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Science in Four
Afrofuturist Literary
Works

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Contents

Introduction 1

1. What is Afrofuturism? 7
    1.1 From Scientific Racism to Identity 14
    1.2 Science and Racial Difference in Science Fiction 20

2. The Science of Afrofuturist Music 23

3. *Nova* 33
    3.1 Race, Identity and Science Fiction: an Inside Perspective 33
    3.2 Flying Inside a Nova 36
    3.3 Digging Inside *Nova* 41

4. *Lagoon* 51
    4.1 Science Fiction in Africa 51
    4.2 New Neighbours 52
    4.3 The Scientist Witch 57
    4.4 Lagos Rhymes with Chaos 63
    4.5 Speaking Lagosian 68

5. *Recurrence Plot (and Other Time Travel Tales)* 72
    5.1 Experimenting with Science and Fiction 72
    5.2 Between Fiction and Reality 74
    5.3 A Quantum World 79
    5.4 Boxes and Mirrors 85

6. *A Killing in the Sun* 90
    6.1 Afrofuturism Reaches Africa 90
    6.2 Africa Takes Back Control 92
    6.3 Western Science vs African Magic 99
    6.4 Taking Africa to Space 101

Conclusion 105

Bibliography 109

Introduction

The definition of science fiction as a literary genre is a controversial subject among critics. When trying to trace the specific characteristics of the genre, they tend to disagree and contradict one another sometimes even resorting to tautologies that are not very useful in the analysis of the genre. Nonetheless, it is clear that this genre deals with fantastic elements and imagination along with reality. Imaginative fiction, however, is a term that covers multiple literary genres. To be more specific, it is safe to say that a 'SF novel requires material, physical rationalisation, rather than a supernatural or arbitrary one. [...] Sometimes this materialisation is rooted in a 'scientific' outlook' (Roberts 2003: 5).

It is from such an unfixed and indefinite reality that Afrofuturism, not just as a literary genre but also as a cultural aesthetics, emerges. As in the case of science fiction, various definitions have tried to delineate Afrofuturism but it turned out a laborious task as it is not founded on established basis; it is a new phenomenon that is still in progress. Nonetheless, it can be argued that

> whether through literature, visual arts, music, or grassroots organizing, Afrofuturists redefine culture and notion of blackness for today and the future. Both an artistic aesthetic and a framework for critical theory, Afrofuturism combines elements of science fiction, historical fiction, speculative fiction, fantasy, Afrocentricity, and magic realism with non-Western belief (Womack 2013: 9).

In other words, Afrofuturism is a literary and cultural aesthetic formulated in the 1990s that envisions possible futures and alternates realities through a black cultural lens. The perspective on the real world, in the West, has always been shaped and dominated by a white European, and later American, approach as if it was the only one, even though the presence of blacks has always been prominent in both Europe and America. It is no wonder that after centuries of slavery, human trafficking and racism African Americans feel the need not only to express themselves, but also to take their rightful place in the world's cultural sphere; in so doing, they provide a different key to read and interpret reality. Even more so, when we consider the fact that African slaves living in America first, and African Americans later, were forced to repudiate their origins in every aspect of everyday life. As a consequence, 'in the field of the visual and narrative arts the project

of excavating an African past will invariably deviate from its anthropological and historiographical premises and venture into the realm of fantasy and myth to compensate for the lack of concrete and indubitable material' (Mayer 2000: 558). Certain topics as racism and African traditions are expectedly predominant in Afrofuturist works; however, this does not mean that they are monothematic or do not vary in style. On the contrary, as there are no standard rules, artists express themselves freely giving their own personal interpretation and point of view. The result is an often balanced and interesting blend between Western and African culture, technology and tribal mythology, science and spirituality; this kind of fusion is unparalleled due to the unique history of the continent. The colonisation of Africa during the 18th century affected its countries in different ways depending on the European coloniser; yet, although in different degrees, the imposed language and culture created a completely new sensibility on the colonised that is still an issue among Africans and is reflected in their artistic works.

The presence of black characters in science fiction is no news; until recently, however, they were either relegated to the role of ultimate 'other' or they represented a useful means for the white hero to exploit narratively. What is new in the science fiction panorama is the presence of black authors that combine and rearrange the elements of the genre into something new leading, eventually, to Afrofuturism. It is difficult to set a precise date for the entry of blacks in the literary scenario as they used to write under pseudonyms and hide their identity in order for their works to be accepted. The transition was not direct; in fact, the works of popular authors of the mid-twentieth century like Samuel R. Delany and Octavia Butler cannot be categorised entirely as Afrofuturist as they insist on hybridity rather than focusing on black cultural nationalism. While these two authors set the foundations of Afrofuturism in literature, Sun Ra and George Clinton set them in the field of music by introducing innovative techniques and conceiving an entire new way of experiencing music with particular focus on an afro-centric sensibility and issues. This opened the doors to Afrofuturism in other artistic fields such as visual art, photography, comics, cinema and fashion with the result that today blacks are participating to the artistic and cultural spheres not just as producers of artistic works, but also as consumers of these commodities. Even though today the phenomenon is closely linked to the African diaspora, towards the West in particular, and reveals a nostalgic feeling towards African origins, it is now going back to Africa. Afrofuturism originated

alongside science fiction and, in a sense, grew within it as a way for the black community to claim back their origins and their identity; black writers adopted science fiction to expose the issue by showing a particular interest in race and identity in their novels. Interestingly, now the situation seems to have reversed. African and African American writers are taking up elements of science fiction in their works and, by doing so, are creating a hybrid embedded in African tradition and belonging to African literature.

As expected, then, science is a constant factor in Afrofuturism, especially in literature. Its relevance in picturing the future is unquestionable and Afrofuturists take advantage of its paramount status in Western ideology and employ it as a way to achieve credibility and gain access to Western culture; this opens the doors not only to new worlds but also to a new way of perceiving reality. The aim of this dissertation is to analyse the role and relevance of science in Afrofuturism and the ways in which it interacts and combines with African cultural elements believed to be conflicting with science from a Western perspective by considering the Afrofuturist motifs in four books. Even though science is not the primary concern of Afrofuturism, it is still essential to such an extent that this literary genre is sometimes seen as a subgenre of science fiction.

The first novel to be examined will be *Nova* by Samuel R. Delany who wrote the history not only of Afrofuturism, but of science fiction too. *Nova* was published in 1968 and, although at the time it fell under the category of science fiction, today it can be considered an Afrofuturist novel due to the themes it deals with. Strictly speaking, it falls under the subgenre of space opera as it features interplanetary travels and battles in space. However, the novel also plays with multiracialism and ethnic identity and it is a forerunner of cyberpunk as it is set in a future where cyborg technology is the norm. Though a broad scientific background is not essential to follow the storyline, a basic knowledge of science, and astronomy in particular, gives access to a metaphorical reading of the novel especially in terms of nomenclature. Still, the plot draws heavily on mythology and the Western literary tradition not only on a narrative level but also on a symbolic one, which is representative of the author's style. Delany's novels are an example of thorough research on language and challenge the boundaries of the relationship between signified and signifier, experience and art, the real world and words, astrophysics and mythology. The result is an original reading of the text since, as Peter S. Alterman notes, 'Delany's prose style is an amalgam of elements: the precise visual

rendering of images coupled with a conscious use of metonymy to create a language of experience' (1977: 31).

Moving to contemporary works, *Lagoon* by Nnedi Okorafor (2014) is a typical example of what is usually considered an Afrofuturist novel because of the themes it deals with. The book depicts an alien invasion in today's Lagos, Nigeria, and its consequences from multiple points of view. This motif has a long tradition in science fiction; as the quintessential 'other', aliens have often been portrayed as the perpetrators of the apocalypse and, hence, treated either as the embodiment of evil, making them the ultimate threat to humanity, or as a mirror reflecting and criticizing our own society. Yet, historically speaking, in Western literary tradition blacks have always been represented as the 'other'. Thus, in the collision between the two quintessential 'others', aliens acquire a new connotation that could not have generated elsewhere. Okorafor provides a realistic portrayal of Lagos in its class, gender and cultural diversification. An alien invasion is such an exceptional event that allows characters with incompatible backgrounds and beliefs to interact and confront with one another. The encounter results in either questioning one's own identity or in the reaffirmation of the character's individuality. Therefore, while aliens tend to arouse a sense of estrangement in the reader, the realistic description of the city and its heterogeneous nature facilitate the reader's connection with the characters. However, the identification is not complete; while on one hand the narrative opens a window on the diversification within the population through frequent changes of focalizer, on the other it makes it difficult to connect because the reader never has an in-depth perspective on any of them. The dynamism of the city is reflected also on a linguistic level as the characters are defined by the language they speak; the coexistence of multiple languages within the same country is a characteristic trait of the African continent as is the multilingualism of the individual.

Even though it was published in the same year as *Lagoon*, *Recurrence Plot (and Other Time Travel Tales)* by Rasheedah Phillips is very different from Okorafor's novel. The peculiarity of the text is so evident that it can be described not only as experimental, but, in a sense, even futuristic. The author was able to create an innovative work of fiction with very limited imaginary elements and introduce ideas that, more often than not, make the reader question the fictitious nature of the story. The most innovative characteristics are the peculiar style of the narrative and application of quantum physics not only on the

storyline, but also on the perspective of reality itself. We live in a time where what we used to think was impossible and belonging to science fiction, here to be understood as too scientifically advanced to be physically realised, has become much more plausible and does not look as far-fetched as it did before. Bearing this in mind, it is fundamental to make a distinction between the scientific elements in a text, defined as relating to physical laws internationally approved, and the non-scientific aspects such as pseudo-scientific theories that may apply to the real world but are acknowledged only by a restricted group. In *Recurrence Plot (and Other Time Travel Tales)* it is particularly important to highlight such differentiation as not only do the two fields intermingle to such an extent that it becomes very difficult to distinguish them, but also because this dichotomy is included within a fictional narrative. In this light, to have a better understanding of the way Phillips considers quantum physics and its application on everyday life it can be helpful to read the book *Black Quantum Futurism: Theory and Practice* alongside *Recurrence Plot*. This is a sort of guide which 'provides BQF Creatives with the framework to apply metaphysics and the sciences of color and sound, along with the theories of quantum physics to recall future and past memories' (Moor Mother Goddess 2015: 8). Since the book is not a work of fiction, it becomes imperative to understand where science ends and metaphysics begins; such awareness allows the reader to treat the book as a key to decipher a very precise approach and point of view rather than as a science book.

The last chapter analyses a collection of short stories by Ugandan writer and filmmaker Dilman Dila in the broader context of African science fiction. *A Killing in the Sun* was published in 2014 and was shortlisted for the Commonwealth Short Story Prize 2013. The ten stories, which are set both in the present day and in the future, feature aliens, evil scientists, modern corporations alongside ghosts and other elements from African culture and tradition. While *Nova* clearly comes from the American science fiction literary tradition and contains Afrofuturist elements that are secondary and almost relegated to a particular attention to race and identity, *A Killing in the Sun* is set in an African environment, not just in the geographical sense, and borrows elements from the American science fiction tradition. The two books can be seen as the far ends of the spectrum of the presence of black culture in science fiction or, from the diametrical opposite point of view, the relevance of science fictional elements in African literature.

The four books show Afrofuturist literature from very different points of view; their diverse historic and geographical context provides not only variation in content, but also in style. Moreover, the analysis of Delany's novel and three books published in 2014 emphasises the chronological evolution of the genre. In addition, since the authors of *Lagoon, Recurrence Plot (and Other Time Travel Tales)* and *A Killing in the Sun* come from deeply different backgrounds, the books allow an interesting comparison as they exhibit a variety of elements and themes that depend on their cultural context. The first two novels were chosen as representatives of the genre in their historical framework; while there are more popular works by these authors, both *Nova* and *Lagoon* assign to science an important, even though different, role while dealing with tropes typical of black literature as cultural identity, ethnicity and so on. Instead, *Recurrence Plot (and Other Time Travel Tales)* has a completely different approach towards Afrofuturism and the literary experience itself. The plot becomes a secondary concern in order to give prominence to science as an instrument towards an entirely new perspective on life in all of its aspects. Finally, Dila's short stories show some of the ways in which Afrofuturism, and science fiction in general, can be appropriated and adapted by African writers while paying particular attention to the interaction between Western and African culture.

1. What is Afrofuturism?

In a way, if we think of Afrofuturist literature as speculative fiction written by blacks in which characters use science and technology to create a better future, then the genre began in the 1850s in America in parallel with science fiction. Alongside the first science fiction authors such as H. G. Wells, Jules Verne and Edgar Allan Poe emerged also the first Afrofuturist stories by popular African American writers such as Martin Delany and Charles Chesnutt who were concerned with the portrayal of the way in which the relationship between science and society were changing within an African American context.

From a literary point of view, Lisa Yaszek, professor at Georgia Institute of Technology, in an online lecture recognises two periods of Afrofuturism in the United States and provides a rapid overview of some of the most representative works (Yaszek 2012). The first work she mentions belonging to the first period, which goes from 1850 to 1960, is Charles Chesnutt's short story 'The Goophered Grapevine' that was published in the journal *Atlantic Monthly* in 1887. The story, set in North Carolina, is told by two different points of view and reflects upon slavery and racism. The author was aware that American readers would not easily accept to deal with such topics, so he depicted the racist Northerners as 'weak, unable to fit comfortably into the natural environment, and indifferent to the boundaries of nature' (Hovet 1973: 86). The audience was entertained by the characters' typical dialect of African Americans living in the South and the realistic representation of customs and manners; however, the narrative carries a strong message that is not restricted to the time it was written because it can be easily applied to the present too. In fact, it can been interpreted 'as a parable which explains the consequences of an unbounded faith in economic progress and the way such a belief serves to conceal the cost in human dignity' (Hovet 1973: 88).

Another work worth mentioning is *Imperium in Imperio* by Sutton Griggs. The utopian novel published in 1899, is about a detached African-American state inside the United States, precisely in Texas. One of the first narrative components that stands out is the ambiguous ending. The author portrays a strict and belligerent mulatto president who wants to take over Texas in contrast with Belton, a dark-skinned character who strongly supports collaboration and an assimilation with Texas by using every possible means in

the field of science and technology. After the president reluctantly executes Belton, he is left as the possibly unstable and brutal ruler in charge of the Imperium. The uncertain ending generates interest because instead of providing solutions and certainties, it leaves the novel open to interpretation. Griggs invites the reader to participate actively in resolving the plot by presenting the text as a set of documents and testimonies. This strategy not only allows him 'to represent a debate over black leadership and political strategies without seeming to appear as a participant' (Curry 2010: 23), but it also provides the audience with the options and elements to conclude the narrative themselves. Furthermore, the novel introduces the very current topic to Afrodiasporic people, which is also at the heart of Afrofuturism, of being simultaneously Americans and Africans, therefore non-Americans. In order to live on this existential borderline without getting lost, it is necessary for them to create a new and independent identity that is both a blend of the two and detached from them. This topic will be dealt with more in depth in a separate chapter as it is fundamental to Afrofuturism; plus, it is so complex that it cannot be dealt with in a few sentences. Nevertheless, in line with Afrofuturism, 'Griggs shows his readers that revolutionary politics need not work towards revolt […] but may also be seen in the development of new and innovative forms of community organization' (Curry 2010: 43).

Yaszek concludes her excursus on the first period with a novel by Edward A. Johnson. Although not among his most famous works, *Light Ahead for the Negro* (1904) conveys a strong message of integration and inclusion. In its preface, the author declares that 'he is trying to show how the Negro problem can be solved in peace and good will rather that by brutality' (Johnson 1904: V). The story is centred on an utopic world in which 'Negros' are able to use their agricultural knowledge and education, one gained as slaves while the other as free people, to make America a multicultural and more productive country. In other words, they apply their technical and scientific knowledge to improve the industry of the South (Yaszek 2012). Compared to the previous novels, this idea is certainly innovative and goes one step further as it locates blacks at the head of an industrial revolution and, therefore, dethrones whites from their hegemonic position as leaders of scientific and technological progress.

In this first period in particular, the differentiation between Afrofuturist literature and science fiction had little to do with the colour of the skin and ethnicity, but rather

with the topics with which the stories dealt. In fact, together with white American authors, science fiction journals published also African American writers; the common and pivotal factor was that neither addressed racial problems. This was mainly due to two reasons: firstly, science fiction was regarded, and still is according to authors such as Nnedi Okorafor (Okorafor 2009), as low and cheap literature and therefore was not viewed as the best setting in which to deal with racial issues. Secondly, whether consciously or not, science fiction stories were set in racist futures; a famous example is Stanley G. Weinbaum's 'A Martian Odyssey' (1932). Not only was the short story highly appreciated by Isaac Asimov himself, but it is still considered pivotal in the history of science fiction for its depiction of the aliens. Before its publishing, science fiction treated aliens as a mere plot device in the protagonist's quest; whereas, not only is Weinbaum's narrative sympathetic to them, but it also traces connections between aliens and humanity. Interestingly enough, the controversial issue does not regard the Martians, but rather humanity. In fact, when the crew meets the Martians, they conclude they are dealing with intelligent beings as these aliens have more sophisticated classification systems than African people on Earth have. For instance, in reporting to the captain, one of the characters comments upon the aliens' language system and says: 'It set me wondering if perhaps his language wasn't like the primitive speech of some earth people—you know, Captain, like the Negritoes, for instance, who haven't any generic words' (Weinbaum 2007). He goes on affirming that the 'Negritoes' are 'too primitive' to understand basic natural phenomena such as the fact that rain and sea 'are just different aspects of the same thing' and he realises that the Martian is not as primitive as them, he is simply 'somehow mysteriously different'. Not only does such statement imply that Africans are intellectually inferior compared to white people, but the story also suggests that blacks are not to be considered entirely human beings. Weinbaum's work clarifies why Afrofuturist writers avoided writing in certain journals; their stories reflected quite faithfully the prejudices towards blacks of the time (Yaszek 2011). The actual merging of Afrofuturism and science fiction in literature took place in the 1960s and 1970s with innovative black writers such as Octavia Butler and Samuel R. Delany. However, it was not labelled as such and it did not acquire the particular connotations of the genre the 1990s when critics such as Mark Dery, Tricia Rose and Kodwo Eshun identified themes and techniques proper to science fiction in works by black artists (Yaszek 2011). Still,

today critics tend to refer to black science fiction authors since the beginning of science fiction as Afrofuturist. Hence, it is not a question of chronology or of self-consciousness of the artist, not only writers but artists belonging to all artistic fields, but rather of the socio-historical and cultural context. While the link between Afrofuturist literature and science fiction has always been unstable, in the music field the two genres went along together from the beginning. Although Afrofuturism did not formally exist yet, starting from the 1940s for two decades science fiction and Afrofuturist storytelling became meaningful components in music through jazz. Artists such as Sun Ra declared his ancestors were aliens and, by doing so, included by extension all African Americans. In this way, they both forged a grand history for black people and, at the same time, secured them an extraordinary destiny and future. As the genres of black music changed in the following decades, the inclusion of Afrofuturism, and science fiction with it, continued and became a distinctive aspect of this kind of music.

