked. For example, who are the aliens, where did the aliens come from, and what happened to earth. These questions are to some extent answered, such as where the aliens came from. But it is never specified in the series, only mentioned that the Votans came from a star system that had been destroyed, this answers both the why and who questions at the same time. As to what has happened to earth is explained by a wall of text.

Using a wall of text, voice over and visual representation the creators have made sure that the viewer can only interpret the information given to them in a certain way, thus there is no room

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<sup>79</sup> *Terra-formed* has been mentioned earlier and it means that earth has been changed, due to the accident of the Votan spaceships it became a hybrid between two worlds, Earth and Votan.

to visualize or think of what might have happened. Doing this, the creators of *Defiance* have made sure that the recipient understands and interprets the story they want to tell. This also makes the digital visual language not needed for the narration as a narrative device, mainly due to that the recipient is introduced to the story by written materials instead of only the image itself. As the episode prolongs more DVFX comes into place, such as the representation of the new terra-formed earth and its landscape, the spaceship that falls to earth and some of the wild life that now exists. Here, the use of DVFX exists as a visual language to make the post-apocalyptic world real to the audience and enhance the imagery.

Looking at the introduction of the episode it is clear that the recipient sees the story that is narrated, thus the visual language exists within the image, it is never utilized as the narrator. The DVFX enhances the scene more than it actually tells and drives the story forward. This can for example be seen in the scene right before the virtual camera lands on Iridia. Here, the image goes from space down to earth and into a moving car, revealing the two protagonists of the series. As the camera follows the falling spaceship the recipient is introduced to the new earth for the first time. Here the image shows a new world with strange landscape. In the middle of the CGI-made scene the recipient sees a car moving on a dusty road. The virtual camera moves towards the car and goes inside it. In this scene the voice over is the narrator instead of the image, the same illusion would have been able to do with only the DVFX. Here the falling spaceship, the world and the surroundings are believable and create an illusion for the recipient that works together with the narration. When using both elements the illusion of the post-apocalyptic world gets more believable towards the recipient.

Even though the digital visual language is not a driving point it still helps to visualize the narration and creates the illusion that has to exist in the scene. The illusion towards the recipient is needed to create the emotional attachment towards the characters and series' universe as Metz argues.<sup>80</sup> In this scene the use of written material and image both elements enhance the illusion of the post-apocalyptic world, creating a belief in the scene and to the recipient.

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<sup>80</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982, p. 72 This has been simplified by the author, the discussion is more complex but the essence of it is what is mentioned in the text. For a full understanding of the discussion see the referenced book.

### 7.3.2 Battle of Defiance

This scene is one of the biggest DVFX scenes in the first episode. Here, the townspeople of Defiance are defending their town from a cliff-side, shooting down towards the Volge. The whole scene is CG made and is given a lot of screen-time in the episode. For six minutes the recipient is surrounded by a DVFX environment and action. As the fight goes on a virtual camera flies over the battlefield to show the massive strength of the Volge, and mixes in some close-ups so that the viewer sees the alien race as well. This is one of the scenes within *Defiance* where image and written material are both intertwined to tell the story and to build up a belief in the illusion. It is also a critical moment in the plot because it is here the resolution of the first episode lies. To be able to have a belief in the illusion it needs to become real. This is something that Christian Metz discusses in: *Film language a semiotics of the cinema*. In this book, he discusses the use of image as a speech together with the dialogue and the scene. Both need to be used in symbiosis so that the recipient believes the illusion that is shown.<sup>81</sup>

In this scene the set-up by the written material creates disbelief and it does not become believable to the recipient. When the camera shows the Volge it shows an immense force of aliens and high technology. In this set-up the townspeople of Defiance could not survive, mainly due to the fact that the Volge has an immense force, in not only numbers but also technology, when they attack. To this the written material also adds a situation where the townspeople need to hold out for ten minutes, before a mega-weapon can concentrate its fire and kill the Volge and by doing so stopping the invading force. Here, a scenario is created that breaks the illusion of the real, the visual language and the written material both state a situation that creates disbelief in the recipient.

The problem in the scene is the functionality of it in the real world. As stated by Metz that the illusion needs to project realism, coming from the recipients own values to become believable.<sup>82</sup> In the end scene this becomes a problem due to the fact that the visual use of DVFX and the written material as a code sets-up a scene that shatters the illusion. Creating disbelief to the recipient and the *Defiance* universe, the visual language and the written material state the same thing, but it becomes inconsistent with what can be believable. Now as

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<sup>81</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975 – 1982, p. 72

<sup>82</sup> Christian Metz, *The Imaginary Signifier: Psychoanalysis and the Cinema*, Indiana University Press, 1975-1982, p. 109 –119

a digital visual language the scene in itself enhances and shows the danger that the townsfolk of Defiance are in, and by doing so a visual language does exist in the scene. Here, the image is used as a narrative device in certain aspects, for example the virtual camera that flies over the Volge force in the action scene. To this the written material has set up the scene and what is going to happen. What can be seen is a hybrid use of written material and image, where the image is used as both a narrator and a techno-enhancement. When trying to create a belief in the illusion within the scene, the written material and the image misrepresent that illusion, which is given to the recipient, creating a disbelief in the scene.

#### **7.4 What key elements drive Defiance forward?**

Written material is the key element in *Defiance*. This is clear for the recipient at the start of the pilot. As discussed in the earlier chapter the DVFX exists more to visually show certain things than to let the image be interpretable by the recipient. Here, the written material drives the story forward and the use of DVFX is only used as a techno-enhancement. This can be shown by breaking down the introduction:

##### **Introduction sequence**

1. Opening scene shows a CGI made image of alien spaceships, a voice over narrates what has happened.
2. The image goes to live-footage of a boy as the narration progresses. Then the voice gets silenced and the image is changed
3. Wall of text explains how long time has passed and what has happened to earth, here a visual representation is shown by the spaceships debris floating above earth.
4. The image shows earth terraformed and a voice over concludes the narration as to what has happened.

As it can be seen the main element here is the voice over that explains the history to the recipient. This goes over to a wall of text setting the scene in the future and after the disaster, it then goes back to the protagonist as she continues to write in her journal and concludes the narration for the recipient. What can be discussed is the visual in the introduction. The story is delivered through the protagonist as she narrates the written material and the visual acts as a techno-enhancement of what is narrated. The introduction could be told by only using the voice over and the wall of text just as it is now. But by using the image it gives a visual representation of what the protagonist narrates and by doing so underlining certain facts, for example when the aliens arrived and what happened to earth. It does not narrate the story, but

it does act as a techno-enhancement for the recipient to interpret the story that is told. This can also be seen as strengthening the narration by showing the images as the narration unfolds. Because the visual only re-tells the narration, it only creates an image that never leaves any interpretation to the recipient; this is already given by the written material that is the main narrator.

Throughout the series the driving element is the narration and the visual is a supplementary in-print to single out certain things. Here, the image and the written material never intertwine and the plot can progress without the use of DVFX or any visual language at all. *Defiance* revolves around written material and only uses DVFX to visualize what happens within the story. A hybrid between written material and image can be seen, but as Shilo T. McClean talks about techno-enhancement this is where it becomes visible.<sup>83</sup> The DVFX does not intertwine with the story or add anything to the plot. It only visualizes the written material and by doing so it becomes a techno-enhancement instead of a narrative device.

A question that has to be asked is: why did *Defiance* use DVFX in the image, when it is driven by written material? The short answer is that it is a science-fiction series, and by being classified as a series in that genre the effects are one of the prime elements.<sup>84</sup> There are some elements within the series itself that need the DVFX to be able to exist, one of them being the new wildlife on earth and the landscape itself. Without the CGI work that has been done here the illusion would be much harder to accept for the recipient. Besides these two examples there is also the aspect of technology. Letting the DVFX represent advanced technology, both alien and human, it is possible to build a much more advanced plotline. This can also be seen in other series such as *Fringe* (2005), where the DVFX was one of the main elements in the story and had a visual representation of both important storyline and objects. Though this is not the fact in *Defiance*, besides the examples that have been discussed the series itself can be made by using props instead of DVFX. Just as Shilo T. McClean discuss the cost in film it is viable in this discussion, where it would not be as cost-efficient to build up the *Defiance* universe within a studio. The change here would not be the belief of the illusion in the scene, because the image would be the same towards the recipient as it is now.<sup>85</sup>

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<sup>83</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 227

<sup>84</sup> Timothy Corrigan, Patricia White, Meta Mazaj, *Critical Visions in Film Theory*, Bedford/ST. Martins 2011, p.455

<sup>85</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 65-68

### 7.5 What influence did DVFX have on *Defiance*?

The use of DVFX in *Defiance* only acts as a techno-enhancement. It never influences the imagery or the narration. Mainly because the narration itself is so clear that the use of DVFX is not needed to explain the plot, it is in different ways used to enhance the visual but never used as a narrative device. *Defiance* as a series does not need the effects in the image to drive the narration forward. The creators instead use written material as the main element and the DVFX as a secondary element to visualize certain things that need to be highlighted. And can be done by today's technology.<sup>86</sup> The image could have been used as the narrator in some scenes, but this is not done. Instead, written material and image are utilized to enhance the illusion and its belief in the TV-series universe.