The actual term ‘Afrofuturism’ was coined by Mark Dery in 1993 during an interview with Samuel R. Delany, Greg Tate and Tricia Rose. In wondering why there were so few African Americans who wrote science fiction, he considered important to bring to light a new kind of

> speculative fiction that treats African-American concerns in the context of twentieth-century technoculture—and, more generally, African-American signification that appropriates images of technology and a prosthetically enhanced future—might, for want of a better term, be called ‘Afrofuturism’ (Dery 1994: 180).

He also pointed out that the ancestors of today's African Americans are very similar to alien abductees: they were both eradicated from their home against their will and were treated as mere objects by a more ‘civilised’ population to exploit and experiment on. During the interview Samuel R. Delany also pointed out that the reason why African Americans found it difficult to imagine a future for themselves was that 'until fairly recently' they were not allowed an image of their own past. More precisely, 'when, indeed, we say that this country was found on slavery, we must remember that we mean, specifically, that it was founded on the systematic, conscientious, and massive destruction of African cultural remnants' (Dery 1994: 191). Referring to his personal experience, he

confessed that his own grandfather was born a slave in Georgia but did not know where in Africa his origins were.

So far, we have come across two different, even though not contrasting, definitions of Afrofuturism. While Womack focuses on the potentiality of the artistic aesthetic and broadly delineates its themes and features, Dery not only narrows the field to speculative fiction but he also confines the term to a specific context, the African American one, and to a precise time in history, the twentieth century. Other critics and academics have provided their own descriptions and interpretations of the phenomenon especially in the last two decades, that is, since Dery first addressed the matter explicitly. Most of them seem to agree with Dery in locating Afrofuturism within an African-American context even though they usually extend it to an Afrodiasporic framework; Alondra Nelson believes that Afrofuturist works reflect

> African diasporic experience and at the same time attend to the transformations that are the by-product of new media and information technology. They excavate and create original narratives of identity, technology, and the future and offer critiques of the promises of prevailing theories of technoculture. […] These works represent new directions in the study of African diaspora culture that are grounded in the histories of black communities (2002: 9).

It is clear from the passage that she calls attention on the way technology and African diaspora affect the future. Likewise, Kodwo Eshun associates the artistic aesthetics with African diaspora, however, instead of noticing on the influence of technology on the future, he concentrates on how to use the past to act on the present. He observes how

> Afrofuturism may be characterized as a program for recovering the histories of counter-futures created in a century hostile to Afrodiasporic projection and as a space within which the critical work of manufacturing tools capable of intervention within the current political dispensation may be undertaken (2003: 301).

Afrofuturist author Mark Rockeymoore, while still referring to Afrodiasporic experiences, insists on the non-mechanical, fluid and adaptable nature of the movement. With an inspirational passage in his article, he offers his view on Afrofuturism that links scientific knowledge with spirituality and, in doing so, encompasses the whole of

creation:

> Afrofuturism is about knowledge. It is about intuitively understanding the harmonics of the Earth and solar system, their electromagnetic interactions: the effect of a butterfly in Brazil upon a hurricane in France, the weather patterns of the Earth, the living cycles of our days and nights and the stilling of the mind. The rotation and evolution of the galaxy and the oneness of the universe. The true, inner connectivity between each being on this planet. The simplicity of knowing truly, what love is. It is about the science of relationships, of clearing the mental and spiritual debris from one's life in a healthy, systematic fashion. […] It is about shattering the walls separating the sciences and realizing the oneness of all creation. […] Afrofuturism simply is! (Rockeymoore 2000).

On the other hand, more recently, writers and scholars such as Ytasha Womack and Lisa Yaszek have extended the historical, cultural and geographical boundaries of the movement by incorporating African authors. In order to pinpoint the goal of Afrofuturist authors, Yaszek borrows an expression from Niall Ferguson's *Civilization: The West and the Rest*. The book investigates how the West always dominated history and how the 'Rest' are now appropriating the tools their oppressors once used against them to their advantage. First, she reminds her audience that Afrofuturist novelists, like all authors, write with the intention of telling a good story and entertain their readers; then, she states that the 'goal of the global Afrofuturist author is going to be to create truly strange new futures by combining elements of "the West and the Rest"' (Yaszek 2012). By 'global Afrofuturism', she refers to the phenomenon of Afrofuturism leaving the United States and spreading throughout the world. However, the creative process works differently for Afrodiasporic and African writers. While the former tend towards a post-modern science fiction, the latter are more direct and straightforward. Moreover, she identifies two political and cultural goals that apply to all Afrofuturist authors. In the first place, they aspire to recover 'lost black histories' and look at how they affect today's black cultures. Secondly, they are interested in examining the ways in which these histories might inspire 'new visions of tomorrow' (Yaszek 2012). Not only do these works save the contribution of black people in Western history from deletion, but they also show how blacks experienced the condition of modernity long before white people. In fact, according to Toni Morrison, 'it's not simply that human life originated in Africa in anthropological

terms, but that modern life begins with slavery' (Gilroy 1993: 178). More specifically, she associates 'the loss of and need to reconstruct certain kinds of stability' as characteristics proper to modernity which black people have been dealing with for a long time. In this light then, it is understandable how science fiction, with its futuristic grammar, becomes the logical and ideal channel to convey black people's stories and histories in order to speak to today's generations and to head towards the future' (Yaszek 2012). However, there are different opinions among academics on the relationship between Afrofuturism and science fiction. American scholar Isiah Lavender III argues that the two genres are 'separate and distinct'. He suggests that since the transatlantic slave trade, all black writing can be perceived as science fiction because of the dislocation experience blacks had to go through and he identifies this as a flaw of Afrofuturism. He also adds that it '"merely" borrows from the sf tradition by adopting some science fictional motifs' (Lavender 2011: 38). Science fiction provides Afrofuturists not only the language and grammar, but also the workspace in what Lavender calls 'ethnoscape'. Ethnoscape is an imaginary space created by the author that 'both fabricates and reconceptualizes racial difference, enabling us to unpack sf's racial or ethnic environments and to think about human divergence in social behaviors' (2011: 159). For instance, we will see that while representing the archetypal space opera story, Delany's *Nova* could also be read in terms of race through the concept of colonialism. However, Afrofuturism and other movements such as Astrofuturism, should not be understood as the only, dominant approaches to race and racism in science fiction. Lavender states that 'these theories have established the right to explore discernable links among blacks, technology, and the future, yet they, like otherhood, are only other ways of reading, interpreting, and questioning the deeply rooted perceptions of race and racism in the genre' (2011: 39).

In conclusion, we have seen that there are many different definitions and interpretations of Afrofuturism: some are more restricting and narrow, others more general and all-inclusive. It is the genre itself that allows such flexibility precisely because of the freedom it grants the artist. There are no rules or guidelines, no specific grammar or forbiddance; the only requirement seems to be to represent black people in a more or less realistic setting, possibly in the future. However, science fiction appears to be a constant theme in Afrofuturism because it provides the best grammar to deal with the

future. Nevertheless, we have seen that the relationship between science fiction and Afrofuturism was a complicated one from the beginning, especially in the literary field. Today it would be inaccurate and limiting to categorise the latter as a mere subgenre of the former as it encompasses certain topics and concerns closer to other literary genres. Yet, on the other hand, 'one of the primary ways that artists project black futures in writing is by adopting the tropes and narrative techniques of science fiction or by writing from an Afrodiasporic perspective from within the science fiction community itself' (Yaszek 2011). The following two chapters will touch some aspects of two topics central to Afrofuturism; namely the issue of race and identity, and the involvement of science and racial tension within science fiction.

1.1 From Scientific Racism to Identity

As a premise to this dissertation, it is should be pointed out that not only is the word 'race' incorrect when talking about human beings as there is no scientific differentiation in this sense, but that it also has a racist connotation. Thus, it is preferable to substitute it with 'ethnicity' to refer to a group of people sharing a common history, culture, language, and so on. In this context, however, the term 'race' will be employed frequently in reference to both the racist and historical nature of the term. Nevertheless, the question of race is a complex and delicate one, thus it would deserve a thorough study. Many critics, academics and writers dealt and still deal extensively with the problem in very different literary genres, both fiction and non-fiction. That being said, even though the black-white dichotomy is central to Afrofuturism, it is not the aim of this thesis to give a comprehensive overview of the subject, but rather to notice how the topic is approached in the works under analysis. More specifically, since this work concentrates on the role of science in literary and cultural fields, this chapter will start by focusing on the opposite direction of this correlation, that is in the scientific outlook on race during the nineteenth and twentieth century that sustained racism and then it will consider the reaction in the sociological sphere of such theories.

The socially constructed idea of the superiority of one race, which took centuries to build up and culminated in the nineteenth and twentieth century, was exploited

especially by white people to justify their immoral actions against other populations. Slavery and the colonisation of Africa are perhaps the most famous examples of what men are capable of for wealth and riches. If on the one hand egoism and greed led to outrageous deeds, on the other it became not only convenient but also morally necessary for white people to provide some sort of objective, unbiased and believable justification to rationalise what they were doing. Highlighting the differences between individuals, or in this case entire populations, helps to put distance and, therefore, objectify and disregard the other. The technological and industrial progress of the West certainly helped the white man in this process and in considering himself superior. In the nineteenth and twentieth century, science was highly regarded in America, the public had blind faith in scientists and there was the assumption that science could, and had to, be applied to every field of knowledge. As a result, scientific racism originated from the application of scientific theories and discoveries to the social sphere. When Charles Darwin published *On the Origin of Species* in 1859, biologists were not the only members of society interested in its implications. Herbert Spencer applied the theory of evolution and natural selection, maintaining that the organism least fitted for survival is erased and only the stronger survive, on society. Spencer believed that, since in biology a species evolves and increases its complexity through natural selection, society must work in the same way and, therefore, has to become more complex. This meant 'that social conflict, such as the conflict between races, was natural and desirable' (Taylor 1981: 451) which was thought to result into organised societies. From this perspective then, competition between races was seen both positively and as a logical consequence intrinsic to the structure of society, which entailed that weaker social members were not only unfit, but also inferior. This period also saw the rise of eugenics, which 'was the idea that good people should be encouraged to reproduce and bad people should be discouraged from it' (Jackson Jr. and Weidman 2005/2006: 72); the corollary to such statement is that the two kinds should not mix. The term was coined by Francis Galton in 1883 who 'believed that Negroes were at least two grades below Anglo-Saxons in ability and intelligence' (Jackson Jr. and Weidman 2005/2006: 68) and that the characteristics of a person were determined only by heredity. There was also the general idea that the Nordic race was superior to every other race as it was thought to be the basis of civilisation because of the social structure of ancient German tribes and, therefore, it should be taken as a social model. All these

factors contributed to shape a solid and scientific, therefore irrefutable, argument sustaining not only the idea that blacks belonged to an inferior race, but also that the Nordic race was superior to every other. Madison Grant strongly believed in this theory and felt that the Nordic race, which made up the British colonies that colonised America, was threatened by inferior races. To those who disagreed, he replied that 'speaking English, wearing good clothes, and going to school does not transform a Negro into a white man' (Jackson Jr. and Weidman 2005/2006: 73). His concern was that by mixing them, races would disappear into a single and more primitive one. The beginning of the twentieth century saw an important phenomenon of migration in the United States that increased the anxiety for racial mix, which was extended to Chinese and 'inferior white races' such as Polish Jews. Eugenicist Lothrop Stoddard wrote that

> even within the white world, migrations of lower human types […] must be rigorously curtailed. Such migrations upset standards, sterilize better stocks, increase low types, and compromise national futures more than war, revolutions, or native deterioration (Jackson Jr. and Weidman 2005/2006: 75).

The concern increased further with the 'Great Migration' of blacks from the South escaping the poverty of the farming system; Grant commented on this situation by suggesting that 'the Negro problem must be taken vigorously in hand by the Whites without delay. States which have no laws preventing the intermarriage of white and black should adopt them' (Jackson Jr. and Weidman 2005/2006: 76). On the front of psychological studies, scientists developed intelligence tests to contribute to the determination of the hierarchy of races. The results showed that children whose parents belonged to a high social class, such as bank presidents, professors and so on, scored better and, therefore, were mentally superior. This meant that the mental trait was inherited and proved that the superior racial individuals belonged to the upper classes (Taylor 1981: 453).

Fortunately, though, the idea that 'the laws of nature require the obliteration of the unfit, and human life is valuable only when it is of use to the community or race' (Jackson Jr. and Weidman 2005/2006: 79) was never applied literally in the United States. If on the one hand there were plenty of strong believers in scientific racism, on the other there were people criticising and attacking it. Probably the strongest argument was

formulated by a professor at Atlanta University who was also the first African American to earn a doctorate, W. E. B. Du Bois. He built his case to refute the idea that racial conflict was at the base of evolutionary progress by falsifying three of its most important assumptions. As rebuttal to the theory that racial antagonism was instinctive and existed in order to preserve the race, he noticed that black and white children play together and, therefore, learnt race hatred growing up. Then, he pointed out that, contrary to what social Darwinists believed, racial conflict was not a way to avoid poor health and ignorance as there was no proof that such characteristics were stronger in blacks than in whites. Finally, he opposed the idea that racial antagonism was at the base of race development by observing that 'it is hardly necessary to suppress one race in order to develop another' (Taylor 1981: 455). This was just one of the many arguments he presented to sustain not only that racism was a social construct and has nothing to do with the biology and survival of a race, but also that scientists were not objective. Scientific facts were clearly 'manipulated by biased [white] investigators to demonstrate their preconceived and unshakable convictions' (Taylor 1981: 459) and prejudices. Other than a sociologist and historian, Du Bois was also a prolific writer. In 1920, he wrote 'The Comet', a science fiction short story set in New York dealing with the issue of race. The disaster story follows the life of a black man, Jim Davis, since the catastrophic event of a comet hitting the Earth's atmosphere and releasing a lethal poisonous gas. Jim had always struggled with the problem of racism in his life; for instance, when he is asked to go in the bank's vault, the narrator notes 'of course, they wanted him to go down to the lower vaults. It was too dangerous for more valuable men' (Du Bois 2005). While he is down there, the comet hits the Earth and when Jim gets out he realises he is the only survival. Naturally, at the beginning he is horrified; however, soon enough, he realises that there is a bright side after all. With all the white people gone, he is finally able to do all those things he could not enjoy before because of the colour of his skin, such as eat in a whites-only restaurants and enjoy other luxuries that were not allowed to him before. Yet, Jim is not alone for long; he soon meets a rich and young white woman who initially sees him as 'a man alien in blood and culture' (Du Bois 2005) but, after giving up her prejudices, quickly starts to appreciate him. They get on so well together that they decide to start a new race and repopulate the planet. Unfortunately, though, they are prevented from carrying out their plan when they are informed that the catastrophe had affected only New York and

the woman loses interest in Jim once she discovers her white fiancé is alive. Meanwhile, Jim is reunited with his wife, but he discovers that his baby had died in the disaster. Therefore, while on one hand Du Bois insists on the social construction of racism and the unimportance of the distinction between races compared to the survival of humanity, on the other he suggests 'not only that it will take a natural disaster to eradicate racism in America, but that without such a disaster there may be no future whatsoever for black Americans' (Yaszek 2011).

The condition of black people in the United States during the nineteenth century was so severe that the physician Cartwright coined the term 'drapetomania' which was uniquely associated to them. The disease was defined as a mental illness affecting African American slaves who had an urge to run away from their masters. A term associated with drapetomania was 'double consciousness', which was found in medical journals throughout the century (Eze 2011) until the condition was debunked as pseudoscience. However, the term did not expire and is still used today thanks to Du Bois who employed it to describe the sociological condition of African Americans. In his work *The Souls of Black Folk* first published in 1903, he explores the issue of black identity in a context of displacement and exposes the impossibility for black Americans to reach self-consciousness; instead they are forced to see themselves as a reflection of a society governed by whites. He asserts that

> it is a peculiar sensation, this double-consciousness, this sense of always looking at one's self through the eyes of others […]. One ever feels his twoness,—an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder (1996: 5).

While, on one hand, double consciousness represents an opportunity to merge two worlds and envision a 'truer self', on the other, it becomes an overwhelming obstacle to an individual's integration in society. A black American finds himself dealing with a complex dilemma:

> he would not Africanize America, for America has too much to teach the world and Africa. He would not bleach his Negro soul in a flood of white Americanism, for he knows that Negro blood has a message for the world. He simply wishes to

> make it possible for a man to be both a Negro and an American, […] without having the doors of Opportunity closed roughly in his face (1996: 5).

This explanation is a surprisingly accurate definition of the goal of Afrofuturism. In fact, Afrofuturists are precisely black artists with 'Negro blood' who have 'a message for the world' and they use both Western and African culture to speak to the world, to walk through the 'doors of Opportunity'. These people living in the United States are both American, because they have lived and were probably born there, and African because of their personal history and domestic upbringing. They are, therefore, the result of the collision of two very different cultures and, while they cannot deny their daily life in a non-African country, they strive not only to keep their African culture alive, but also to make it known to the world. Identity, then, is not just something inborn or inherited, but rather an objective in constant progress that is usually seen as a potentiality. Yet, it can also be experienced as a confining obstacle; for instance, Samuel R. Delany believes that

> the problem is the idea of *anybody's* having to fight the fragmentation and multicultural diversity of the world […] by constructing something so rigid as an identity, an identity in which there has to be a fixed and immobile core […] structured to hold inviolate such a complete biological fantasy as race—whether white or black (Dery 1994: 190).

It is evident here that he is not contrary to the concept of identity, but rather to a specific definition of it. A definition that bounds the individual to fixed ideas, which are often predetermined stereotypes such as race.

In this chapter we have seen how, starting from the eighteenth century, science has been shaping the notion of racial difference and influencing the opinion of Europeans and white Americans towards black people. The scientific discoveries of the period heavily influenced every field of knowledge and were taken as unchallengeable demonstrations of the superiority of the white, or better Nordic, race. These claims triggered a decisive reaction that led to a vehement investigation on Afrodiasporic identity to which Afrofuturism is the successor. The concept of double consciousness conceived by Du Bois is still a main concern for Afrofuturists; as Eshun remarks, 'Afrofuturism's specificity lies in assembling conceptual approaches and countermemorial mediated practices in order to access triple consciousness, quadruple consciousness, previously

inaccessible alienations' (2003: 298). These artists are not only exploring how various identities coexist in a single individual, but also the ways in which indigenous knowledge is able to influence Western science and culture.

1.2 Science and Racial Difference in Science Fiction

Being science fiction the principal language of Afrofuturist literature, it may be convenient to examine the way in which the genre relates to science, as it will be helpful in the reading of the texts. The chapter will then analyse the role of the concept of race within science fiction.