### 7.6 Summary *Defiance*

In conclusion the recipients that watch the series get a plot driven by written material and which uses DVFX to enhance certain elements. As the narration of the TV-series never goes in-depth in the background of the story, the recipient needs to visit multiple platforms to be able to fully grasp the context of the story. If they don't, many things can be missed and feel incomplete. If the recipient seeks out the information a rich background of all the races, a timeline which starts from the alien perspective and much more information can be found. Things that are never touched upon in the pilot, but that can easily be acquired. This can be the reason to why the use of DVFX never acts as the narrator. The written material does intertwine with the image sometimes, but never enough so that it creates a visual language. All key elements of the story are delivered to the recipient through the written material as the main narrative device. To this other platforms can be visited to more deeply get involved into the series universe.

Here the perspective of the MMORPG has to be considered. As it has been stated earlier the MMORPG universe and the universe of the TV-series co-exist, meaning that everything that happens in the TV-series has an effect in the MMORPG universe. Using transmedial marketing and different platforms to deepen the story of *Defiance*, it in-riches the narration for those recipients that visit the website, play the game and watch the series, for those recipients who do not know where to look, can feel that some information is overlooked and sometimes lack conceptuality.

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<sup>86</sup> Shilo T. Mcclean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 65

This shows that though *Defiance* lacks an own visual language that can be seen in for example *Terra Nova* and the holographic scene, it still has a deep narration that crosses over multiple platforms. The universe of the TV-series also expands to a much greater extent and uses the multi transmedial visual language in a more effective way towards the audience.

## 8 Comparison

### 8.1 Chapter overview

The series that have been discussed in the previous chapters have been an analysis of one episode and different images and the implementation of DVFX as a visual language within them. Now an overall analysis and discussion will be made where the discussion will be a comparison between the series. To be able to do this four different questions have been set-up that look at different parts within the analysis, these are:

1. How is DVFX used in the series as a narrative device?
2. What does DVFX represent in the image?
3. Could the series have been created without DVFX?
4. Techno-enhancement, visual language or hybrid?

The main focus in this discussion will also be on the scenes that already have been discussed and analyzed in detail, but as a comparison of the series and the use of DVFX within them.

### 8.2 How is DVFX used in the series as a narrative device?

What can be seen in all four series is that the use of narration and DVFX varies depending on which series it is. None of these series have exactly the same use of the two elements, it either goes towards letting the written materials drive the story forward or it gives some space to the DVFX to tell the story, for example: even though the DVFX in *Terra Nova* uses the image as a narrator, as seen in the vignette where the image drives the starting point of the episode, it is the written material that is the main element in the series. This can also be seen in *Doctor Who* and *Defiance*. In *Doctor Who* from 1963 the written material is the main driving force of the series. This was quite early established and verified. However, when it comes to *Doctor Who* from 2005 this slightly alters, but never in a sense that lets the DVFX be the main point of the series. It still uses the written material as the base of the series, the DVFX is allowed to both enhance the story and sometimes tell the viewer certain interpretable things. Then, in *Defiance* the series uses DVFX to visualize the scene, such as the beginning and introduction, but it is the written material that narrates the story, it is restricted both to a wall of text and voice over. In the vignette a visual language is used and does not need the written material, but it becomes a techno-enhancement due to the fact that the image is never allowed to narrate the story to the recipient. Instead, the series introduction relays on the written material. It is the same thing for *Doctor Who* (2005), in the episode the narration is always using the written

material as the base for the story. To this different scenes use DVFX to enhance certain elements, often danger.

In *Terra Nova* there is a difference because the story relies on written material, but uses DVFX to deliver important and key points to the story, for example the holographic screen that introduces the recipient to the time travel aspect. In the introduction of *Terra Nova* there is also a visual statement that does not use any written material at all, here the DVFX is used as a narrative device to show what has happened to earth and this is done by using different recognizable symbols of earth and the moon. For example, the American flag that is on the surface of the planet that the viewer sees, this is easily interpreted as the moon and as it looks down towards earth the image shows disaster by having a desert-like planet. Only using the image and also let it pause, gives the DVFX its own visual language, this is then used in different scenes throughout the season. Even though it begins with this visual language, the series itself goes towards using the written material more and more as the season prolongs. The DVFX is still used, but becomes an enhancement. Just like in the other three series the visual language that is allowed is mainly used as a driving point in the first episode.

Of all four series it is only *Terra Nova* that actually uses this kind of visual language and also uses the image as a narrative device instead of the written materials. This shows that the image and the implementation and use of the effect in it can provide a visual language that gets interpreted by the receiver and drives the story forward. In *Defiance* both image and written materials were used together to both deliver and enhance the story, as it has been discussed this was not necessary for the story itself. When using the two elements together it guaranteed the creators that the recipient would not interpret the narration in any other way, then the setup they had. Doing this kind of hybrid and use written materials and image also shows that the visual language not only works by itself, it can also be used to clarify certain aspects of a series.