Science fiction author Stanley Schmidt divides scientific speculation into two categories. He defines 'extrapolation' as 'speculation based on extensions, developments, and applications of well-established scientific knowledge' (1977: 30). In other words, this kind of science fiction employs the scientific knowledge we already have but do not use for economic, social or some other kind of problem. It does not introduce any new concept; every speculative element is just a possible product and elaboration of today's knowledge. As we will see, *Recurrence Plot (and Other Time Travel Tales)* can arguably belong to this type as it is based on the application of quantum physics to the real world. In opposition to 'extrapolation', Schmidt identifies 'innovation' that depends 'on the assumption of new—i.e., now unknown—principles' (1977: 31). For instance, one of the central themes of *Nova* is the acquisition of an imaginary chemical element with incredible characteristics. Of course, the separation between the two classifications is not clear and definite; as a matter of fact, often a work of speculative fiction is very difficult, if not even impossible, to place in either group. While it is true that *Recurrence Plot (and Other Time Travel Tales)* applies the physics of particles to daily life and, as such, it can be seen as an example of 'extrapolation', we should also consider that this leads to time travel, which Schmidt explicitly places in the 'innovation' group. In this respect, when arguing whether this category should actually be considered science fiction given its far-fetched ideas, we should keep in mind that if these ideas were provable, we would be dealing with scientific knowledge rather than speculation. Still, such ideas are valuable to science as it was the case with Jules Verne's *Twenty Thousand Leagues Under the Sea*

and his envisioning of electric submarines almost a century before they were invented, or Ray Bradbury who, in his famous novel *Fahrenheit 451*, predicted the in-ear headphones fifty years before they were released in the market. What is important in 'innovative' science fiction, then, is not how implausible an idea seems, but rather that 'nobody should be able to prove it's *impossible* at the time of its writing' (1977: 31).

Science, however, carries different weight within science fiction works. Sometimes the science fictional setting serves as a mere background to the plot, while the focus is on 'highly developed individual characters, strong emotions and sensory impressions, and richly multifaceted cultures in conflict' (1977: 43). This is true for both *Nova* and *Lagoon* since they both concentrate on a group of characters and their quests within a science fiction setting. Here, then, it is not fundamental to have an extended scientific knowledge to enjoy the story, even though some background in the field may allow to access hidden interpretations as we will see in *Nova*. Other works, instead, have a scientific idea or issue as the central theme of the story. For example, it can be argued that the real protagonist of *Recurrence Plot (and Other Time Travel Tales)* is quantum physics rather than the main characters. In this case, a reader with a poor understanding of physics, while still being able to follow the plot, would miss associations or even whole passages fundamental to the narrative. In any case, as Samuel R. Delany points out, 'it's fair to assume that the average SF reader is going to have *some* kind of popular science background' (Delany and R. M. P. 1990: 310).

While the degree of involvement of science in the science fiction scene varies from narrative to narrative, the way in which the genre deals with racial tension seems to stay constant; that is, constantly neglected. In fact, the characters' ethnicity is often 'not mentioned and probably assumed to be white or, if mentioned, is irrelevant to the events of the story and functions only as an additional descriptor' (Leonard 2003: 254). Moreover, as Mark Bould notes, starting from the 1950s the American literary scenario of science fiction 'postulated and presumed a color-blind future' (2007: 177) in which humanity is made up of one race. Perhaps, there is no intended racism in this vision; probably 'because of their orientation toward the future science fiction writers frequently assumed that America's major problem in this area–black/white relations–would improve or even wither away' (Scholes and Rabkin 1977: 188). Nevertheless, there is no room for diversity in such picture; the assumption is that racial difference becomes irrelevant when

compared to more universal matters such as the colonisation of other planets and time travel. This 'color-blind future', though, does not denote a world made up exclusively of white people, on the contrary. Science fiction stories often feature characters of different ethnicities and from different cultural backgrounds working together for a common goal or against a common threat often coming from outer space. However, this multiculturalism can be seen as a 'form of racism, a 'racism with a distance'—it 'respects' the Other's identity, conceiving the Other as a self-enclosed 'authentic' community towards which he, the multiculturalist, maintains a distance rendered possible by his privileged universal position' (Žižek 1997: 44). In other words, this approach towards cultural difference is a way to assert, even though usually involuntarily, one's superiority over the 'Other'. Yet, it can be argued that such depiction is not advantageous to white people either as it 'mark[s] the failure to acknowledge even the existence of Whiteness as a socially significant racial identity' (Carrington 2016: 16). As we have already seen, the colour-blindness has not been limited to characters, but it has been extended to the writers. Only recently has science fiction criticism started considering black science fiction authors with the exception of Samuel R. Delany and Octavia Butler. Commenting on the fact that until a few years ago these writers were invisible in the literary scene, Sheree R. Thomas compares them to the astronomical notion of dark matter: neither can be seen, but the world/universe would not work without their gravitational force (2001: XIV). This is a further example backing the preoccupation of Afrofuturist artists with advertising the movement and their works on an international scale.

In conclusion, science fiction and science should be considered as complementary and completing one another rather than existing on two different planes, that of imagination and the real world. Sometimes the former merely borrows scientific ideas, while others science fictional imagination influences the latter to the extent that it seems to predict future inventions and discoveries; in any case, the relevance of science in science fiction books varies substantially. Science, then, appears in the genre in every degree and in all its forms, whereas the question of racial tension is almost absent since the origin of science fiction, which is, in fact, a form of racism.

2. The Science of Afrofuturist Music

Music and literature are probably the two major art forms through which Afrofuturism became well known on a global scale. This chapter does not aim to analyse nor give an exhaustive portrayal of the musical techniques and aspects of the phenomenon, but rather to call attention on the way past and contemporary performers employ science fiction and science to capture the audience and make a point.

At first glance, the term 'Afrofuturism' can be perceived as an oxymoron (Rockeymoore 2000). Most Westerners usually automatically associate Africa with primitivism, backwardness and underdevelopment. They see Africans as lacking a sophisticated social structure and culture including scientific and technological knowledge. This attitude, which is often extended to all black people, is located at the far end of the spectrum of the modern understanding of progress. While thinking about the future, it has become inevitable to speculate upon technology, innovation and a fast-paced society based on automation. This apparent oxymoron is what lies behind the effectiveness of Afrofuturist musicians in representing black people alongside science and space. In doing so, not only do they include blacks as active participants in what Westerners believe to be the 'modern' society, but they also create a bridge between the past, in particular the African and Afrodiasporic past, and a future that for the first time is multi-coloured instead of white filtered. Sun Ra starting from the 1950s and George Clinton in the 1970s are considered the first Afrofuturist musicians because of their peculiar costumes that reminded of both Africa and space, the employment of both traditional and electronic instruments and the introduction of a song mythology coming from the cosmos. These elements reformulated the concept of sound and functioned as an invitation to universal love (Womack 57: 2013).

Sun Ra felt like he had a mission to heal through music, in this sense he is the precursor of today's new-age and ambient music used for contemplation. Thus, he was without a doubt a very spiritual artist; however, this does not imply that he was adverse to science—on the contrary, he used elements of astronomy and science fiction in combination with African tradition to achieve his goal. In fact, the jazz composer from Alabama, Herman Poole Blount, named himself after the ancient Egyptian sun god and his performances often featured musicians and dancers wearing sophisticated costumes

inspired by ancient Egypt fashion and the space age. As Womack points out, 'space analogies were the ideal way for Sun Ra to escape the parameters of music and humanity, and they freed him creatively to ponder the life questions he seemed so dedicated to answering and addressing through music' (2013: 60). For instance, not only did he associate his persona to the sun, but he also claimed he came from Saturn and therefore to be an alien which, for him, 'was a metaphor for being different and alone' (Väätänen 2014: 39). Sun Ra used the concept of aliens not only in a metaphorical way, but also in a concrete one to the extent that in 1953 he even declared that seventeen years earlier he had been abducted by them. He gave a very detailed report of the event: he called them 'space men' and claimed that his 'whole body was changed into something else' through some sort of device that 'looked like a giant spotlight shining down on me, and I call it transmolecularization […] Now, I call that energy transformation because I wasn't in human form'. He then asserted that he had 'landed on a planet that I identified as Saturn' and described the 'space men' as having 'one little antenna on each ear. A little antenna over each eye' (Szwed 1997: 29). Whether he actually believed in the whole story or whether it was deliberately invented is of little consequence because through such narrative he managed to create a sort of mythology around his character. Moreover, he frequently used space and spaceships as metaphors for slave trade and suggested a creative alternative in reference 'to the destruction of diverse, distinct African histories and their subsumption in the "melting pot" of miscegenation and history-without-genealogy' (Corbett 1994: 17). Science and technology played an important part not only in building his persona, but also as a direct influence to his music. Sun Ra was one of the first performers to use a Minimoog, a monophonic analogue synthesizer, and the Outer Space Visual Communicator (OVC), an instrument invented by Bill Sebastian exclusively for Sun Ra which is described by Bhob Stewart as 'the much-vaulted color organ extrapolated by science fiction writers of the 1930s' (Stewart 2011: xvi). Among the astronomical references in his music, the album *The Heliocentric Worlds of Sun Ra, Volume Two* by Sun Ra and his Solar Arkestra, which was released in 1966 by El Saturn Records, is probably one of the most striking examples because of the relevance it assigns to science. To begin with, the titles of two of its three songs, 'The Sun Myth' and 'Cosmic Chaos', feature words of the semantic field of space. Yet, the most interesting association with astronomy is the cover image of the album itself featuring a German astronomical

chart of the solar system (Figure 1).

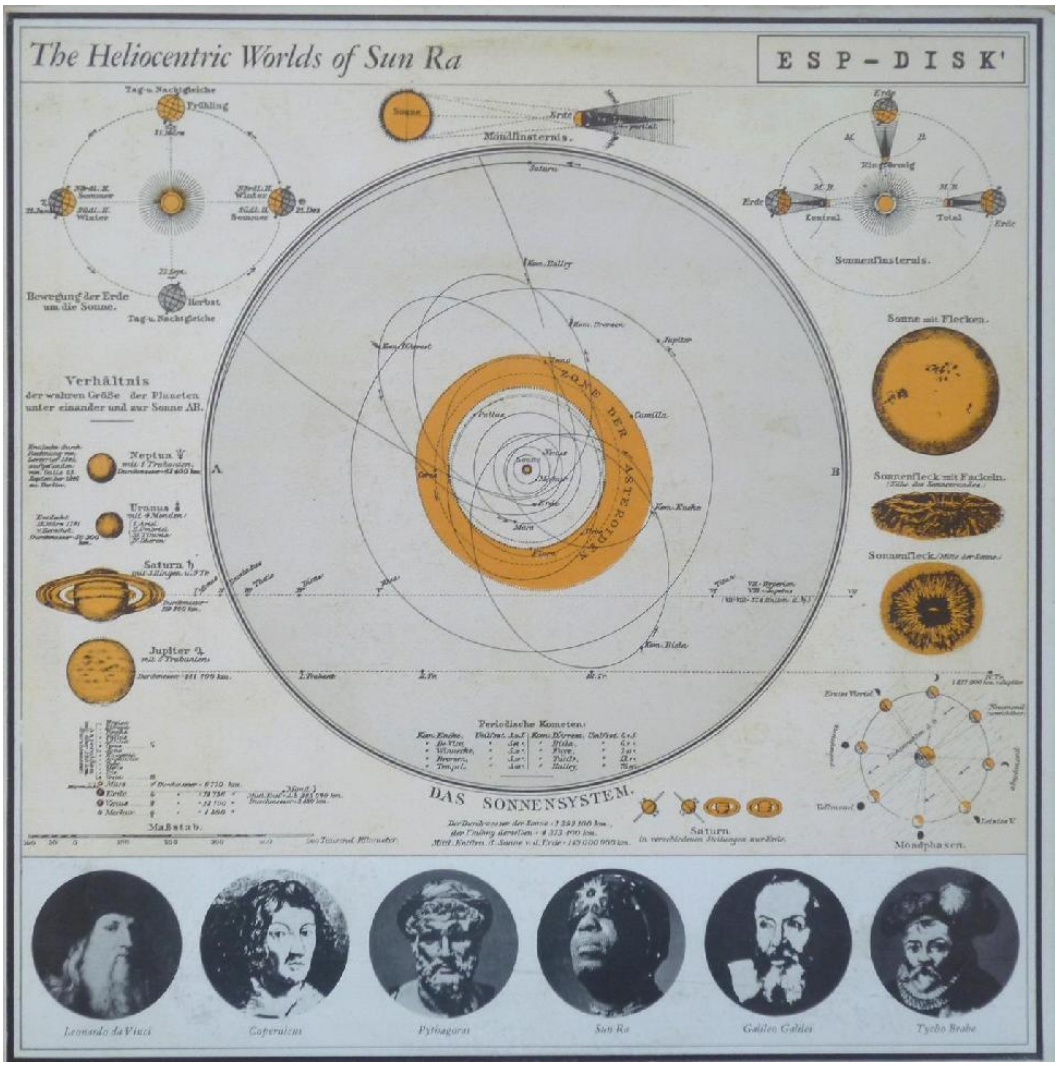

Figure 1. *The Heliocentric Worlds of Sun Ra, Volume Two* (1966), by Paul Frick

Together with the orbits of the planets, the chart displays explanatory diagrams of how seasons, eclipses, lunar phases and solar activity work; while, beneath, a photo of Sun Ra is placed among some of the most important astronomers and scientists of all time such as Leonardo da Vinci, Copernicus, Pythagoras, Galileo Galilei and Tycho Brahe. In summary, Sun Ra had a very peculiar idea and approach towards science; he placed it

> somewhere between or beyond science fiction and science. More than a method of reasoning and a set of laboratory practices, it was also a mystical process, and […] had the power to create new myths, erase old ones, altering our ratio to each other and the rest of the universe (Szwed 1997: 132).

Unsurprisingly, Sun Ra was not the only Afrofuturist musician interested in science fiction and astronomy. On December 15, 1975 was released the fourth album by American funk band Parliament led by George Clinton, *Mothership Connection* containing songs associated to science fiction such as 'Mothership Connection (Star Child)' and 'Unfunky UFO'. The album matches very well the definition of Afrofuturism given by Dery as it both deals with African American themes in the twentieth century and uses the 'images of technology' to picture a better future (Bird 2013: 32). The first song, 'P. Funk (Wants to Get Funked Up)', begins with

> we have taken control as to bring you this special show […] welcome to station WEFUNK, better known as We Funk. Or deeper still, the Mothership Connection, home of the extraterrestrial brothers […] Coming to you directly from the Mothership. Top of the Chocolate Milky Way, 500,000 kilowatts of P. Funk Power (Parliament 1975).

Not only does the speaker introduce himself and his 'brothers' as aliens, but he also claims that they 'have taken control': if aliens are used by the band to represent the black community within a white society, then this is a cultural step towards taking agency. The speech is an interesting combination of music, science fiction and science; mentions of our galaxy, the Milky Way, and a unit of electric power, 500,000 kilowatts, confirm the relevance of the last two subjects in Parliament's idea of music. What is even more salient in terms of science fiction is the cover image of the album that shows George Clinton himself wearing a futuristic attire and coming out of some sort or spaceship (Figure 2). The scene is set in space: its background image is a truly existing photograph of the 'Pillars of Creation', which is a part of the Eagle Nebula in the Serpens constellation.

Figure 2. *Mothership Connection* (1975), by Parliament

This was one of the first images in popular culture featuring an African American in space; Clinton affirmed that the band chose to

> put black people in situations nobody ever thought they would be in, like the White House. I figured another place you wouldn't think black people would be was in outer space. I was a big fan of *Star Trek* so we did a thing with a pimp sitting in a spaceship shaped like a Cadillac (Hicks 2006).

The spaceship was a pivotal element also in the band's shows: it would land on stage surrounded by smoke and Clinton would come out of it. The Mothership was not just a source of visual entertainment or a prop in Parliament's album and shows, it was backed up by a story that reinforced the mythology of the band. As Womack points out, 'the mothership came from the star Sirius, harking back to the Dogon's theory of origin' (Womack 2013: 63) that sees the Nommos as the first living creatures who lived on a planet of the Sirius system, landed on Earth and provided the Dogon strikingly accurate information on our universe.

The Dogon is an ethnic group living in Mali, West Africa who have surprising astronomical knowledge supposedly dating thousands of years ago. For instance, they seem to have known that Jupiter has moons, Saturn has rings and that the planets orbit

around the Sun long before the West, which had to wait until the sixteenth century for Galileo Galilei to make such discoveries with his telescope. Yet, the most incredible fact regards Sirius, a star of the Canis Major constellation and the brightest star in our night sky. They claimed such star has a companion that cannot be seen by human eye, that it takes fifty years for it to complete an orbit around Sirius and that it is small and extremely heavy. Today we know Sirius is actually a binary star system made of Sirius A, the bright star we see, and Sirius B, a white dwarf that was first seen through a telescope in 1862. The Dogon call this star 'Po Tolo': 'tolo' meaning star, while 'po' refers to its small size. Moreover, they claim that it is white and heavier than iron (Oluseyi and Urama 2008: 252). It was not until the beginning of the twentieth century that Western science discovered that Sirius B was a white dwarf: that is a very small and extremely dense, therefore heavy, object. This insight into Dogon's mythology is just one example which proves not only that scientific disciplines, in this case astronomy, are not a knowledge exclusive to the West, but also that indigenous science, which is often hidden in stories and myths, can be even more accurate and exact. Once again, Afrofuturist artists took elements from African tradition but, in this case, Clinton and his band borrowed a feature that is commonly considered typical of Western culture and knowledge.

As mentioned with Sun Ra and his original instruments, science and Afrofuturist music meet not only on the field of content, but also in that of production. More specifically, rather than science we are talking about its most tangible application on human life that is technology and machines. Guillaume Dupit, a French musician who studied funk and Clinton in depth, describes the repetition in funk songs as machine-like. However, 'You can't reproduce the notion of the groove with a machine. If you take the same sample and repeat it, it's not the same result if you play it with instruments. It's like science fiction, this balance between the machine and human' (Womack 2013: 67). Machines and electronic musical instruments are often seen as incompatible with art and creativity; they are perceived as means that distance people from emotion and spirituality. Afrofuturist music is a representative of how this is a misconception. As Kodwo Eshun points out, 'machines *don't* distance you from your emotions, in fact quite the opposite. Sound machines make you feel *more* intensely, along a broader band of emotional spectra than ever before in the 20th century' (Eshun 1998: 00[-002]). These devices allow people to access a new dimension and provide a new way of experiencing music. A clear example

is Sun Ra's Outer Space Visual Communicator, which combines music with colourful patterns that move and change in accordance with the music. Womack describes such sounds as not having a language (2013: 69); indeed, the result is something unfamiliar and exotic. In fact, Eshun defines 'Alien Music' as 'the distance between Tricky and what you took to be the limits of Black Music, […] leaving every old belief system: rock, jazz, soul, Electro, HipHop, House, Acid, Drum'n'Bass, electronics, Techno and dub – forever' (Eshun 1998: 00[-002]).

Reminiscent of Sun Ra and George Clinton with her alter ego character and science fiction references is Janelle Monáe, a contemporary artist whose music adheres well to Eshun's definition. It is sufficient to watch one of her songs' videos to recognise her Afrofuturist approach and realise how fundamental science fiction is to her music. For instance, halfway through the video of the song 'Dance Apocalyptic' a fake 'Breaking News' video interrupts the song to report 'fires in New York, […] locusts in Detriot, […] an earthquake' in some other place, then the studio is invaded by zombies and aliens with a television displaying a spaceship on the background (Monáe 2013). Moreover, at the beginning she is introduced as 'Electric Lady' in reference to her alter ego Cindi Mayweather, a metallic android from 2719. The figure of the android is the focal point of her music because it symbolises a new 'other' that, unlike aliens, is a product of human intelligence and skills; plus, there is no doubt on their existence and we do not need to look for androids on other planets, they are already among us. Being part machine and part human, the android and its association to the 'other' can be traced further back when 'in the era of slavery, people of African descent were human enough to live and love and have a culture, but were nonhuman to the extent that they were 'machines', labour for capitalism' (Calvert 2010). Living somewhere in between the past and the future, Monáe's character and music seem to exist outside of the temporal dimension; as Womack suggests, her EP *Metropolis* 'feels like audio time travel' (2013: 75). Resembling her Afrofuturist predecessors, Janelle Monáe considers herself to be to some degree 'alien', different and unique and, at the same time, aspires with her music to involve everyone without prejudices. To make this point as clear as possible, at one of her concerts she handed out the Ten Droid Commandments instructing her public how they should understand her music; Commandment 6 explicitly invites to 'abandon your expectations about art, race, gender, culture and gravity' (Womack 2013: 75).

So far, we have seen the application of science and science fiction in music and how artists took, and still take, advantage of these subjects in their songs and in the image they create for themselves. However, even though it is less prominent, the process works in the other direction too. On August 28, 2012 to celebrate the landing of NASA's Mars rover *Curiosity*, which is still active today, will.i.am, member of the well-known music band The Black Eyed Peas, debuted with a song on Mars (Womack 2013: 53). 'Reach for the Stars', both written and sang by the artist, was transmitted from Earth to Mars and back; the signal travelled over 530 million kilometres before it was received by a group of students and scientists in Pasadena, California. After that, the song was played on Mars by the rover itself. This was the first time a song was broadcasted from one planet to another and it was a way for NASA to get to the new generations. The song was meant to survive the test of time and be easily understood across cultures; will.i.am believes that 'today is about inspiring young people to lead a life without limits placed on their potential and to pursue collaboration between humanity and technology through STEAM education' (NASA Mars Press Release 2012).

Another contemporary musician who employs music as a more practical tool rather than mere entertainment is Paul Miller, also known as DJ Spooky. He believes that 'music and art can be vehicles for provoking thought, overcoming inertia, and helping people engage with issues that are exponentially reshaping our information-driven world' (Daugherty 2014). His projects have dealt more than once with environmental issues and climate change, but perhaps the most popular is when, in 2007, he went to Antarctica to record the sounds of ice and created *Sinfonia Antartica*. The performance consisted in a string quartet playing 'music that Miller composed based on algorithms of Antarctica's weather and temperature patterns' while on the background a screen displayed photographs of the continent alongside scientific material and data (Daugherty 2014). By presenting scientific information through art, he hoped to make it less intimidating and more accessible to everyone; the American artist revealed that 'people often think data is cold and removed from everyday life […]. For me, it's the opposite. It's at the heart of things, the hidden poetry of modern life' (Daugherty 2014).

In the last two examples, we have seen how black musicians engage with science in a practical way. They tried to reach as many people as possible with a very specific goal in mind, that is, to involve them in the problem of climate change and stimulate them

towards scientific disciplines. However, music and science can interact also on a more abstract and theoretical level. Stephon Alexander is a theoretical physicist and musician who studied the music of John Coltrane and believes it to be closely connected with Albert Einstein's theory of relativity. Coltrane was a black American jazz saxophonist and composer who died in the late 1960s; not only did he strongly influence music genres and musicians with his works, but he was so interested in spirituality and so admired that after his death he was even canonized as Saint John William Coltrane by the African Orthodox Church. In his book *The Jazz of Physics*, Alexander emphasises the parallel between Coltrane's idea and use of music and the laws of physics. He argues that 'Coltrane used his instrument as a tool to search for new connections between music and the universe itself—much like how physicists use experimental instruments to do the same thing' (2016: 217). Coltrane greatly admired Einstein and, drawing from his idol's work, he found his music on the idea of symmetry; for instance, at the basis of his album *Giant Steps* are symmetric scales (2016: 64). In particular, the album *Interstellar Space* was inspired by Einstein's theory of general relativity and the hypothesis of the expanding universe. Just as an expansion is caused by a force opposing gravity, so the composer used bass and drums in the album resulting in 'a majestic display of Coltrane's solos expanding away and freeing themselves from the gravitational pull of the rhythm section' (2016: 218). John Coltrane, however, aimed at making his music truly 'cosmic' and, in order to do so, he did not limit his study merely to the connections between music and modern physics, but he dealt also with 'cyclic time in Eastern philosophy, Western harmony, and African polyrhythms' (2016: 217).

Even though the work of John Coltrane, will.i.am and DJ Spooky is not considered Afrofuturist, the way in which they deal with music in combination with other subject areas, in particular science, is very close to the philosophy of Afrofuturism. Moreover, they promote the image not only of black artists, but also of blacks in relation to science and STEAM education and launch them into the future. By addressing global topics such as environmental issues, social questions and by exploring interdisciplinary theoretical connections, the productions of these African American artists demonstrate how blurry the boundaries between the different branches of knowledge are and that art and science do not have necessarily to exclude one another, on the contrary. On the other hand, Afrofuturist musicians such as Sun Ra, George Clinton and Janelle Monáe, while still

integrating scientific elements in their music, tend to deal with them from a more science fictional point of view in order to address Afrodiasporic issues. In other words, they 'utilize a set of tropes and metaphors of space and alienation, linking their common diasporic African history to a notion of extraterrestriality' (Corbett 1994: 7). Space becomes the perfect setting both to represent the sense of alienation and '*unreality* of existence for people imported into New World servitude and then disenfranchised into poverty' (1994: 8) and as a metaphor for innovation. Metaphors are commonly used in order to render something obscure and complicated more accessible and familiar; yet, interestingly, the metaphors these artists adopt are mysterious concepts such as space, aliens and androids. Corbett suggests that is because the idea of space is directly associated with that of exploration, which is what links space with 'innovation in African-American music' (1996: 18). A remarkable characteristic they all share is a mythology of their persona, which works as a symbol for social marginalisation, based on outer space and externalised through alter egos, eccentric costumes and wordplay—for an example, consider the beginning of the song 'P. Funk (Wants to Get Funked Up)' by Parliament quoted above. For these artists, 'the impossible alternative futurity rests on reconfiguring the past, on the construction of vast, transformative, science-fictional mythologies, on looking *back* at the end of history […] in the white "uprooting" of black African civilizations (1996: 23).

3. *Nova*

Samuel R. Delany may not be the quintessential Afrofuturist author, but he certainly is one of the cornerstones from which the movement originated. Even though *Nova* is not one of his most famous works, it still functions as the ideal starting point in the understanding of the evolution of Afrofuturism and its relationship with science at this early stage. This chapter will start by reporting the author's opinions on matters relevant to the reading of the novel such as science fiction, race and identity. It will then move on exploring how *Nova* handles science and the last section will conclude by analysing the constitutive elements of the novel as a whole.

3.1 Race, Identity and Science Fiction: an Inside Perspective

Samuel R. Delany has been a very prolific writer fundamental not just to Afrofuturism but to science fiction as well. He received many awards and critics have always shown interest both in his works and in the author himself as a representative of both the African American and the gay communities in literature. Yet, his works never focused directly on the question of race; perhaps, that is due to the fact that his childhood was not marked by racial tensions. He was born in 1942 in New York City into a African American middle-class family and 'grew up in a family environment in which significant intellectual achievement was common and expected' (Freedman 2005: 398), but attended renowned white schools. That explains why, unlike his ancestors, Delany never perceived being both black and intellectual as an internal conflict and never felt the obligation to campaign for the racial issue. Spending his childhood between Harlem, the neighbourhood of black workers where he lived, and Park Avenue, where he attended a white private school, helped him develop what Du Bois called 'double consciousness'; Delany 'describes his childhood musing over the relation between "these two gates, two webs, two nets"' (Tucker 2004: 18). This is one of the reasons that led some white critics to question his blackness, as if there were some kind of criteria to measure the degree of blackness of an individual; as a reply to such allegations, the writer simply asserted, 'look, I *am* black.

Therefore, what I do is part of the definition, the reality, the evidence of blackness. It's *your* job to interpret it' (McCaffery 1990: 75). This statement clearly renders how he experiences his ethnicity, which is certainly more linked to his very fluid concept of identity than to any association with racial and gender markets, which he openly refuses. Delany does not believe in placing race as a central and constitutive factor of identity, he rather sees it as a 'system of political oppression grounded […] on a biological fantasy'. In fact, he sustains that the injustices African Americans have suffered are 'not a matter of a 'great race' treated as an 'inferior race'', but rather 'a complex of lies, contradictions, and obfuscations […] fundamental to the very notion of race' (Tucker 2004: 17). However, this does not mean that his novels are populated only by one ethnic group or that there is no variety in this sense; as a matter of fact, it is true the exact opposite as we will see in *Nova*.

Delany was a true pioneer in the field of science fiction as his novels are sprinkled with black characters that, more often than not, take over important roles. For instance, the protagonist of *Nova* is Lorq Von Ray, a mulatto galactic traveller whose 'mother's parents were on Earth, in a country called Senegal [and] his father's great-grandparents were also from Earth, from Norway' (Delany 2002: 43). Delany's novels, then, picture a future, *Nova* is set during the second half of the thirty-second century, in which white people are not the only ones who made it into space, all of humanity contributed to the colonization of our galaxy (Fox 1987: 94). As might be expected, Delany's arrangement was not welcomed with enthusiasm: the editor of *Analog* Magazine, John W. Campbell, rejected the serialization of *Nova* by maintaining that, even though he liked the story, 'he didn't feel his readership would be able to relate to a black main character'. In addition, 'there reputedly exist a letter from him to horror writer Dean Koontz […] in which Campbell argues in all seriousness that a technologically advanced black civilization is a social and biological impossibility' (Delany 1998).

One of Delany's most distinctive traits is probably his awareness of narrative techniques that allows him to experiment with science fiction. In fact, he is not just a writer, but also a literary critic and, from 2001 to 2015, a professor of English and Creative Writing at Temple University in Philadelphia. This explains his deep understanding of and interest in language and linguistics, which is reflected in his works of fiction. Moreover, Delany dealt with this topic extensively in essays such as 'About

5,750 Words' (1978) where he considers linguistics and the way it applies to fiction. In this essay, he approaches the concept of 'story' from a singular perspective since he does not consider it as 'a replacement of one set of words by another'. He rather believes that 'the story is what happens in the reader's mind as his eyes move from the first word to the second, the second to the third, and so on to the end of the tale' (Delany 2009: 4). The reader, then, takes on an active role in the construction of the story; the process is rendered even more laborious for a reader of Delany's works since the author admits he often tries 'to say several things at the same time' (2009: 10). His ideology works particularly well with science fiction. Borrowing Saussure's view of language in which the sign is made of a signifier and a signified, Delany defines 'subjunctivity' as 'the tension on the thread of meaning that runs between […] sound-image and sound-image' (2009: 10). In order to clarify this concept, he considers the phrase 'the red sun is high, the blue low'. Since naturalistic fiction deals with what is observable, this expression in such context would make no sense. Similarly, 'at the subjunctive level of fantasy', the meaning of the sentence would remain obscure without some sort of explanation as the image produced by the coupling of two suns would oscillate between a mere backdrop to the story and an image which purpose remains a mystery. Instead, 'the particular verbal freedom of SF, coupled with the corrective process that allows the whole range of the physically explainable universe, can produce the most violent leaps of imagery' (2009: 12). In other words, the combination of the dissociation between fictional images and what is observable, typical of fantasy, and the tracks of what is 'physically explainable', the distinctive trait of naturalistic fiction, gives access to a wide range of opportunities that render the image of two suns not only possible, but also self-explanatory. Hence, while a work of naturalistic fiction would be described as a story that '*could have happened*' and a work of fantasy as events that '*could not have happened*', science fiction relates to events that '*have not happened*'. These can be further divided into the subcategories of science fiction; for instance, 'sociological and predictive tales' envision events that '*might happen*', 'science-fantasy stories' are defined as '*events that will not happen*' and, finally, 'cautionary dystopias' as '*events that have not happened yet*' (2009: 11). Interestingly, unlike the other two genres, the tenses describing science fiction subcategories, although it may not seem like it at first, all deal with the future. Moreover, two out of three do not deal with an imaginary future, but with a hypothetical one, with events that could actually

occur. Delany introduced the idea of subjunctivity as a way of 'satisfying the need of the modern novel to emphasize the impossibility of rendering the world outside, and at the same time presenting a close and scientifically acceptable vision of the world' (Alterman 1977: 26). However, it should be specified that the author here understands the future 'only [as] a writerly convention that allows the SF writer to indulge in a significant distortion of the present that sets up a rich and complex dialogue with the reader's here and now' (Delany 2012: 165). In other words, 'Delany's galactic future […] is a logical extension of the present in that the plurality of worlds reflects the plurality of *this* world' (Fox 1987: 98). That is why Delany always provides the date and place of composition of his works. A novel should not be read outside of the historical context in which it was written because 'fiction is a product of a specific place, a specific time' (Delany and R. M. P. 1990: 320). This consideration acquires particular relevance when dealing with a genre such as science fiction where science and technology, which are constantly questioned and subjected to redefinition and upgrades, are constitutional narrative components.

3.2 Flying Inside a Nova

Delany's works can be divided chronologically into three groups. The first group is made up of nine science fiction novels starting from *The Jewels of Aptor* (1962) and ending with *Nova* (1968). In a conversation with Carl Freedman, Delany asserted that none of these books represent the writer he is today, but he would pick *Nova* as the representative of the first period of his career (Delany and Freedman 2008: 212). The novel is often referred to as the standard space opera novel; yet, when Wilson Tucker coined the word 'space opera', he used it as a derogatory term denoting 'pulpy, landfill-grade science fiction'. Today, nearly eighty years later, space opera is fully recognised as a subgenre of science fiction defined as 'a form of adventure story in which space travels plays a critical element' (Reynolds 2012: 12). Tucker pointed out three elements characterizing space opera. To begin with, it has to involve a ''space-ship': like the nautical fiction from which it borrows terminology and tropes, space opera depicts journeys through uncharted realms in vessels'. Secondly, it has to be an 'adventure story' including conflicts and violence

and, finally, 'like westerns and domestic dramas, it often succumbs to formulaic plots and mediocrity' (Westfahl 2003: 197-198). Delany was one of the first science fiction writers to appreciate this subgenre; indeed, *Nova* perfectly fits the definition.

The unambiguous placement of the novel into a subgenre, however, does not imply an equal clarity in its description. *Nova* is the kind of novel that has no simple and direct answer to the question 'what is the novel about?', but it rather allows multiple responses and interpretations. Probably the most straightforward summary would mention a smart and fearless mulatto hero, Lorq Von Ray, who hires a crew to retrieve the most precious material in the universe in a race against the cruel and selfish Prince Red. Alternatively, this can be seen as the backdrop of a 'modern story of a young man [Katin] learning how to be the writer who can write the story we are reading' (Scholes and Rabkin 1977: 95). The novel could be also decoded as a science fictional rendering of Greek mythology and medieval quests. To sum up, critic Judith Merrill suggests some of the ways we can read *Nova*; that is, 'as a fast-action far-flung interstellar adventure; as archetypal mystical/mythical allegory (in which the Tarot and the Grail both figure prominently); as modern myth told in the SF idiom' (Delany 2002: n. p.). The plurality of meaning and literary layers of Delany's works should not come as a surprise since, as mentioned earlier, the author himself admits that this is exactly his aim.

The reader, then, has at their disposal an array of possible lenses through which to read *Nova*, including the examination of the scientific elements that drive the plot. We have already discussed the importance of having some scientific background when reading science fiction; yet, the core scientific element of this novel represents an exception to such claim. Katin, a member of Lorq's crew, explains in one of his many recordings that 'when something goes wrong with the balancing mechanisms inside a sun, the dispersal of incredible stellar power dephases into the titanic forces that make a sun go—' (Delany 2002: 27). At this point he is interrupted by the Mouse, but it is evident the next word would have been 'nova'. Moreover, a few pages earlier, Lorq explicitly described a nova as an 'imploding sun' (2002: 24). The only problem is that this is not the description of a nova, but of a supernova. In fact, a nova is a binary system of stars merging and suddenly ejecting a gas shell; this phenomenon appears in the sky like a new star. How could Delany, who had a diploma from the Bronx High School of Science and was interested in science and science fiction, make such a mistake? Did he use the term

‘nova’ to designate a supernova deliberately? Actually, probably neither assumption is true. In fact, ‘until the twentieth century, there was no discrimination between novae and supernovae’ (Duerbeck 2008: 2); more precisely, until the 1950-1960 every new star was labelled as ‘nova’ and very luminous novae were designated as ‘supernovae’. It is fair to assume, then, that when Delany wrote the novel the common knowledge on these objects was not up to date. Such explanation appears even more plausible considering other passages involving astronomy and physics. For instance, the author exhibits a solid knowledge on the physical nature of stars when he has Lorq describe a star as ‘a furnace where the very worlds of empire are smelted […]. Every element among the hundreds is fused from their central nuclear matter’ (Delany 2002: 96). Two pages later, Dan, an old and blind man, reports that once a freighter ‘noticed something funny about the spectral lines of some star […] Stars are mostly hydrogen, yeah, but there was a big buildup of heavy materials in the gasses on the surface; that means something odd’ (2002: 98). Indeed, the heavier elements produced through nuclear fusion are pulled towards the core of the star, while the lighter elements are found in the outer layers. Moreover, towards the end of the book, the narrator points out that

> at twenty times the distance of Earth from the sun […] there was not enough light from a medium G-type star to defract daytime through an Earth-type atmosphere. At such distances, the brightest object in the night would still look like a star, not a sun—a very bright star (2002: 221).

The passage is interesting both on a scientific and on an historical level. Even though the average reader would probably not be familiar with the Harvard spectral classification system, they would still be able to picture the scenario; yet, they would not recognise in such portrayal the configuration of Uranus in the Solar System. The planet, in fact, is located at a mean distance of 20 AU (Astronomical Units, which is the distance of Earth from the sun) from the sun that is a G-type star, meaning it looks white/yellow to the naked eye and has a moderate superficial temperature. Furthermore, *Nova* was published in 1968, the year before humanity took the first step on the moon. At the time, space missions had just reached Mars (in 1964 the Mariner 4 spacecraft accomplished a flyby of the planet) and the first images of the sun from the planet’s surface are from the 1990s. Considering that, as of today, there are only simulation of what the sun looks likes from

the outer planets of the solar system, whether Delany's was an educated guess or there were already simulations on the subject, the description he provides is remarkably realistic.