In both versions of *Doctor Who* it is the written material that comes first, here the DVFX only enhances different scenes and technology in them, and never acts as a narrative device. The use of the written material creates the universe and the different set-ups of the scenes. There is always a voice over or most likely the Doctor himself that explains what is happening. *Doctor Who* could take advantage of a hybrid where the DVFX is allowed to act as a narrator, and still have the written material as its base. Instead, the image is only used as a techno-enhancement.

To summarize it can be said that all four series use the written material as the key element even if it never starts out in that way, the DVFX is mainly used as an enhancement and in certain aspects or scenes the DVFX is allowed to tell the story and becomes a visual language. Though *Terra Nova* used the image as a digital visual language and narrative device it never uses it throughout the season, the written material becomes the base and the DVFX turns into a techno-enhancement. In *Defiance* the use of a hybrid between image and written material were used and this let the creators direct the interpretation of the images and the story that the recipient would encounter. In the two separate *Doctor Who*, both the original and remake of the series, it was the narration first and the DVFX was only used as an enhancement of danger or excitement, besides the brief use of visual language in the vignette of the remake in 2005 the image never tells the story, it only shows what the written materials already have set-up for the recipient.

Now the discussion that a visual language does not exist as Shilo T. McClean argues is not correct in all aspects. Although DVFX can be seen as a new tool which has been added to the writer's creativity, the written material has always been essential as the main narrator for a scene. In this thesis one can see that the written material is the key element. However, there is still a digital visual language within some of the series where the DVFX acts as the narrative device. In for example *Terra Nova*, here the image does tell the story and has an impact on it. It also delivers vital information through the DVFX. Nonetheless as the season progress the DVFX becomes a techno-enhancement. What this shows is that a hybrid between image and written material is needed, and both can and are acting as a narrative device to progress a TV-series story.

### **8.3 What does DVFX represent in the image?**

#### **8.3.1 Overview**

In all the analyzed series' universes different species or zoology are presented to the recipient. This is often done either with masks and costumes or DVFX. Now for the early *Doctor Who* this is represented by costume, mechanical, optical and mask effects. This means that in this part of the analysis it is hard to discuss the use of DVFX, mainly because DVFX had not advanced to the level it is today. Now for the other three series it is possible to see the representation of the visual language in the image, for this the overall analysis will be focusing on *Doctor Who* 2005, *Defiance* and *Terra Nova*, which each has DVFX representation of some sort of visual means. In *Terra Nova* the visual representation is the wild life of an old earth, in *Defiance* it is the alien race the Volge and the zoology of the terra-

formed earth, and in *Doctor Who* it is the aliens, alien worlds and so on. In *Doctor Who* the aliens are represented by masks, costumes and DVFX. Because of this the focus for *Doctor Who* will be the alien commander in the first re-launch episode, which is represented by CG.

### 8.3.2 Comparison and representation

In all three series DVFX represents danger, future, time travel and aliens. This is because the genre in itself is influenced by digital effects and almost always presents the illusion of another world to the recipient. In *Doctor Who* the alien commander represents danger to the human population, due to the invasion that the Doctor tries to stop. Here, the recipient sees the alien as a blob of goo that uses mannequins as its henchmen. In the scene the alien is only visible for a few seconds at a time and it is the Doctor and his monologue that is the main focus of the scene. Here, the illusion in itself is that the aliens are bad and that they want to invade earth. The scene is simple and it is easy to interpret the CG made alien commander as evil. In *Defiance* the DVFX also works with the written material to narrate the story through the protagonist Irida. Here, the DVFX highlights certain scenes and important moments in human history within the *Defiance* universe, the DVFX stands for the representation of the aliens and their first arrival to earth. After the introduction the DVFX also represents the new terra-formed earth and its wild life. To this the different alien races are made by masks and costumes and the DVFX becomes a visualization of the technology and weapons together with the dangers that the zoology stands for. Here, one of the races, the Volge, is also completely made by CG, which makes the digital visualization of the Volge a representation of the whole race itself.

*Terra Nova* has a couple of different uses of the DVFX. Here the digital visual language in the image becomes the narrative device in the opening scene. It is allowed to influence some bits of the story, by presenting vital information such as the time travel aspect. This represents both the new and old earth and the wild life it has, for example the dinosaurs.

Of all three series it is only in *Terra Nova* that it is shown that the DVFX represents more than just danger. In both *Defiance* and *Doctor Who* the first representation by the DVFX is danger and technology. In *Terra Nova* the first representation is disaster, but no danger in the sense of aliens trying to invade earth. Here, the recipient is also introduced to life on earth, the reason to the polluted sky and everyday life, as in *Defiance* the recipient is presented to aliens that want to change earth and take it over. In *Doctor Who* it is the same representation as in *Defiance*, but through the eyes of Rose and a day in her ordinary life.