However, as expected from a science fiction novel, the science in the book is not entirely accurate and realistic. As almost every space opera and many science fiction narratives in general, *Nova* features faster-than-light spaceships. The problem with this kind of technology is that it violates Einstein's theory, which asserts that the speed of light is the highest possible velocity. Delany explains this transgression in literature as a conscious 'critique of the Einsteinian model of the universe'. In other words, 'those FTL [faster-than-light] drives are all saying […] that the Einsteinian model will be revised by new empirical and theoretical developments, just as the Einsteinian model was a revision of the older Newtonian model' (McCaffery 1990: 82). The scientific approach of rejecting absolute truths employed within science fiction allows this kind of spaceships to cover very long distances and, in so doing, opens up a wide range of possibilities. Most of the times, science fiction authors present such technologies as a given fact within the narrative universe they created; Delany, instead, seems to be concerned with making it believable by giving a seemingly scientific justification alongside examples familiar to the reader. At the beginning of chapter three, the narrator explains that

> to move a ship faster than light from star to star, you take advantage of the very twist in space, the actual distortion that matter creates in the continuum itself. To talk about the speed of light as the limiting velocity of an object is to talk about twelve or thirteen miles an hour as the limiting velocity of a swimmer in the sea. But as soon as one starts to employ the currents of the water itself, as well as the wind above, as with a sailboat, the limit vanishes (2002: 39).

A similar strategy is employed to illustrate the nature of Illyrion, the imaginary element that Lorq is trying to retrieve from inside a star. Its importance as a powerful battery for objects such as the Mouse's syrynx, spaceships and faster-than-light travel in general is marked multiple times throughout the book. A particularly detailed passage in the second chapter provides a long and complex explanation on this element. Katin starts by informing the Mouse, another crewmember, with the dictionary definition of Illyrion; that is, the 'general name for the group of trans-three-hundred elements with psychomorphic properties, heterotropic with many of the common elements as well as the imaginary

series that exist between 107 and 255 on the periodic chart' (2002: 30). First, it should be noted that when the novel was published the last and heaviest element in the periodic table was rutherfordium with atomic number 104 and today the last element has still atomic number below 120. Furthermore, it is interesting the choice of the word 'imaginary' to label the unstable elements 'between 100 and 298', as the term reminds the reader of the fictitious nature of most of them. After the dictionary definition of Illyrion, Katin asks, 'how's your subatomic physics?'; luckily for the reader, the Mouse has very little knowledge on the subject, which gives the opportunity to Katin for a two-page-long and quite pedantic chemistry-like lecture including technical nomenclature of chemical compounds such as 'KrI_4, H_4XeO_6, RnF_4'. The author, here, makes his thought reported earlier on the evolution of scientific theories explicit by having Katin state that 'the concept of energy embodied in the Einsteinian quantum theory was about as correct, and led to as many contradictions, as the theory three hundred years earlier that fire was a released liquid called phlogiston' (2002: 31). The reference is to a superseded theory of the second half of the seventeenth century that hypothesised the existence of an element inside combustible objects that was released once the body was set on fire. With such premises, it becomes much easier for the reader to picture a future—the novel is set in the 3100s—in which faster-than-light travel and even flying inside a nova is possible. Hence, when at the end of the novel Lorq actually flies inside the nova, not only is it perceived as logically believable but it also comes as expected since the entire narrative builds up to this decisive moment. In explaining how he managed to survive, Lorq once again resorts to a quite long lecture on an imaginary physics of what happens in the moment a star explodes. Once again, he employs geometrical terms such as 'torus' with which the reader may not be familiar. Not only does he provide a scientifically detailed explanation of how a star acquires such shape, but he also supplies a visual example well-known to both the characters and the reader by saying that 'that sun became a doughnut with a hole big enough for two Jupiters to fit through, side by side' (2002: 237).

Science in *Nova*, then, is both fundamental to the setting and works as a way to justify central passages of the plot. The narrative would probably stand even with fewer scientific references, but it would be perceived as less believable. In order to achieve such credibility and still create an exciting adventure, Delany employed the kind of science fiction Stanley Schmidt calls 'innovative'. The scientific descriptions in the novel may

appear reasonable to a reader with a poor understanding of science, but many of them are, in fact, products of the author's imagination.

3.3 Digging Inside *Nova*

Like every novel by Delany, *Nova* is more than a simple galactic adventure; in its pages lie literary references, recurrent motifs and social commentaries. One of the many ways this book can be read is as a depiction and commentary on the process of making a novel, or more in general of certain aspects of literature itself. Katin, who is originally from Earth's moon and was educated at Harvard University, is struggling to write a novel in a time when literature as we know it has become obsolete, an 'archaic art form superseded by the psychorama' (2002: 27). His education and project put him in the position of both giving lectures on different topics to other members of the crew and make observations justified by the need to take notes for his novel. Katin's main problem is finding 'a subject that can support a novel' and, while he looks for a suitable candidate, he records considerations on the nature of novels. In the following example, he interrupts a conversation to make a long historical consideration that begins with,

> note to myself number five thousand three hundred and seven. Bear in mind that the novel—no matter how intimate, psychological, or subjective—is always a historical projection of its own time. […] To make my book, I must have an awareness of my time's conception of history (2002: 129).

This consideration mirrors Delany's habit of providing the date and place of composition of his works. The metaliterary analysis goes on throughout the novel by considering the kind of audience he wants to address (2002: 200), the fact that the characters 'are fixed most vividly by their actions' and that 'there are three types of actions: purposeful, habitual, and gratuitous. Characters, to be immediate and apprehensible, must be presented by all three' (2002: 186).

The awareness of literary motifs and the interconnection between Katin's novel and Delany's reach their climax in the last paragraph of the book, which also exemplifies another interesting dichotomy running throughout the narrative. The novel travels on two

parallel rails: that of science, discussed in the previous chapter, and one of mysticism and superstition. At this point in the plot, Katin sees himself 'turning into some allegorical Grail quest' and is well aware of the 'archetypical patterns it follows'; that is why he is seriously reconsidering his plan of writing a novel. He fears he will die just like 'those writers who died before they finished their Grail recountings' and he believes that 'the only way to protect [him]self from the jinx […] would be to abandon it before [he] finished the last' (2002: 241). This is how the book ends: with an unfinished sentence that is up to the reader to complete. It is at this point that we realise that the book we have been reading was Katin's novel all along. Hence, Katin managed to find a subject at last, but it was neither himself nor Lorq; he consciously decided to write the Mouse's biography. To fully understand Katin's choice, we should consider that *Nova* is set in a future society that feels nostalgic towards the twentieth century because 'at the beginning of that amazing century, mankind was many societies living in one world; at its end, it was basically what we are now: an informatively unified society that lived on several worlds' (2002: 156). Katin explains that the freedom of movement between planets brought by a general satisfaction in the working field caused a 'lack of cultural solidity' (2002: 220). In other words, the 'economic, political, and technological change have shattered all cultural traditions' resulting into an 'attractive' and technologically advanced but 'totally hollow' society (2002: 46). Towards the end of the novel, however, he recognises the solution to this problem in the Mouse who he sees as the embodiment and summary of cultural traditions because he 'collected the ornamentations a dozen societies have left […] over the ages and made them inchoately' his (2002: 220).

The Mouse is a very well-travelled 'orphaned gypsy' who 'at ten […] spoke some half dozen of the languages bordering the Mediterranean' (2002: 10). His aspect is defined by his 'travel acquisition[s]'; for instance, the fact that he only wears one boot while the other foot is bare is a practice he picked up during his wanderings. Yet, his most precious possession is his sensory-syrynx: a sort of musical instrument that fills the air with wonderful sounds, images, colours and smells that is somehow redolent of Sun Ra's Outer Space Visual Communicator. However, it has to be managed with caution as it can become dangerous and damage sensory organs since, as the Mouse warns, it is 'highly directional' (2002: 177). Thus, not only does the syrynx represent immediate and intuitive creativity in contrast with Katin's reasoned form of art, but it also draws a parallel to the

destructiveness of an exploding star. At the beginning of the novel, the Mouse reveals that old Dan became blind because 'while trying to reach the nova […] he looked at the star too long through sensory input and all his nerve endings were seared. They *weren't* killed. They were jammed into constant stimulation' (2002: 38). Dan's fate is equated in the end of the book by Lorq's sensory blindness, which is the price he has to pay after retrieving the rare element. The star, then, represents a supreme and untameable source of power that can both bring order and structure to society, and lead to a primordial chaos that draws blind Dan to commit suicide.

The society of *Nova* is dominated by fast movement and technology. The 'sensory input' the Mouse talks about in the quotation above is an example of how essential these components have become in the humanity imagined by Delany. In a future where people are equipped with sockets connected directly to their nerves that allow them to operate all sorts of machineries through nervous impulse, buttons have become 'archaic'. Sockets are such a constituent component of an individual's integration in society that those who refused to have them implanted—for instance, gypsies except for the Mouse—'were being hounded' (2002: 125). The lack of one of the six implants could also explain Prince Red's anger. Because he was born without an arm, he wears an artificial limb that while granting him a supernatural strength, it also makes him feel alienated; and 'on Earth that's about the worst thing that can happen to you' (2002: 133) as you cannot perform any kind of job. The change of perspective occurred when the new concept of work brought by the Industrial Revolution was considered 'psychologically damaging […] to humanity' because there was 'no direct relation between a man's work and his *modus vivendi*' (2002: 218). However, while on one hand technology was able to cure 'much of the endemic mental illness caused by feelings of alienation' (2002: 219), on the other it did not solve economic inequality. *Nova*'s universe is divided into three distinct areas: Draco, which includes the Earth, the Pleiades Federation and the Outer Colonies, where the mines of Illyrion are located. In one of his explanations to the Mouse, Katin informs us that

> Draco was extended by the vastly monied classes of Earth. The Pleiades was populated by a comparatively middle-class movement. Though the Outer Colonies have been prompted by those with money both in the Pleiades and in Draco, the population of the colonies comes from the lowest economic strata of the galaxy. The combination of cultural difference […] and the difference in the

> cost of transportation is what assures the eventual sovereignty of the Outer Colonies. And suddenly Red-shift [the company belonging to the Red family that has the monopoly of transportation] is striking out at anyone who has their hands on Illyrion (2002: 93).

The reality of the Outer Colonies can arguably resemble that of the European colonies in Africa where those in power not only exploit the locals, but they also prevent the population from advancing socially and economically. However, while portraying the colonisation of Africa on a planetary scale, Delany seems to offer an optimistic outcome for the oppressed. Katin believes that since the population of the Outer Colonies is the only one in possession of both cultural and material resources, it is destined to prevail. Cultural diversity is also a fundamental trait in Lorq's crew; 'although people work as teams in Delany's fiction, their differences determine the quality of the group effort and define them as persons' (Nilon 1984: 63). The crew of seven members led by Captain Lorq Von Ray, who is of mixed ethnical origins and comes from a wealthy family, can be deemed into three couples. The first being the Mouse, a gypsy, and Katin, an intellectual from Earth's moon, who share an interest in art even though they pursue it in different forms; their antipodal educational background offers the opportunity for the narrator, who it is clear in the end is Katin himself, to provide a portrayal of *Nova*'s universe. The second couple consists of Sebastian, a strong but kind man who is both blonde and has Asian traits, and Tyÿ, a mysterious woman whose eyes are 'the color of steel' and is characterised by her ability of Tarot reading. Finally, Lynceos and Idas are twin brothers of African descent who were born in the Outer Colonies and, because of their criminal conduct, were forced to work in the mines. Their ties with Africa are hinted throughout the novel; to begin with, they reveal that they 'grew up in the dry, equatorial stones of Tubman at Argos, under three suns and a red moon' and that they 'were wild. They called us wild' (2002: 34), which are the clichéd ideas Westerners have on African landscape and people. Yet, their most distinctive trait lies in their physical aspect: while Idas is black, Lynceos is albino. The brothers are complementary both in speeches, they finish up each other's sentences, and physically. The contrast between the two is constantly marked, even in their 'dark and white smiles'; for instance, while Idas is defined by dark adjectives and his 'black back' is compared to 'a screen for fragmented constellations' (2002: 130), Lynceos is constantly associated with white to the extent that

'his flesh was translucent as soap' (2002: 21).

The dichotomy between black and white can also be found both in the rivalry between Lorq and Prince, since one is mulatto while the other is white, and within Prince himself. One of his most distinguishing descriptions can be found towards the end of the novel: 'the black vinyl vest hung loose on his bone-white chest. Ridged ribs scored it sharply. Black pants, black boots. Around his upper arm at the top of his black glove: white fur' (2002: 201). Such portrayal might remind a science fiction fan of the character of Darth Vader in the *Star Wars* franchise; both characters are defined by the colour black, they both became evil because of a psychological trauma and they are both crippled. Another parallel with the film series can be traced on the language of the people from the Pleiades Federation such as Sebastian and Tyÿ. In fact, their speech is very similar to that of Yoda in *Star Wars* inasmuch as their syntax appears to the reader as incorrect and sometimes even as an obstacle to the comprehension of the text. Music critic and historian Ted Gioia observes that 'in both works, a battle for supremacy between competing federations of planets is reduced to the grudges and rivalries of individual combatants'. Moreover, 'Lorq Von Ray is Delany's Hans Solo with a dose of Luke Skywalker, the pilot of a fast-flying spaceship and seeker after adventures. His adversary Prince Red is, like Darth Vader, part human and part enhanced cyborg' (Gioia 2014).

Although Delany's interest in the role of language within speculative fiction is epitomized in *Babel 17* (1966)—a science fiction novel in which the author applies the Sapir-Whorf hypothesis to the narrative—, *Nova* still presents some points worth considering. It has already been pointed out that the population of the Pleiades Federation speaks a variant of standard English in which a simple sentence may become puzzling to the reader; for instance, the phrase 'I have what I waited for' becomes 'I what I waited for have' (2002: 174). In this example, Lorq's language adjustment to his interlocutors', Sebastian and Tyÿ, indicates that multilingualism is an ability retained not only by the inhabitants of Earth, as seen earlier with the Mouse, but common to all of humanity regardless of one's place of birth. The characters themselves show awareness towards linguistic differences; for instance, Lorq reveals, 'my family—at least my father's part—is from the Pleiades. Still, I grew up speaking like a Draconian in my own home. […] When I settle on a permanent family, my children will probably speak the same way' (2002: 152). Yet, linguistic and social identity is not taken for granted, but it is rather a

process of recognition that the captain has to go through:

> another realization hit Lorq: He and his parents spoke to the people of São Orini with a completely different set of words than they spoke to each other and their guests. He had learned the slurred dialect of Portuguese under the blinking lights of a hypno-teacher sometime in the fog of early childhood (2002: 49).

Lorq, then, is a clear example of the fact that 'Delany's characters possess the additional depth of double consciousness, which extend their parameters beyond the archetypical' (Rutledge 2000: 132).

A further interesting linguistic element is to be found in the encounter between semantics and science. The result is a nomenclature that, together with numerical recurrences, creates a sort of underlying network giving access to metaphorical and symbolical interpretation of the novel. Delany himself writes that

> naming is always a metonymic process […] The relation between entities […] are woven together in patterns far more complicated than any alphabetic or numeric listing can suggest [and it] is as complex as the constantly dissolving interface between culture and language itself (1996: 282).

For instance, the Mouse refers to his syrynx with the word 'ax', which hints both at the danger the instrument can cause and at it being the source of enjoyment since this is also the slang term for a guitar (Alterman 1977: 30). Another example is the fact that Lorq comes from the area of the galaxy called 'Pleiades'. In astronomy, this is the name of an open cluster, which is a group of relatively young stars formed in the same nebula, in the constellation of Taurus. The Pleiades is probably the most famous of these objects because it is made up of over a thousand stars of which seven are easily visible to the naked eye, hence the appellative 'Seven Sisters'; these stars are also famous for their blue colour. The association with Prince Red, within the semantic field of colours, is automatic: blue and red, in fact, are commonly considered as opposite colours as they are the typical examples of warm and cool colours. The opposition between him and Lorq can also be traced, even though the connection is not as evident as the one just mentioned, in the galactic area they represent. Prince is from Draco: a constellation visible from the northern hemisphere located opposite to the constellation of Taurus with reference to the Polaris. Furthermore, the company owned by Prince that has the monopoly on 'space

drives' is called 'Red-shift Limited'; a scientific pun that refers to the redshift effect. This astronomical phenomenon of the Doppler effect makes a viewer see the wavelengths of a source moving away shifted towards the colour red whereas, if it is coming towards the viewer, the source appears shifted towards the blue side of the electromagnetic spectrum. The redshift effect is also linked to the past on a cosmological level; since the universe is not only expanding but also accelerating, the redder we see a galaxy, the further it is and the faster it is drifting away from us. On a cosmological scale, distance is directly linked with time: when looking at such far away objects, we are looking into the past, towards the beginning of the universe. This pull towards the past, understood as an obstacle to advancement and evolution, is one of Prince Red's defining traits. Towards the end of the novel, Lorq explains to him that 'stasis is death' (2002: 202) and 'you're for stasis. I'm for movement. Things move. There's no ethic there' (2002: 205). Both characters are in a race towards seven tons of Illyrion stored inside a star; Lorq intends to change the economic system of the galaxy by destroying Red-shift Limited, while Prince plans to prevent this from happening and keep things as they are.

On a numerological level, Lorq is characterised by number seven. He comes from the Pleiades, also known as 'Seven Sisters', he is in a quest to retrieve seven tons of Illyrion with a crew consisting of seven members. It is difficult to pinpoint a specific reason for this choice since this number has countless associations in every field of knowledge. Interestingly, however, there is a connection between the number and black identity; in fact, Du Bois believed that

> after the Egyptian and Indian, the Greek and Roman, the Teuton and Mongolian, the Negro is a sort of seventh son, born with a veil, and gifted with second-sight in this American world,—a world which yields him no true self-consciousness, but only lets him see himself through the revelation of the other world (1996: 5).

Even though the society of *Nova* does not exhibit significant ethnic prejudices and the characters seem all more or less self-conscious, Lorq does actually display a sort of 'second-sight' in wanting 'to upset the balance of power' (2002: 203) and bequeath to humanity a new economic system. Moreover, he is presented to the reader mostly through the eyes of Katin and the Mouse and often revealed in comparison with his opposite, Prince.

Prince, however, is not alone in his attempt to stop Lorq. The presence of women in the novel is limited to a few iconic characters. Other than Tyÿ, whose role will be analysed shortly, there are Cyana Von Ray Morgan, Lorq's aunt who helps him locate a star about to 'go nova', and Ruby Red, Prince's sister. While the relationship between Lorq and Prince is of hate and pure antagonism, that of Ruby and the two male figures is rather complex. She is described as beautiful, with eyes like 'smashed disks of blue jade' but her features are 'austere and violent'. Ruby, Prince and Lorq form a sort of love/hate isosceles triangle where at the base lies the hate between Lorq and Prince. At the vertex is Ruby who loves, in a possibly incestuous relationship, and is loyal to her brother to the end but is at the same time attracted to Lorq. This last relationship, which is an interracial one, will always remain on a platonic level because of Ruby's refusal to leave her brother's side. The fact that Lorq is black seems to have an influence in Prince's destructive attitude towards him; 'however, that Lorq is able to pit his strength and will successfully against the Reds, rather than be lynched by them, says something different about the cycle of violence and oppression blacks of the future may endure' (Govan 1984: 46-47). Moreover, the name Ruby, which is an explicit link to the nova through the colour red, hints at what she means to Lorq; she represents his object of desire, a mere trophy. Lorq's morality proves to be quite questionable both in his quest for Illyrion—he motivates it to Prince by stating, 'the reason I must fight you is that I think I can win' (2002: 205)—and in his desire for Ruby.

As already mentioned, Lorq's quest is a quotation of the Holy Grail quest but, as Sandra Miesel notices, it is also alludes to the Prometheus story. These associations with mythology are so evident that not only does she recognise them, but she even defines *Nova* as a 'paramount myth' (1971: 86). While the plot somehow mimics the Grail quest with Lorq having to make a major sacrifice—give up his senses—to retrieve his personal Grail—Illyrion—, the character seems to be moulded on the figure of Prometheus. Like the Greek Titan, Lorq challenges authority and tricks the system to help humanity; in other words, 'the development of the galaxy depends on the ability of a black man to bring back the fire of the sun' (Govan 1984: 46). These are not the only literary works to which *Nova* has been related; for instance, Salvatore Proietti sees the novel as a rewriting of Melville's *Moby-Dick*. Like Ahab, Lorq is a captain with a crew on a quest to fetch seven tons of Illyrion that Proietti compares to the 'whiteness of the whale'. In addition,

the two novels have in common an artist-figure narrator and cultural encyclopedism as a meaningful elements in the plot (2013).

It is quite unusual for a science fiction novel concerned with scientific accuracy, even though science has a quite marginal part in the structure of the plot, to employ myths as narrative models alongside superstition. Most of the times, Lorq exhibits the confidence and determination of a true leader; yet, he looks for guidance and assurance in the Tarots. In this sense, the role of Tyÿ is fundamental; even though her character is one of the least developed in the narrative, her ability in Tarot reading opens a window on the future and provides Lorq with the reassurance he needs to carry on in his expedition. The paradoxical aspect of this exercise lays in the fact that in such a technologically advanced society, Tarot reading is a common and widely spread practice considered not only accurate, but perhaps even scientific. Thus, when halfway through the book the veracity of the Tarots is questioned, the surprise comes from the fact that paradoxically it is the most superstitious character, the Mouse, who triggers the debate. Referring to the fact that he always spits three times into a river before crossing it, he blurts, 'you call *me* superstitious because I spit in the river? Now you tell the future with cards!' The explanation he receives is that 'the cards don't actually predict anything. They simply propagate an educated commentary on present situations' (2002: 112). Yet, the curious note is not about the cards, but about the Mouse's reaction; in fact, even though his disbelief is founded as he knows 'that the cards belonged to the gypsies first, and that the gypsies knew: they're just fake' (2002: 123), he is told the cards are 'perfectly logical. You talk like somebody living a thousand years ago' (2002: 113). This is just one of the many confirmations that the novel is set in our future; our present is their past, but something happened in between the two epochs that changed the way people approach Tarots. Today, from a psychoanalytical perspective, Tarot reading can be seen as a therapy which 'relationship depends ultimately on the relationship between client and practitioner'. If between the two there is reliance and trust, the client turns 'disconnected statements […] into a coherent narrative in which [they] are the hero' (McConnachie 2017). In this sense, Lorq is both the protagonist of *Nova* and the hero of his own story that he creates with the motivation given to him by the cards. Instead, from a narrative point of view, not only do the Tarots counterbalance the scientific rationalism that pervades the novel, but they also form a sort of chiasmic pattern in which Lorq, the

embodiment of logic and rationality, has faith in the Tarots and the Mouse, who represents superstition, rejects them.

In conclusion, even though science plays an important part in the plot of *Nova*, it is not the focal point. The novel concentrates on the characters and uses them to explore different aspects of various fields such as literature, society, language, identity while 'includ[ing] and capitaliz[ing] on the tension between scientific theory and linguistic potential' (Alterman 1977: 34). The book is set in a future in which technology, on one hand proves to be fundamental in the evolution of humanity, while on the other fails to satisfy 'the need for a spiritual center in a universe [with shattered] cultural traditions' (Nilon 1984: 67). From an Afrofuturist point of view, Delany claimed that in his 'futures the racial situation has changed […] for the better' and that 'as a young writer [he] wanted to write about worlds where being black mattered in different ways it matters now' (Govan 1984: 46). The nature of the author's proto-Afrofuturism, in the sense that the Afrofuturist philosophy is not fully developed in his first works, is shown by the fact that even though 'his science-fiction novels affirm the diversity and vitality of black life', they do not focus on the 'black experience' (Govan 1984: 48).

4. *Lagoon*

Lagoon is a novel by American Nigerian writer Nnedi Okorafor published in 2014 and it represents a meaningful example of contemporary Afrofuturist fiction. To begin with, the chapter analyses the role of the aliens and the reaction of the alien invasion on the population of Lagos. Then, it considers some of the major elements characterising the book, among which religion, Nigerian culture, both Nigerian multilingualism and the further potential complication of alien language, and the employment of science in a story which primary concern is Lagos and its population.

4.1 Science Fiction in Africa

Nnedi Okorafor was born in America in 1974 to two Igbo Nigerian immigrants. Today, she is a writer and an associate professor at the State University of New York at Buffalo. Her fiction books have won international awards and, specifically, *Lagoon* was 'a British Science Fiction Association Award finalist for Best Novel' (Metacognition 2014) in 2014.

In commenting upon her relationship with science fiction, Okorafor states that because she was born in the West, she was exposed to the genre since childhood; yet, she could not relate to those stories 'because I never saw reflections of myself, my family, my cultures, Africa' (Onifade 2015). Being 'Naijamerican (Nigerian American)', then, is fundamental in her narratives where she skilfully manages to mix two very different cultures. Starting from a similar consideration to the one Dery addressed in 1993 that led him to coin the term 'Afrofuturism', namely the lack of African American science fiction writers, Okorafor came to the conclusion that the scarcity of African authors in the genre's scenario 'leads to two troublesome facts'. Firstly, 'Africans are absent from the creative process of global imagining that advances technology through stories'; secondly, they 'are not yet capitalizing on this literary tool which is practically made to redress political and social issues' (Okorafor 2014). Therefore, this is not merely a literary drawback, but it turns out to be a global deficiency in visioning the future. Okorafor points out that

science fiction is not random speculation on the future; these narratives spring from the writer's scrutiny of the present and envision of what today's premises will lead to. She also believes that science fiction is an efficient tool for the 'shaping of contemporary Africa', functioning as a source of 'imagination and ideas. You cannot find a solution to a problem until you imagine that solution first' (Onifade 2015).

Africa is too often treated as a 'site of dystopian calamity *and* investment and speculation […] where the only future possible is that being imparted upon it' (O'Connell 2016: 302). In this light, *Lagoon* is a powerful response that hands back agency to Africa over its own image and future. Okorafor manages in this novel to depict a captivating image of Nigeria by 'writing about the invisible, […] writing those people and individuals whose stories have not been told' (Zutter 2016). Interestingly, Okorafor does not consider herself an Afrofuturist as she 'finds categorization as a whole reductive' (Zutter 2016); yet, we will soon see that *Lagoon* indisputably ticks all the boxes of Womack's definition of Afrofuturism.

4.2 New Neighbours

Stanley G. Weinbaum's short story 'A Martian Odyssey' discussed in the first chapter is just one of the many cases demonstrating that extraterrestrials have always been a central theme in science fiction. Since the beginning of the genre, they appeared in all sorts of forms and aspects; yet, all these diverse creatures exist on the borderline between what is considered opposite to humanity—which is what the term 'alien' designates—and the characterisation of humanity itself. In fact, as Weinbaum's story exemplifies, they offer people the opportunity to demonstrate their humanity through empathy and by identifying common traits between themselves and the aliens. Through the encounter between the two species, then, 'the readers are encouraged to re-examine their self-conceptions as a result of confrontation with the Other' whose culture is used 'to highlight the markers of difference' (Seed 2011: 27).

Extraterrestrials, however, are not just a narrative figure to be found in fiction as they have become a major topic of interest of scientific disciplines such as biology, astronomy, chemistry and, of course, astrobiology; even more so since the discovery of

the first exoplanet, or extrasolar planet, in 1992. This revolutionary finding opened the door to numerous explorations that have detected an astonishing number of exoplanets: as of September 2017, over 2500 exoplanets have been discovered (NASA Exoplanets Exploration n. d.). Other than for the extraordinary discovery from a geological and astrophysical point of view, the existence of planets outside our Solar System makes it possible, and even highly probable, that extraterrestrials are not restricted to the realm of imagination, but are rather a reality with which we will soon have to deal. Eminent scientists have realistically considered the implication of an encounter with aliens and they all seem to agree that the outcome would not be positive for us. Stephen Hawking even compared our first contact with an advanced civilisation to when Christopher Columbus arrived in America and things 'didn't turn out so well' (Devlin 2016) for Native Americans. If we consider that such a species would be able to contact us, if not physically reach Earth, it becomes evident that they would be far more technologically, and probably culturally, advanced than us. Astrophysicist Neil deGrasse Tyson even believes that such civilisation could consider us inferior creatures and have no interest in making contact at all (Griffin 2016). All these speculations, however, are necessarily based on our history and experience; there is no way for us to know in advance how and in what ways such a species would resemble us. Hence, as Neil deGrasse Tyson points out, our concerns are 'more a reflection of how we know we treat each other than it is on how we could ever possibly suspect an alien to treat us' (Rosenberg 2014).

In science fiction, the aliens' otherness is displayed in their phenotype; a trait that is frequently stresses is the colour of the skin. The physical difference denotes some other kind of divergence, whether it be a cultural, linguistic or intellectual one. In this case, it becomes not only acceptable, but even correct to talk about diversity of species. The difference in bodily features and culture easily relate to the Western perspective on blacks and, even though the 'concept of alienness does not always signify a colonial relationship, it often dovetails with the colonial discourse of the Other' (Langer 2011: 82). Hence, the association between alien invasions and colonialism is an almost natural one from a white point of view. What happens, then, when the target of the extraterrestrials is an African location and the story is written by an African author? Probably the most famous recent example is Neill Blomkamp's 2009 *District 9*. The film addresses important issues, above all racism; however, it also depicts 'Nigerians as opportunist gangsters and prostitutes'

(Langer 2011: 82).

In the 'Acknowledgments' of *Lagoon*, Nnedi Okorafor thanks the film 'for both intriguing and pissing me off so much that I started daydreaming about what aliens would do in Nigeria'. She then continues by admitting that 'this novel was birthed from my anger at *District 9*, but it quickly became something entirely else' (Okorafor 2014: 301). It is evident from the very beginning of the book that Okorafor's aliens and their modus operandi are not only atypical, but also somehow unsettling. Their arrival is announced by a loud explosion in the water off the coast of Bar Beach in Lagos; yet, the reader, together with the main characters and two other minor ones, witnesses only one creature coming out of the sea. The being is described as 'not human' even though it appeared as a 'dark-skinned African woman with long black braids' (Okorafor 2014: 13). The three protagonists—Adaora, a marine biologist with a superhuman connection with water; Anthony, a Ghanaian rapper with amazing communication skills; and Agu, an extraordinarily strong soldier—are the first to approach the alien and take it into custody.

The creature claims it does not need a name, so Adaora names it Ayodele from a childhood friend. Moreover, as it displays its shape-shifting ability from the moment it gets out of the water, it is safe to assume that this species is genderless; still, for clarity's sake and since this specific alien is a major character, from now on she is going to be addressed as a female as she is in the narrative. Adaora admits that 'if there was any strong hint of the alien in Ayodele's appearance, it was in her eyes' (2014: 37). Interestingly though, the history, planet of birth, social structure, culture and everything related to her species remains a mystery throughout the narrative. The only mention of her past and nature of her people is in response to Adaora's questioning,

> you have named me Ayodele. You people will call me an alien because I am from space, your outer heavens, beyond. I am what you call an ambassador, the first to come and communicate with you people. I was sent. We landed in your waters and have been communicating with other people there and they've been good to us (2014: 37).

The book is divided into three acts and each of them begins with a prologue in which the focalizer is an animal. This and the fact that aliens come out of the water make it clear that the very first contact the aliens made with Earth's creatures was not with humans but rather with the inhabitants of the sea. The novel, then, while focusing on people and more

precisely on Lagosians, highlights the status of human beings inside the complex variety of creatures inhabiting our planet. Ayodele does not see humans as a superior species; in fact, she refers to marine creatures as 'people' who are able not only to communicate, but were also 'good' to the newcomers. As a confirmation to this standpoint, the book is 'dedicated to the diverse and dynamic people of Lagos, Nigeria – animals, plant and spirit' (2014: n. p.). Even though the aliens show empathy and respect towards all living creatures, which is a characteristic that draws them closer to life on Earth, they could not be biologically more different. In fact, instead of being a carbon-based life form, they are 'made of tiny, tiny, tiny, metal-like balls [that] aren't fixed together as our cells are' (2014: 25) and allow them to change form as they please. Their mutable nature endorses Professor Hugh Charles O'Connell's equation of the aliens 'with the "evental site" as they are presented as that which cannot be represented by the regulative state or its discourse' (2016: 309). In this view, they completely lose every corporeal essence and become the embodiment of everything that is 'alien, unknowable, or unlocatable', all that is impossible 'to narrate […] within the governing ideology of the present' (2016: 309). Nevertheless, while their biological nature is unclear, their purpose is a little less obscure: Ayodele explicitly states, 'we do not want to rule, colonize, conquer or take. We just want a home' (2014: 220). Even though the reader never knows what happened to their previous home, the aliens' cry for help would trigger sympathy for them if it were not for their imposing and authoritative attitude. Despite their helpful intentions, they leave no choice to humanity; they seem to appoint themselves as unwanted protectors of Earth, their new home. At the end of the first act, Ayodele makes an online public speech and asserts, 'nobody is attacking you. And nobody will dare now. The winds of change are blowing. We are change' (2014: 112). The change Ayodele refers to is not just their mutable and intangible corporeal nature—aliens in the novel are often associated to smoke—, but rather what they mean to bring on our planet, that is, technology.

This new scientific tool, which we never actually get to know, 'liberates Nigeria from its dependence on oil as the single commodity that [is what] makes the world pay attention to it' (Miller 2014). Ayodele herself points out that the country 'is full of a fuel that is tearing you apart' (Okorafor 2014: 113). Even though the environment is not the focus of *Lagoon,* the novel still calls the reader's attention on the issue. To begin with, the preface to the first act is inspired by a real event occurred in Angola when a 'swordfish

punctured part of an oil loading pipe, causing a three-day delay to tanker shipments of Girassol crude' (Kurahone 2010). In the novel, the sea creatures display a will of their own in fighting for 'the water to be "clean" […] for sea life' (2014: 248). Not only will the alien technology function as a resource for Nigeria to rely on, but it also promises a better future to all forms of life. These aliens, then, are clearly not the typical invaders, they rather 'represent such a utopianism as a seemingly benevolent colonialism' (O'Connell 2016: 295). The premise to an environmentally healthier land is taken in in different ways by its inhabitants. While, 'the tarantula believes that life is best lived by embracing the changes that come his way' (2014: 119), halfway through the book Agu sees the aliens coming out of the water in human form as harbingers of 'the death of […] Lagos. The death of Nigeria. Africa. Everything?' (2014: 143). The climax is a clear manifestation of the fear for the change brought by the newcomers. Such change is necessarily preceded by the chaos and violence of a revolution that lead to a new equilibrium. A state in which Nigeria is not exploited by capitalism for its natural resources anymore, but instead, thanks to the aliens and their technology, it becomes the country leading the world to the future. Therefore, while on the one hand destruction is a necessary evil, on the other 'the violence found in *Lagoon* can also be read as an allegorical registering of the totalizing valences *and* violence of neoliberalism in its global determinations and local instantiations' (O'Connell 2016: 307).

Then, while it is true that Ayodele and her people represent violence, destruction and death, they also symbolise re-birth as they bring life both metaphorically and literally, even though not necessarily to humanity. A passage that clearly exemplifies this apparent paradox can be found towards the beginning of the second act when a riot erupts among the crowd gathered outside Adaora's house where Ayodele is staying. Since the official cause of disorder was Ayodele, even though it was actually triggered by the tension among the people themselves, a soldier shoots her with the only result of making her furious. This is the moment when Adaora realises that 'these aliens had come in *peace*. Had come. *Had*' (2014: 197). After a deafening 'sound of marbles' caused by the atomic or molecular rearrangement anticipating some kind of metamorphosis, the crowd notices that 'where the soldiers had stood, heaps of raw meat wriggled and then became still' (2014: 136). Not only does Ayodele murder the men, but she also deprives them of their human shape by disassembling them on a structural level. This both highlights the fact

that even a group of soldiers is powerless when facing a single alien and it also reinforces the idea that humans are little more than 'raw meat' to the extraterrestrials. Once again, Adaora hears the sound of marbles and immediately realises that what was left of the soldiers, 'the wet piles of meat, the scattered clothes, even the spattered blood' had vanished and

> in their place was a plantain tree, heavy with unripe plantain. […] Ayodele had taken the elements of oxygen, carbon, hydrogen, nitrogen, calcium, phosphorus, potassium, sulphur, sodium, chlorine and magnesium that had been Benson and the other soldiers and rearranged them into a plant (2014: 137).

Again, Ayodele shows to regard all living creatures in the same way; what is death for some human beings becomes life for a plant.

4.3 The Scientist Witch

The passage quoted above exposes the cyclic nature of life by employing scientific, more specifically chemical, terminology. The narrator insists on the tangible and physical components of human beings as opposed to that of the aliens and treats them like pieces of a puzzle that can be rearranged to form different figures. Interestingly, the passage then takes a very different approach towards the event, '*does the soul transform, too?* Adaora wondered. She'd never believed in God but she was a scientist and knew that matter could be neither created nor destroyed. It just changed form' (2014: 137). From the beginning of the novel, Adaora is presented as and characterised by her rationality and analytical thinking in opposition to her religious and superstitious husband. Yet, the extraordinary event that invests Lagos makes her question herself and her beliefs. These lines reveal the internal conflict she is experiencing: though she is aware of the science that is behind the metamorphosis of the soldiers, namely the principle of mass conservation, she cannot help but wonder what lies beyond the material world. In this instance, science becomes for Adaora a source of reassurance and stability; as the narrator explicitly declares towards the beginning of the novel, 'when she was afraid, nervous or uncomfortable, all she had to do was focus on the science to feel balanced again' (2014: 23).

As already mentioned, Adaora is a marine biologist; a Nigerian female scientist working in Lagos may seem an unexpected combination, especially to a Western reader. One of the first scenes in the novel portrays Adaora, Agu, Anthony and Ayodele in Adaora's house where she has a fully equipped laboratory which allows her to examine the alien. This, however, is quite an uncommon, if not unrealistic, representation of the working environment and possibilities of Nigerian scientists. Nigerian physicist Rabia Salihu Sa'id, a researcher studying the link between deforestation and the change of air temperatures in Nigeria at Bayero University in Kano, testifies, 'each day, my university is giving me only four hours of electricity. I can't do research in four hours!' (Venton 2015). This is just one of the problems Western scientists are exempt from, but Sa'id has also to deal with the lack of funding and male support like many of her female colleagues from all around the world.