DVFX as a representational tool for or together with the written material only exists in small parts throughout the episode of *Doctor Who* and *Defiance*. Often the DVFX is a techno-enhancement and the representation of different things is narrated through the written material instead of the image, except in the vignette and introduction of both series. In *Terra Nova* the DVFX does represent not only new and old earth but also the life of 2149. There is also important details that is presented to the recipient through DVFX for example the holographic screen, vignette, Goladprison, ID-badges and the time-bay itself. Even in *Terra Nova* the representation through DVFX and the image disappears, not as the episode prolongs, but in the season itself. The pilot keeps the visualization and the use of the image to tell the story, but as the first season concludes this has changed towards narrating the story with only the written material.

Now DVFX as an illusion within each TV-series universe is another representation that needs to be discussed. In all three series the illusion of the contents needs to be interpreted by the recipient as believable. Here, the use of DVFX in the image becomes valuable to the illusion towards the recipient, just as Christian Metz discusses belief in what is shown to the recipient, is important when it comes to create the illusion of representation in the image. Using DVFX to create the illusion of different universes it becomes believable to the viewer, in each of these series it does. Using either only the image or together with the written material the illusion of reality becomes real, to this the DVFX represents the illusion of a real universe to the recipient. That DVFX is an illusion is true. What can be debated is the recipient's interpretation of that illusion, something that this thesis will not discuss as previously stated in the delimitation chapter. It is something that needs to be considered due to the fact that all visualization made through DVFX is made to create a believable universe, no matter what it is. After this, the recipient can always interpret the image in their own way depending on values and projection. It can be seen that the visual implementation creates an illusion and belief towards the recipient and the created series' universe within the image itself. To this certain scenes are represented by the digital visual language, further strengthening the narration and the world of the series either alone or together with the written material.

#### 8.4 Could the series have been created without DVFX?

Of the four series that have been analyzed *Doctor Who*, is probably the only series that can be made without any DVFX at all. This has been proved since the series' first started in the 60s, the series has a strong narration and relies more on the actors than the image itself. To this the DVFX became a part of the series enhancing certain aspects of the content of the written materials, as seen in *Doctor Who* from 2005. Could *Terra Nova* and *Defiance* have been made without DVFX, and if so would they have been as successful? This is a hard question to answer mainly because both series rely more on DVFX than *Doctor Who* and both series have a universe that is set in the future. To this the cross platform marketing and the transmedial franchise have to be considered. The series not only play out in front of the screen, the recipient can now play and read about the series and its universe as well. This enhances the illusion in the image, making the series become more valuable to the viewers. In general, the TV-series could probably have been made even without the DVFX, the cost would have been increasingly high, but it would still have been possible. What the DVFX might have provided was the means to do it as a series, and utilized the effects in a way that it not only becomes a whammo-effect but also represent certain aspects in the story, which has been discussed earlier.

That all four series have a narration in them that drives the key story forward is factual and needed, to this the DVFX works in different ways depending on which series it is. This shows that it would be possible to do the series without the DVFX, but not completely without special-effects, certainly not when it comes to *Terra Nova* and *Defiance*.

#### 8.5 Techno-enhancement, visual language or hybrid?

In the analysis the main question have been *how are Digital Visual Effects being used within contemporary TV-series?* The thesis has used this question to look at how DVFX is used in contemporary TV-series as a narrative device. Looking at four series it has been possible to determine the use of DVFX in the image and as a narrative device, another question that was asked and looked at where if there existed a new visual language used by DVFX.

In contemporary TV-series it does exist a form of three different uses of DVFX: the **first** is enhancing: here the DVFX only enhances the image itself and the written materials are the driving point of the series. The **second** use, is a hybrid: where both written materials and image are intertwined to tell the plot and drive the story forward. The **third** and last use of DVFX: is that it is allowed to become the visual language as a narrative device in the image of the written materials, one example here is *Terra Nova* and the holographic screen that has

been discussed earlier. There are also different scenes in the episodes throughout the first season of *Terra Nova* that let the DVFX narrate and become the driving point of the story. Even though this is the case, the written material always exists and has influence on the story. The visuals get the space it needs and the image becomes the narrator, but the written material is the main narrative device of any of the analyzed series.