An interesting study by Polina Levontin, a researcher at Imperial College London, examines the portrayal of scientists in Nigerian science fiction. Firstly, she notices that science fiction gives a quite modern and 'progressive view of gender in science', however, 'whereas Western SF is approaching gender equality in depicting scientists, Nigerian SF is lagging behind (taking the normative view that gender equality is ideal)' (2016). She also finds that in the twenty-three science fiction novels she examines, among which *Lagoon*, there is an 'incompatibility between the goal of motherhood and aspirations of being a scientist' (Levontin 2016). In fact, Adaora has her two children taken away from her husband who is concerned for their safety given Adaora's conspicuous involvement with the aliens. Hence, it seems like she can either be a good mother or a good scientist, but not both at the same time. This depiction of female scientists becomes relevant if we consider 'that fiction can be an indicator of public attitudes and a stronger assumption that the public is influenced by fictional representations in literature' (Levontin 2016).

In *Lagoon*, however, Adaora's job is more a plot device giving a realistic, as opposed to fantastic, overview of the aliens rather than functioning as a scientific lens running throughout the novel. This consideration is also supported by the fact that all scientific references in the book are surprisingly mixed with either religion, superstition or spiritual observations. Even though Adaora with her job represents the embodiment of nature, 'on the day she received her PhD in marine biology from the University of Lagos,

she […] thank[ed] the Powers That Be' (Okorafor 2014: 8). While representing science, then, she still has some sort of spiritual belief. Yet, this is not strong enough to save the relationship with her husband when the two ideologies are forced into a confrontation on the unfamiliar ground presented by the alien invasion. Chris serves as Adaora's opposite and is there to emphasise and characterise Adaora; halfway through the novel the narrator informs us that

> she'd never been religious. She'd never believed in the mysterious as her husband did. She was a scientist. Her world was founded upon empirical evidence, on rigorous experimentation, on data. She was the thinker and he was the one willing to simply have faith. That had been what kept them balanced. Chris was a genius when it came to securing and growing contracts. […] He consulted dibias, witchdoctors and babawelos when he felt he was at a crossroads. And this had always worked. It had made them rich. For Adaora, however, logic determined her actions. She went to church because she was expected to go, not because she believed. She studied the oceans and its creatures. She calculated, documented, observed. She wrote articles for academic journals and was respected in her field (2014: 158).

Not only does the paragraph show the opposite mind-sets of the two characters, but it also shows the overlapping between religion, in this case Christianity, and local traditions and beliefs, which suggests that one faith does not exclude the other. In fact, as we will soon see, while being a fervent Christian, Chris

> believed there were white witches, physical witches and marine witches. All were evil, but the marine witch was the most powerful because she could harness water, the very substance that made up 70 per cent of an adult's body and 75 per cent of a child's (2014: 17).

That is why, when he is aghast at Ayodele's shape shifting, he accuses Adaora of being a marine witch and of poisoning him and sentences, 'Jesus Christ will send you back to hell, o! God will punish you! In the name of Jesus and the Holy Spirit' (2014: 31). Chris firmly believes in legendary creatures, yet, interestingly, he justifies and evaluates them through science; not only does he attribute the marine witch's evil powers to the scientific notion that the human body is primarily made up of water, but he is also familiar with the

exact percentages of water constituting the bodies of both adults and children. Still, he despises science and his wife's job to the extent of designating Adaora's laboratory the 'witch's den' (2014: 21).

Once again, superstition and religion intermingle in the description of witches' practices which bear a resemblance with the Western concept in the Middle Ages. During a flashback on Anthony's childhood, the reader is informed that, according to his father's family,

> in her village, before [Anthony's mother] married his father, she was known to commune with the devil. Since his father's death, his mother not only cooked for but slept with all of his father's friends. And even before his father had died, she'd aborted several children. So they said. According to them, his mother's nails were always dirty, her soup was always sour, and she'd used charms to get his father to marry her (2014: 163).

The belief in witches is so deeply rooted among population of Lagos that it is widespread even among the upper social classes. The Nigerian President, after meeting Adaora, Anthony and Agu and after witnessing their superhuman abilities, '*still* felt that [they] were witches. Good witches, but witches nonetheless'. While he proves to be more open-minded than Adaora's husband by accepting the possibility of the existence of 'good witches', he still holds on to popular stories. However, the President is wise enough to acknowledge that 'old outdated ways of thinking don't die easily, and sometimes they don't die at all' (2014: 278).

Then, while on one hand the novel presents only allusions to witches as imaginary creatures, on the other it moulds another figure from local stories into a proper character: the Bone Collector. The 'Awakening' that gives the title to the second act seems to refer both to humans and to 'other things inhabiting Lagos besides carbon-based creatures' (2014: 120). The Bone Collector is a sort of terrible old god that rises 'up in a huge snake-like slab of concrete [with] faded yellow stripes' (2014: 207) to devour people. The road monster gives the opportunity to an alien, in form of a woman, to surprise both the reader and the characters once again. The focalizer of this cinematic-like chapter is a man stuck with his family in the bustling Lagos-Benin Expressway, a real motorway scene of many mortal accidents, late in the night. When the appearance of the terrifying road monster spreads panic in the crowd, only a 'tall Nollywood-looking woman' (2014: 205) is brave

enough to face the creature; 'she was not earthly. She was something completely other. *But* she was not evil, either' (2014: 206). She proves her altruism and generosity by inviting the monster to 'collect [her] bones and then never collect again' and then goes on by exposing her evanescent and impalpable nature, 'I am everything and I am nothing. Take me and you will be free of your appetite' (2014: 208). Her ultimate sacrifice makes the man witnessing the event realise that, even though she is the alien invading Earth, she immolates herself to save human beings and that rather than the aliens, 'Nigeria's worst diseases [are] pervasive corruption and unsafe roads' (2014: 208). In some ways, then, Ayodele and her people seem to resemble the Christian god who both 'kills *and* gives life' (2014: 139), as we have seen Ayodele turns the soldiers into a plantain tree, and immolates himself in order to save humanity.

The Bone Collector is not the only figure in the novel coming out from local folklore, another mythological being who is mentioned more than once is Mami Wata. This is 'the goddess of all marine witches' (2014: 235) and is associated to the 'Fin Bank'. The building is considered 'one of Lagos's most artistic structures, a gigantic trapezoid with arched wings made entirely out of square panes of glass. A few were red, but the majority of them were an ocean blue' (2014: 234). Such connection with water is exactly the reason why Mami Wata 'loves this building'.

Yet, the most important mythological creature in *Lagoon*, since without him there would be no story, is certainly Udide: a spider, the narrator, the storyteller par excellence. Okorafor assigns this pivotal role to

> the formidable Nigerian story-spinning spider named Udide Okwanka. He is the supreme spider artist who toils beneath the ground, in the *ekwuru* (the spirit world). He possesses the power to gather fragments of any object and shape them into a new object (Scalzi 2010).

He appears several times in the novel with aside chapters in which he implies he is the puppeteer of the theatre show that is the novel and provides some sort of guidance to the reader. Instead of being at the opening to the book as the reader would expect, the 'Narrator's Welcome' chapter is at the beginning of the third act, towards the end of the novel. It is a two-page chapter written in italics, aligned to the centre of the page and divided into paragraphs, somehow reminiscent of the verses and stanzas of a poem, in

which he clarifies his role as the omniscient narrator and directly addresses reader. Udide concludes his entry with

I am stronger than ever. I approach the end of this leg of the tale.
And here, I greet you.
Welcome, listener, welcome.
[…]
Na good good story.
I go continue to listen, o. Quietly… (Okorafor 2014: 229).

These few lines both emphasise the role of oral storytelling as the main mode of spreading culture in Africa and Udide's degree of awareness within the story, especially in relation to the ending. The impression the reader gets from this chapter and from an earlier revelation that the story '*is in the always-mingling past, present, and future*' (2014: 194) is that the spider is out of and above the narrative. Not only does he come out as almost omniscient, but he even declares to be the architect of such story when he asserts, '*I've spun the birth and growth of this great city* […] *Lagos. Nigeria. I know it all because I created it all*' (2014: 291). Still, he has limitations. He needs the characters not to fully understand what is going on so that he '*can continue to narrate this tale while* [he] *enjoy*[s] *it*', because, if they do, his '*strong webbing will snap*' (2014: 228). Udide enjoys the story and love his city, the human beings and the '*new people amongst the old people*' (2014: 229) inhabiting it to the extent that the novel ends with him deciding to leave his privileged status and join them,

For the first time since the birth of Lagos, my glorious city, I will pause in my storytelling.
I will leave my web.
I become part of the story.
I will join my people (2014: 293).

Not only is the narrator part of the local folklore, but he also bears a resemblance with the Christian god. Other than the traits just mentioned, namely omniscience and being the creator of a world, he welcomes the aliens with the phrase '*Here There Be Monsters*' that is evocative of the famous phrase in the Book of Genesis, and finally he leaves his own heaven to join his creation. With this characterisation of Udide, then, emerges a connection with the aliens that is supported by Adaora's first description of

Ayodele who 'had piercing brown eyes that gave Adaora the same creepy feeling as when she looked at a large black spider' (2014: 17). Moreover, both the aliens and Udide shape and modify the world they want to inhabit according to their own taste. As O'Connell points out,

> ultimately, the aliens and Udide Okwanka become part of each other's narratives as the aliens land within Udide Okwanka's "design", yet it is the aliens that create the utopian rupture and the possibility for a new futurity for Lagos in which Udide Okwanka will "pause in my storytelling….and become part of the story"' (2016: 299).

Even in this sense, then, the aliens are superior to human beings: not only are they characters playing a part in Udide's story, but they also participate in its writing.

4.4 Lagos Rhymes with Chaos

Okorafor does not limit the portrayal of the variety of life forms to a macroscopic level—that is to say plants, animals, human beings and aliens—, but she also considers the social diversity within the (human) population of Lagos. In particular, 'using multiple points of view, Okorafor is able to show the possible effects of an alien invasion on different individuals in Nigerian society' (Aiyetoro and Olaoye 2016: 239). The social diversity in the area and the closeness to water were probably the reasons why the aliens chose Bar Beach as their landing site. In the depiction of such scenario, the narrator neither embellishes nor focuses on its most appealing elements, but he rather opts for a more realistic and authentic description of Nigerian reality:

> in many ways, Bar Beach was a perfect sample of Nigerian society. It was a place of mixing. The ocean mixed with the land and the wealthy mixed with the poor. Bar Beach attracted drug dealers, squatters, various accents and languages, seagulls, garbage, biting flies, tourists, all kinds of religious zealots, hawkers, prostitutes, johns, water-loving children and their careless parents (Okorafor 2014: 7).

These people, along with the three main characters, not only witness the invasion, but also report it to the reader alongside their personal experience. An interesting point of view comes from the members of the LGBT student organisation of Lagos, the Black Nexus. Unlike other characters who plan to kidnap Ayodele because they see her as a 'money-making alien' (2014: 98), the Black Nexus wish to have her on their side to be able to 'come out of secrecy'; indeed, 'who better to understand than a shape-shifter?' (2014: 74). Their intent is more than legitimate given the struggle this community has to go through on a daily basis. In a passage towards the end of the first act, the narrator shows sympathy towards these people who have to put up with terrible insults such as '*adofuroo*', 'a derogatory term for homosexuals in the Yoruba language' (2014: 295), 'fags' and 'bottom power'. That is why they are credited for being 'so brave', for 'com[ing] out in a place so public […] They'd been hiding for such a long time. Not so much out of shame, but out of a need to stay safe' (2014: 92).

The character that most fervently opposes the Black Nexus through 'sermons on the "evils and filth of homosexuality"' (2014: 72) is Father Oke. The priest is described by Adaora as 'the worst kind of charlatan' (2014: 46) and 'a smooth-talking predator' (2014: 43) wearing an 'immaculate white collar' and 'shiny', 'spotless' shoes (2014: 42). Interestingly, in a book in which there are no other religious figures, he represents the venal and dishonest facet of religion; in this sense, religion and Father Oke function as the main antagonists to the change brought by the aliens. Udide informs us that he had become a preacher because he liked that 'speaking publicly [grew] his confidence' (2014: 46), which implies that his personal gain is his primary concern. The priest has to make a huge effort to hide his thoughts and feelings, but he still shows neither kindness nor sympathy towards his followers; on the contrary, he has a very low and disrespectful opinion of them. When he finds himself facing a woman whose 'English no be good', he thinks of her as 'a waste of a woman' and at her arguable admission of being a witch his impression of her degenerates into a 'common piece of female trash [who] in his glorious church had the nerve to admit to the greatest sin! To his face!' Yet, even though he thinks of this woman as a '*peasant*', '*rubbish*' and '*filth*', 'he would [still] take her money' (2014: 59). Father's Oke attitude is not confined to the walls of his church; he tries to manipulate people whenever he gets the chance, as it happens with Chris. Adaora publicly accuses the priest of instructing her husband to starve himself and slap her in the face;

what is worse is that Father Oke manages to convince Chris not only that 'women are…weak vessels', but also that Adaora is 'a *marine* witch, the worst kind' (2014: 35). The fact that at the end of the meeting the man is 'sufficiently opiated by the words of his beloved priest' (2014: 36) makes Father Oke not only a brainwasher, but also a sort of drug dealer. Indeed, although Chris realises that 'a bishop displaying such extravagance seemed wrong', he keeps on being 'one of Father Oke's biggest supporters' (2014: 41). Yet, there appears to be a force more powerful and influencial than religion even for Chris. Towards the end of the novel, the reader is informed that 'no matter Chris's religious beliefs, even *he* knew that no one spoke directly with Ijele and lived. Not even one of…*them*' (2014: 283). 'Ijele, the grand masquerade of masquerades, one of the greatest spirits of Nigeria' (2014: 200) is an Igbo tradition listed in the UNESCO Archives. Not only does the deference Chris shows towards it imply that this local tradition is above any religion, but also that its power can reach anyone regardless of their beliefs or origins, not even outer space is exempt from its influence. This opinion is a common thread connecting believers and non-religious people. In the chapter on the Bone Collector discussed earlier, the focalizer declares, 'I am not a Christian or a Muslim, or maybe I am both. But I also believe in the mysteries we can never understand, especially in my country. This thing was one of them' (2014: 207). It does not matter, then, what a person believes, no one can escape the ancestral Nigerian spirits.

Religion, however, is still a key factor not only in Chris's life, but also in Fisayo's. The girl is 'a hard-working, book-reading secretary by day and a prostitute by night' (2014: 14) who was there when Ayodele first came out of the water. The combination of her witnessing the first alien appearance, her terror and extreme religiousness resulted into both an apocalyptic interpretation of the event and the moral responsibility of spreading 'The News' and save her city. Indeed, she projects her tragic view on the whole city that becomes the true setting of the Apocalypse, 'Lagos was flooded with evil; the end of days was here. Her throat was sore, her voice raspy from telling The News to all who would listen' (2014: 191). She even depicts what she thought to be an alien in form of a boy—it is worth noting that neither here nor anywhere else in *Lagoon* does the reader know whether the age of the human form the alien takes has any correspondence with its actual age—in the middle of the road 'as Satan would stand out in a sea of angels'. This is when her terror turns into madness. In a sort of slow motion scene, the reader witnesses

her pulling the trigger while aiming at 'the child-witch of Satan […] The bullet smashed into the mute boy's left eye. He stumbled to the side and then sat down hard. He lay back. Comfortable now' (2014: 191). As if the murder of an innocent child, who was not an alien after all, was not enough, Fisayo keeps on shooting on a killing spree and murdering other innocents, which she legitimizes 'in the name of Jesus' since she firmly believes that 'God had left her a weapon' (2014: 192).

The fear of the alien is an understandable reaction to the invasion. This fear, however, rather than originating because of the newcomers, who we saw are peaceful creatures by nature, should be interpreted as the fear of the unknown. Then, the instinctive reaction is to try to make sense of these aliens through the images humanity has created of them. For instance, it seems legitimate to the characters to assume that if 'this woman-thing is an alien, then that must have been what took them! They're taking people! Maybe eating them or something!' (2014: 75). Indeed, in the collective imagination, aliens are the abductors par excellence regardless of their form, language and place of origin; the fact that they are not from our planet alone, makes them kidnappers. In addition, a few pages later, Lance Corporal Benson inquires whether they are green or 'have antennae and those big *yanfuyanfu* eyes' (2014: 80). Essentially, the real problem causing panic and chaos in the streets is that 'everyone thinks everyone else is an alien and no one knows *what* the aliens really look like' (2014: 148).

The relevance the narrator attributes to the role of diversity and multiculturalism as key components of Lagos is evident throughout the book. This aspect is evident in the aliens' mass invasion from the water witnessed by Fisayo,

> *they* were coming out of it – people who were not people. Men. Women. No children. Tall. Short. Mostly African. Some Asian. They walked around her and past her without looking at her. Without seeing her. What looked like a white man dressed like an Igbo man; he even wore a red, black and white striped woolen chieftaincy cap. Ridiculous! All wrong. Foreign. *Alien* (2014: 131).

It is not clear whether she is more shocked by the cultural mix embodied by the white man or by the fact that the people she is seeing are actually aliens; still, the result does not change, it is 'all wrong'. Whether it be for the mingling of different cultures or for that of races, human and alien, she firmly believes it is inappropriate and unethical. Fortunately, though, this is not the general opinion and the novel ends on a more peaceful

and inclusive note with an appeal from the President, 'people of Lagos, especially, look at your neighbor. See his race, tribe, or his alien blood. And call him brother. We have much work to do as a family' (2014: 278). The coexistence of different cultures is a characteristic both of the city and of some of its inhabitants. The focalizer of chapter thirty-nine is a man who is both Igbo and American. His awareness of what Du Bois called 'double consciousness' is particularly evident when, at the 'Testament Cyber Café' he reveals to the reader that he 'was good at 419. Nigerian internet fraud' because 'who would suspect an Igbo guy who was American using the name of a Yoruba god?' (2014: 196). The god he refers to is Legba, 'the Yoruba trickster god of language, communication and crossroads' (2014: 195), which is particularly fitting to the illegal activity he is performing.

However, if on one hand Lagos is a culturally mixed city, on the other it is 'geographically divided across socio-political and class lines'. The symbol of globalization, 'wealth of finance and development' is the Eko Hotel (O'Connell 2016: 300) with its 'manicured driveway [and] over-maintained palm trees' (Okorafor 2014: 147). This hotel is not only the centre of luxury and splendour, but also 'one of the few places in Lagos where, ordinarily, you saw more than a few white faces. European and American businessmen, mainly'. While 'to Agu's eyes, they looked bloated and red', to them, Lagosians are 'superstitious bollocks' (2014: 148). Agu, already tired and injured, gets into the hotel from Adetokunbo Ademola Street where shouting, fighting and panic are dominating the scene. The contrast between the two worlds is rendered explicit by the fact that 'what struck [Agu] most when he stepped into the lobby of the posh hotel was the shiny floor. It was so shiny he could see the terrible state he was in' (2014: 147). Even though the building had been built as a 'fortress' and as an island of opulence in contrast with its surroundings, in this passage it literally becomes a mirror to the opposite of what it wants to represent. In such context, 'Agu is made to stand out and to embody the supposedly senseless violence of Lagos and Nigeria more generally. His presence, although he is a native of the city, is the intrusion' (O'Connell 201: 301). The urban division and enclosure is not unique to the Eko Hotel. When Chris visits Father Oke, he is struck by the magnificent wall surrounding the priest's house. Moreover, all around the wall there are the houses of

> poor people. These houses were surrounded by walls, too, though the walls were

> really just the walls of the much larger home boxing them in. *Lagos is like a big zoo,* Chris thought to himself. *Everyone is contained by lots of walls and lots of gates, whether you like it or not. It's secure but there is no security* (2014: 33).