What DVFX does and what the visual language stands for is the interpretation of certain scenes and aspects within the series themselves, by letting the DVFX drive the story different ways are opened up to the recipient to discuss and interpret the story. It also lets the creators evolve and create worlds to make the statements they want to do, without having to use a wall of text or a monologue. The visual language becomes a part of the written materials and it enhances the story with the use of DVFX. That a new form of a visual language exists is a fact, by using DVFX to drive certain aspects of the story or enhancing it shows that the visual language in contemporary TV-series has an influence. Just as Lev Manovich discusses in *After Effects, or Velvet Revolution in Modern Culture* the visual language does influence the audience, to this the DVFX now can and is becoming the narrator in TV-series instead of just a techno-enhancement. Metz also discuss that these changes have been going on since 1993 and that they keep developing.

In addition to this Shilo T. Mcclean needs to be considered, she talks about DVFX and the visual as a means and techno-narrator (in this thesis referenced as techno-enhancement), the discussion and analysis she has made in *Digital storytelling: the narrative power of visual effects in film* is that a new visual language does not exist, certain tools in the process have been changed, but it all consists of written material in the beginning and end of a production. It is here she talks about DVFX as one of the new tools, where it can enhance the scene itself but never narrates it as a narrative device. In this analysis this has been tested and in the thesis it can be seen that DVFX can and is being used as the narrative device. Now Shilo T. Mcclean is right because a TV-series or film can never exist without the written material, this is the first process when a series is created. As the project develops and becomes the end product, the scenes, images and content of it can be changed and instead of only using the written material to narrate the story, the image can be used making the DVFX a narrative device of the scene.

The immersivity that the DVFX can and is creating helps not only the series own universe, but together with the written materials enhance the experience for the viewer themselves. It cannot stand alone, the DVFX needs the written materials to become a full experience, it is here where Shilo T. McClean's discussion is legitimate. The DVFX needs the written material to exist in the scene, but as Lev Manovich says that a visual language does exist, is also legitimate, even though the written material has built the story. The image can narrate it as the narrative device and let the recipients interpret what they see. Having a hybrid model, with a strong narrative base and on that an added visual language. Can enhance and drive the story forward further creating belief in the illusion. One example of this is *Terra Nova*, which utilizes the DVFX for both enhancements of the image and lets it narrate the story.

Another topic that has briefly been discussed is the transmedial use of different platforms and the cross-marketing that exist in the 21<sup>st</sup> century. This is a topic in itself, but what it has contributed to the series and their universe is the hypermediacy.<sup>87</sup> Using different platforms to tell the story of the series, the series itself can become bigger and utilize these platforms to give out more in-depth information: for example *Defiance*, where the series web page has a complete time-line of the incidents and the reason to why the aliens came to earth, something that is never fully explained within the series itself. Using all these elements a series can exist outside the episodes running time and it can also provide information and evolve in between the different seasons. That this is something that exists cannot be ignored, but how it will develop will not be further discussed, due the fact that it is too early to say, all that can be done is to wait and see.

## 9 Conclusion

The progression of DVFX will only continue and this will make the digital visual language more important than it has ever been before. In 2013 to 2014 as this thesis is written more and more series are surfacing that uses DVFX and the image as a visual language, not only to create wonderful and spectacular worlds but also to tell their story. The DVFX is still mainly an enhancement, but more series start to utilize DVFX as a narrative device as seen in *Terra Nova*, to give out certain information that often needs a scene: i.e. the holographic scene. One example of this is *M.A.R.V.E.L Agents of Shield* (2013- ). In this series the fictional characters from MARVEL magazines come alive and with them the technology of its fictional universe, in the series the DVFX is used as an enhancement and as a visual language

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<sup>87</sup> Jay David Bolter, Richard Grusin, *Remediation: Understanding New Media*, First MIT press, 1999, p.31

to tell certain bits of the story. Another series is *Almost Human* (2013- ) this is also a series that uses DVFX as both enhancements for certain aspects, but allows the image to drive other parts of the story.

Both series use the hybrid model that has been discussed and utilize both written materials and the image in different ways, but both always tell the story and progress it. This shows the direction of how DVFX is used, by letting the visual language become a part of the narration and the dramaturgy. Storytellers can create more in-depth stories and not always have to be using a wall of text or voice over. Instead, they can use the image itself as the narrative device. This has been done before with the creation of film grammar.<sup>88</sup>

As it has been mentioned certain ways to utilize the image in the photo and editing process already exist, one example brought up was the close-up. Other means exist as well such as jump cut, bird perspective and power perspective. What needs to be considered is that this is a language created in the use of the camera as the beholder. Whilst the visual language with DVFX is the visual interpretation and use of a created image, inserted into the frame of the image and the narration, the difference is that film grammar is built with the camera and the narration together. Filming scene by scene and then putting them in a dramaturgical order that is followed by the script in the editing process (excluding experimental editing or filming in this comment). The DVFX is then inserted as an enhancement of the image because the film grammar in the scene already exists.

The visual language that is being discussed here and what have been looked at is the created effects that are applied in the editing process. It is here the new digital visual language starts to exist. Letting the visual effects become the main driving point for the scene as a narrative device, opens up new ways to utilize and intertwine DVFX in the image. It then becomes interpretable by the recipient as a storyteller as seen in *Doctor Who*, *Terra Nova* and *Defiance* in their introduction sequences. There are some things that need to be considered, first off is that animation already has its own language together with film-language, this is due to the fact that animation and film have had an influence on each other since the start of filming. Where both worlds of the industry have had an evolutionary impact on each other, such as in film where visual effects, animation and special effects have been used to create illusionary

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<sup>88</sup> Iris Barry, *D.W. Griffith: American film master*, Museum of modern art, 2002 and Christian Metz, *Film language, A semiotics of the cinema*, Oxford University Press, 1974

fictional worlds to the audience, in such as *Star Wars* (1977). This can also be seen in TV-series in for example *Star Trek* (1966-1969), *Battlestar Galactica* (1978-1979) and *Quantum leap* (1989-1993), but the effects in these series only rely on the visual to enhance the image. It never allows the visual effects to become a narrator of the plot, something that is now evolving with today's technology.

As a conclusion it can be seen that new ways to use DVFX are emerging and with it a new visual language. The use of both image and written material are becoming one with each other, in the sense of driving the story forward. In contemporary TV-series of the 21<sup>st</sup> century the image not only enhances the story, it also drives it forward and gives out crucial information to the recipient. Creating imaginary worlds with a strong narration that is intertwined with the DVFX the image becomes real for the recipient and its series universe. Now that DVFX is used as a narrative device a new question needs to be asked: From where will the research continue? The answer to this question has its answer within digital visual effects and the technological development that can be seen. Looking at DVFX and how it is used in TV-series and films it is possible to continue the research within this field. A couple of questions that can be the focus for continuity of this research are: How is DVFX used as a narrative device to progress the story? Is it the technology that makes it possible for the use of this kind of visual language, or can this be seen by looking at special-effects (mechanical, optical etc.)? Where is the DVFX taking the story in contemporary TV-series and films? Is the visual language allowed and used to progress the story as a narrative device?

All these questions can be used to continue the research that this thesis has started, to see if DVFX as a visual language will continue to develop or digress back to only be a techno-enhancement. For the industry this thesis and the continue research of DVFX as a narrative device, is needed to show the use of DVFX and open up new and different ways to use visual language within a film or series, instead of only serving as an techno-enhancement. If filmmakers opens up to the idea of using DVFX as a visual language to progress the story, it also open up new ways of creating and establishing scenes, narrative and a series/films universe. This can further help and create a believable illusion that has not been seen before within the industry.

I believe that we stand in an era of DVFX where the technological development has entered the world of storytelling. Mainly because the creators do not have to restrain themselves in

their imagination, but can instead write a script that not only is stunningly beautiful, but also where the visual language is used to further drive and deepen the story of the TV-series universes. Making the unbelievable believable, not only by the written material, but also from the visual language as a narrative device.

## 10 Terminology

Some of this terminology is a repetition from the "Terminology" chapter, which is included in the paper. This is done for a repetitive purpose and easier access when the reader is further in the paper, and its discussion.

### 10.1 Frames

Frames or FPS (frames per second) it is also shortened, is a word within the industry and can be loosely translated to pictures. One frame is one static picture taken by the camera. These pictures are then set in motion when played on a projector. The projector pulls the negative through pins and illuminates light onto it, the speed is 24 frames per second (FPS). At this speed the eye fills in the information so that it looks like the image is moving, this is called beta-movement. After 24 frames a cut is made separating the images from each other, this can be seen as a quick black screen, a screen that is often not registered by the eye. Frames can be divided into different groups depending on what kind of effect the editor and director wants. The two formats commonly used are 24fps and 25fps. 24fps or more accurately 23.937fps is for the American broadcasting system: National Television System Committee (NTSC), 25fps is for the European broadcasting system: Phase Alternating Line (PAL).<sup>89</sup> Additionally to this there is also the use of the word when directors or film creators are talking about the shot itself. Here, frame is describing what the shot contains, or what it frames in the picture from the camera angle.

### 10.2 Special effects

Special Effect in the 21<sup>st</sup> century is not the same as it was in early 19<sup>th</sup> century. The technological advancement that has occurred divided special effects into two sections: one that is not digitally made for example: optical, mechanical, lightning and masks. And the other that is visual effects that are digitally enhancing or manipulating the picture in post-production.<sup>90</sup>

### 10.3 Stop-motion

Stop-motion is a technique that uses models to create a scene. A photo is taken of the model in its first position and after that the model is altered, a new photo is taken and these steps are repeated until the whole scene is captured. One example of a film that used stop-motion is

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<sup>89</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 10 - 28

<sup>90</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 66, p. 122

*King Kong* (1933). Objects or models are not the only things that can or is being used to work with stop-motion, even real people can be used in this way and the concept is the same.<sup>91</sup>

#### 10.4 2D/3D Animation

Animation is found in films such as *Toy Story* (1995) or *Megamind* (2010). Animation is also used in live footage films such as the *Lord of the Rings* trilogy (2001 – 2003), where Gollum was animated over the actor Andy Serkin's movements. Serkin's had a ping-pong suit on him and he acted out all Gollum's movements in the film.<sup>92</sup> Then in post-production the visual effect artists tracked the suit and added Gollum's body to Serkin's movements. 2D and 3D animation is also used in many films to blend in fire, explosions, burning houses, muzzle flashes and much more.<sup>93</sup> 2D and 3D animation will from now on be shortened to 2D or 3D.

#### 10.5 CGI

CGI stands for *Computer generated Imagery* (also called *Computer generated images*, and is often shortened *CG* or *CGI*), and is an expression used within 3D, animation and computer graphics. CGI is used to build graphical animations such as environments and 3D characters and is used heavily within the film-industry, some of these films are for example *Avatar* (2009), *The Hobbit* (2012) and Pixar's film *Toy Story* (1995).<sup>94</sup>

#### 10.6 Blue/Green screen

Screen technique is used together with digital visual effects and CGI. It was first used in the beginning of 1940 in the film *Thief of Bagdad*.<sup>95</sup> Using a chrome green screen it is possible to take away the background and make it transparent. One film that uses this is for example *Sin City* (2005). In *Sin City* the director Robert Rodriguez worked together with Frank Miller, the creator of the graphic novel, and the visual effects team to adapt the look from the graphic novel onto the film. Using screen technique the visual effects team managed to adapt the coloring from the graphic novel onto the film, this meant both taking out and add new color into the image.

The screen that is often used, especially when it comes to films filmed digitally, is Chrome green, this color is the most efficient color and is being used due to its absence of any real

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<sup>91</sup> David Bordwell & Kristin Thompson, *Film Art: An introduction, Seventh edition*, New York: McGraw-Hill, 2004, p. 162 - 166

<sup>92</sup> Ping pong suit: This is a suit in chrome green color, which has ping pong bolls attached to it. These balls act as a 3D marker within 3D tracking.

<sup>93</sup> David Bordwell & Kristin Thompson, *Film Art: An introduction, Seventh edition*, New York: McGraw-Hill, 2004, p. 162 – 166

<sup>94</sup> Shilo T. Mcclean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, p. 14

<sup>95</sup> Nawal Mohamed Salah Eldin, *Visual effects cinematography, the cinematographer's filmic technique from traditional to digital era*, TOJDAC, April 2012, volume 2, issue 2, p. 119

colors in itself.<sup>96</sup> Any screen color can technically be used as long as it doesn't exist in the scene that is going to be manipulated.<sup>97</sup>

### 10.7 Motion Tracking

Tracking is a technique used when digital footage is put into a live-footage scene. If the visual effects team is supposed to blow up a train and do it by using CGI, they will take the scene and put it in a motion tracking program such as Mocha. After that is done, the visual artist sets tracking points into the scene and on the areas that are going to be tracked, then the new data is applied onto those points that the artist has put out. Doing this the scene is manipulated and shows the train blowing up without having to do it for real.<sup>98</sup>

### 10.8 Digital Visual Effects

Digital Visual Effects is a process where the live action images are manipulated in different ways. This is often used together with motion tracking, CGI or green screen to create and manipulate the image to the visual artist's advantage, such as building up a burning city or having a massive alien attack as in the series *Falling Skies* (2011).<sup>99</sup>

### 10.9 Visual language

Visual language is used in many different ways it can be seen in commercials, advertising, movies and TV-series.<sup>100</sup> In this thesis visual language will be used in the sense of looking at the use of DVFX as a language within the image, and the interpretive code that DVFX offers in the scene as a narrator.<sup>101</sup>

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<sup>96</sup> Chrome Green: With real colors the author means colors that does not exist in human skin or range that can be seen. For example: a yellow color can be used, but the person or the environment that the scene takes place in cannot contain any yellow color. It is here that Chrome green works well because it is a manufactured color and does not exist by nature.

<sup>97</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 169

<sup>98</sup> Mitch Mitchell, *Visual effects for film and television*, Focal press, 2004, p. 205 - 206

<sup>99</sup> Shilo T. McClean, *Digital storytelling: the narrative power of visual effects in film*, MIT press, 2007, preface

<sup>100</sup> Ann Marie Seward Barry, *Visual Intelligence: Perception, Image and manipulation in visual communication*, State University of New York Press, Albany, 1997, p. 2 - 11

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