The separation between the domestic and public space becomes advisable, if not necessary, because 'if there is one city that rhymes with "chaos", it is Lagos' (2014: 214). This 'chaos', or 'zoo' as Chris calls it, however, does not carry an entirely negative connotation. Even though 'there were some emails that accused Nigeria of being too backwards, undeserving of an alien visitation' (2014: 287), Adaora soon realises the aliens had chosen Lagos because the Nigerian city is not as strictly structured as 'New York, Tokyo or London' (2014: 64) and, therefore, has the potential to host them and adapt to the new situation. In other words, 'they find the country, with its fervent Christianity, Igbo masquerades, oil economy, 419 scammers and brave gay rights activists, energizing and attractive' (Rosenberg 2014).

4.5 Speaking Lagosian

The cultural mix of Lagos is well represented also by the different languages spoken in the city. When Adaora was at Bar Beach, before meeting Ayodele, she 'heard people nervously talking, some in Yoruba, one in Igbo, two in Hausa, most in Pidgin English' (2014: 16). While the first three languages are only referred to in the book, the latter is used by several characters, especially by Moziz, 'a struggling medical student […] making most of his money from 419 scams' (2014: 49) and his friends. Because of this, some of their dialogues may turn out to be quite hard to follow for a non-Pidgin English speaker. When orchestrating their plan to kidnap Ayodele and exploit her to make money, Moziz wonders, 'well, if dem get flying ship, wetin again dem get wey we no sabi?' (2014: 50). Now, while the general meaning of a single sentence may be comprehensible, a whole dialogue of several pages could present an obstacle. That is why Okorafor provides a glossary at the end of the book with the most frequently used Pidgin English words and a few local terms. Actually, the reader is not the only one finding it difficult to

understand a language; the characters themselves either experience the same problem, or use language as a tool to impede communication. While on one hand Agu does not understand a group of criminal teenagers or Area Boys addressing him in Yoruba (2014: 175), on the other Anthony on one occasion speaks in Twi 'so the others didn't understand' (2014: 256). Though multilingualism is a common ability among Lagosians, as we will later see with Adaora's children, every language seems to behold different social status. When the President addresses 'journalists, camera technicians and chattering civilians', in order to be sure they understand 'he switched to Pidgin English, which he hated speaking. It was the ignorant man's language' (2014: 237).

As if the linguistic situation of Nigeria was not complex enough, the alien invasion makes things even more intricate. Of course, we would expect that aliens had a completely different form of communication from ours; hence, generally speaking, this is a delicate aspect to handle for fiction writers. Indeed, 'as soon as aliens speak, their otherness becomes compromised, because we associate language with a way of life and view it as one defining characteristics of humanity' (Seed 2011: 44). Scholes and Rabkin rightly point out that authors used to treat 'language as part of the invisible system of fictional conventions instead of as an aspect of whatever alien contact is being explored' (1977: 154). Since science fiction has started considering the issue, most authors have been relying either on technology, with advanced translating devices, or higher alien intelligence and abilities, telepathy for instance. In *Lagoon*, the problem is brought up by Adaora's eight-year-old daughter Kola who asks Ayodele, 'how come you speak English?' (2014: 67). The answer is evasive and does not provide any sort of explanation on how she masters the language. Kola then lists two other languages, Hausa and Igbo, which Ayodele proves to be able to speak. However, when the child mentions Russian, the alien replies, 'if I can get close to someone who can [speak it], yes. You cannot, so I cannot' (2014: 68). Even though this clarification sheds some light on why she is able to speak English and the other languages spoken in Nigeria, the way Ayodele picks up a language, including the slang as Adaora notices at the end of chapter eight, and switches between one another so easily remains a mystery.

On a metaliterary level, *Lagoon* highlights its engaging combination between science fiction and African literature by paying tribute to two works representative of the genres. After waking up from a heart surgery, at the broadcast of the alien invasion, the

President wishes he were at 'his home in Abuja with a glass of cool Guinness, watching *Star Wars*'. The narrator then specifies that his favourites were 'the more recent installments' and that he loved them because 'there was such honor in *Star Wars*' (2014: 84). His preference is later taken into account by the alien Elders who, during their encounter, take the form of 'humanoid figures that reminded [Adaora] of something out of *Star Wars*' (2014: 251). On the other end of the literary spectrum, Agu presents his father as 'a great wrestler in his day […] just like Okonkwo in the book *Things Fall Apart*' (2014: 174). However, the citation of Chinua Achebe's archetypal novel goes beyond a single sentence and is to be found on a structural level. In fact, both novels depict an alien invasion of Nigeria including the chaotic response of the community, the fundamental, although different, role of religion, and the problem of communication.

Lagoon, however, is not a mere reinterpretation of Achebe's novel as it is aware of the fact that 'this wasn't the first invasion of Nigeria, after all' (2014: 144). In his first welcome to the reader, before the narrative even starts, Udide's first words are for Lagos and he points out that 'the city takes its name from the Portuguese word for "lagoon". The Portuguese first landed on Lagos Island in the year 1472' (2014: n. p.). After the narrator's brief lecture on the city's origin, the novel focuses on the present situation until the last few chapters in which the past is recovered to draw parallels with the present and future. In an inspiring final speech to all of Nigeria, the President compares the aftermaths of the two invasions,

> for the first time since we cast off the shackles of colonialism, over a half-century ago, since we rolled through decades of corruption and internal struggle, we have reached the tipping point. And here in Lagos, we have passed it. […] Last night, Lagos burned. But like a phoenix, it will rise from the ashes – a greater creature than ever before (2014: 277).

Not only is he welcoming the aliens, but he is also hoping for and believing in a better tomorrow. Despite their peaceful intentions, it is hard to miss the fact that from 'the very beginning […] the novel draws attention to their connection to early colonizers with their arrival through sea' (O'Connell 2016: 298). Udide too, in one of his aside chapters, provides his testimony on colonialism, '*I have seen people come from across the ocean. I have seen people sell people*' (2014: 291). As the Europeans came 'from across the ocean', so do the aliens come from many light-years of vacuum; yet, as we have already

seen, he trusts that the outcome will be nothing alike.

In conclusion, the novel's structure into three acts follows the increasing alien involvement in Nigerian life. The book begins by replicating 'the colonial encounter', then uses 'aliens as a means to reawaken radical anticolonial subjectivity', and finally culminates by drawing 'the possibilities for Afro-utopianism' (O'Connell 2016: 304). Okorafor moulds the unknown circumstance able to turn around Nigeria's economy into aliens. The potential result is not just the overthrow of capitalism, but also a completely new life for the country. Yet, the reader never gets to see if such potential is actually fulfilled; in fact, 'the novel ends not by resolving the contradiction and thus as the utopian closure of history, but instead as the more radical utopian promise of opening from its neoimperial capitalist realist enclosure' (O'Connell 2016: 311). The Afrofuturist nature of *Lagoon*, then, lies in its focus on Lagos and its inhabitants while combining elements from different literary genres, in particular science fiction. The role of science, however, is quite marginal and its narrative function is merely to justify unexplainable events, as the soldiers' metamorphosis into a plantain tree, and guarantee the plausibility of the story that could otherwise be easily confused with fantasy fiction.

5. *Recurrence Plot (and Other Time Travel Tales)*

Rasheedah Phillips' first book, *Recurrence Plot (and Other Time Travel Tales)* (2014), stands out both for the original way it deals with the encounter between fiction and science and for its interactive approach towards the text itself. As opposed to the previous two novels, characters here are put aside in order to highlight science that becomes the central figure driving the narrative. Even though the book touches topics such as racism, free will and memory, it does so always in connection with the main theme, time travel. Indeed, one of the peculiarities of Phillips' work is her unconventional outlook—a combination of both science and the Western philosophy on one hand and spirituality and African traditions on the other—on such a science fictional trope with the notable result of making it both accessible and, even more incredibly, plausible.

5.1 Experimenting with Science and Fiction

The constant and progressive flow of time from the past to the future is one of the pillars on which stands not only our daily life but also the Western concept of reality. Such certainty is often undermined by science fiction that either makes use of exotic and faraway places, such as black holes and other planets, or exploits extravagant devices such as time machines. While *Recurrence Plot (and Other Time Travel Tales)* is not much different from its predecessors in challenging the laws of physics regulating our world, it does so in an ingenious new way. Indeed, its originality lies in the fact that the author manages to make the story incredibly convincing without introducing any exotic element; the narrative sounds so plausible that it often makes it challenging for the reader to distinguish between fiction and the real world.

Rasheedah Phillips is 'a practicing attorney, a mother, writer, the creator of The AfroFuturist Affair, the co-creator of Black Quantum Futurism multimedia arts collective, and 1/4th founding member of Metropolarity' (Metropolarity n.d.). Like

Okorafor, she was exposed to science fiction in childhood, but later rejected it because she felt it did not 'reflect my social identity as a Black woman or the culture of people with whom I shared a history and identity' (Janté 2016). Phillips, in an interview with writer and journalist Tiana Janté, while acknowledging the technologies and futures envisioned by traditional science fiction, also pointed out that the genre 'failed to transcend the social hierarchy, supremacy and privilege that plague our present-day realities'. More specifically, she added that in these stories

> Black women and other marginalized peoples are virtually non-existent or play exceptionally minor roles, seemingly due to inferior genetics and an inability to adapt to changing social and environmental conditions (Janté 2016).

Because of this and the fact that she believes it is fundamental for people in marginalised communities to be represented in media, she created The AfroFuturist Affair. It started as a Charity & Costume Ball in October 2011, Phillips 'wanted a safe space for me to read my sci-fi work and celebrate sci-fi culture with others who create within the theme' (Janté 2016). However, it soon became 'a grassroots community formed to celebrate, strengthen, and promote Afrofuturistic and Sci-Fi concepts and culture through creative events and creative writing' (AfroFuturist Affair 2014). She sees Afrofuturism not only as a chance for black people to express themselves artistically, but also as a 'medium for social commentary and a lens through which communities can evaluate or shape their futures' (Janté 2016).

Recurrence Plot (and Other Time Travel Tales) is an experimental book not just in the topic it deals with, but also in its 'multimedia approach' as it contains images and graphs (Light 2015); moreover, the continuous change of font style and size contributes in making it even more captivating. In addition, along with the book, comes an optional soundtrack composed by experimental musician Mother Moor Goddess available on CD or Soundcloud (for further information see the 'Shop' section in The AfroFuturist Affair web page). Regarding the content, 'this is a book about time travel, not just in that the main character travels through time, but she also thinks about, and practices, *how* to time travel' (Light 2015); in this sense, the characters function as barely more than instruments to emphasise the process of time travel and to reflect upon time in general. As we will soon see in the book, compared to the Western concept of time that

is linear and progressive, 'Afrofuturism uses a completely different construct of time and engages a different notion of time consciousness and notion of the future' (Janté 2016).

After a dedication to the women in the author's family and to all past and future 'mothers and children' (Phillips 2014: n. p.), the reader comes across two table of contents: while the first is quite ordinary, the second may appear puzzling and difficult to interpret. To begin with, the page numbers do not correspond to the titles of the chapters in the previous table of contents but to names (most of which female); and, more importantly, the whole page is arranged as a weekly calendar with the days on the top row and the characters' names on the left column. Moreover, once you understand the pages are those in bold among the scattered numbers in the calendar, you realise that the second chapter is not only the longest, but that it also covers up two thirds of the entire book. Almost every chapter begins with a quotation by a writer, among whom DuBois, and they all conclude with an open ending. Unlike in *Lagoon* where the continuity between chapters is guaranteed, in *Recurrence Plot* the reader often grasps the connection only towards the end of the chapter. Finally, similarly to *Lagoon* that at the end features a glossary to facilitate the reader's comprehension of the plot, Phillips' book provides seven appendices consisting of fictitious documents that both clarify and validate the stories. Finally, while the structure of the work certainly resembles a collection of short stories, we will soon see that all narratives actually revolve around a single event.

5.2 Between Fiction and Reality

The main chapter of the book, 'Recurrence Plot' or 'Khepri' depending on the table of contents we consider, tells the story of Khepri, a journalist investigating a series of experiments on teen boys led by Dr. Hammond that draw the youngsters to violent behaviour. She finds out that the doctor invented a neurological apparatus, the 'psycho-temporal transcranial stimulation device, or the PTSD […] used to stimulate areas of the brain responsible for memory and time perception' (Phillips 2014: 99). While this is the key event connecting the stories, the central element of Khepri's narrative, if not of the entire book, is ETO. The acronym stands for 'Experimental Time Order' that is the title of a "manual' on time travel' (2014: 66) 'crudely assembled, as if it had been printed out

on someone's home computer, folded over horizontally into a book, and stapled together' (2014: 34). Not only does *Recurrence Plot* employ ETO to allow Khepri to travel in time, but it also features excerpts, or maybe the entire manual, to call the reader's attention to their own perception of time and reality. Its physical description resembles that of the book the reader is holding into their hands, which is quite predictable since *Recurrence Plot* presents pages of ETO; yet, when we read its first page through Khepri's eyes, we feel that the book is addressing us rather than the character. The manual begins with

> Dear reader, I hope that you have picked up this book as I intended. If so, you are reading this message at the exact time that I mapped out for this, in your "now" moment. Using a precise arrangement of Bayesian statistics, quantum mechanics, astrology, and mental time travel, I have very carefully calculated every probability of how you should receive this book, and how you will respond to it (2014: 36).

The introduction alone is a little disturbing for the 'reader'—in this case the term applies to both Khepri and us—and the fact that the book does not report an author makes things even creepier as we do not know who the first person narrator is. Not only, then, is there more than one narrative layer, but these layers are so intertwined that the reader's standing point becomes equivocal: we are reading a story about a woman reading a manual that seems to address both us and the character at the same time. Khepri probably mirrors the reader's reaction when 'she didn't know whether to laugh, keep reading, or get as far away from it as possible' (2014: 38); in both cases, however, the second option prevails. The feeling of uneasiness runs throughout the text every time Khepri opens ETO; after providing information, mostly of scientific nature such as human anatomy and physics, the manual not only reminds its public that 'the observer must always be part of the experiment' (2014: 57), but it also invites them to perform a series of exercises. Again, we cannot help but wonder whether the offer applies to the character alone or to ourselves too; even more so given the simplicity of the 'experiments', the first of which involves just a few mirrors and a clock. The results of these exercises are not immediate; on the contrary, they seem to have no effects. This, at least, is what Khepri believes until the following day when she is startled by a reminder in her computer she did not remember writing that read 'If you are reading this now, the experiments worked. Advance to Experimental Time Order, Chapter 2' (2014: 72).

The story proceeds by alternating Khepri's daily life, focusing on her job and on her reflections on ETO, and the manual itself. A turning point in her investigation occurs when she manages to get an interview with 'the mother of thirteen-year-old Jaden Johnson, recently locked up in *Haverford Juvenile* for murder'. The boy perfectly fits the profile of Khepri's theory on the '*Haverford Experiments*' conducted at Parallel University as he is 'a Black adolescent, involved in a violent crime, with no history of violent behavior' (2014: 97). During such interview, Khepri ponders on the fact that 'her own experiences over the last few days were beginning to expose just how thin the line between reality and fiction was' (2014: 107). This last assertion, which could easily be considered the leading concept of *Recurrence Plot*, in this instance, can be read on three different levels. The first 'fiction' is the one Jaden's mother is told about the 'tests and interviews' conducted on her son as she has no idea of what he is going through (2014: 102). The second layer regards Khepri and her struggle with the nature of ETO and its applicability to her everyday life. Finally, the last level pertains to the reader and their questioning of how much faith they should grant to the science and theories displayed in *Recurrence Plot* leading to the incredible result of time travel.

Phillips' interest in 'that fine line between the speculative and reality' (Janté 2016) comes up again in the fifth chapter entitled 'Zero Point', or 'You'. For five pages a 'guide voice' accompanies the reader, who is addressed directly, through some sort of dream-like 'Human Experience' before they come across the actual protagonist, Jaden. The chapter is a brief insight into the time the boy spends at Parallel University and into the kind of experiments involving virtual reality to which he is subjected. In this instance, Jaden, or better the user, is led to believe they have total control over their life; as the voice insists, 'You build Your existence step by step, sewing together each time-slice, allowing each one to flow seamlessly into the next' (2014: 192).

While in this context the focus on the self appears to be more of a brainwash to influence the user in the real world, the novel insists on the importance of the individual, in particular in relation to scientific experiments. ETO claims that

> science has yet to unlock the vast powers of the mind by failing to do one simple thing—acknowledge the experimenter, the observer, the scientist, the living man as involved with the experiment, the thing being observed (2014: 58).

As a matter of fact, science, quantum mechanics in specific, holds the opposite. The influence of the observer was not only theorised, but also demonstrated in a 'highly controlled experiment' involving a beam of electrons (Weizmann Institute of Science 1998). A few lines later, however, ETO asserts that 'subjectivity cannot be minimized' (2014: 59), suggesting that the observer should be understood in their individuality rather than in their bodily nature (it should be specified that in the experiment just mentioned, the beam of electrons was actually observed by a detector and not directly by scientists). While on one hand the manual's assertion may refer to the fact that 'all assumptions […] are derived from human observation, human experience, and our imposition of our perceptions upon the macrocosm' (Phillips 2014: 73), on a deeper level the 'subjunctivity' ETO mentions should rather be interpreted as the individual consciousness. Among the quotations sprinkling the book, one by American author Robert Anton Wilson maintains that 'when I think of me, I am me; when I think of me and you, I am me and you; […] when I think of God, I am God' (2014: 61) and that everything we think and see is just the product of 'brain circuitry'. Then, from an almost objective and unbiased vision of the world where we are all subjected to the same laws of nature, we ended up on a completely subjective one. Not only is the observer intertwined and bound to the experiment, but they also become both its principal variable and its architect. Reality itself, then, becomes the product of the human mind; or, seen from another perspective, the individual goes back to being located at the centre of the universe. Interestingly, such centrality is not just spatial but also temporal. Khepri's time travel is not physical, but mental. For a few minutes, she manages to transfer her consciousness in her own body but days ahead. In the process, however, the 'future Khepri' develops a consciousness of her own becoming 'a whole other individual […] with her own intentions, motivations, and decision-making agencies'. The concept of identity, then, becomes blurry as there is no spatial nor temporal perimeter distinguishing one Khepri from the other, 'there seemed to be no clearly defined *I* here: they were both *I* among their isolated selves, dynamic in their own rights within their discrete moments in time' (2014: 109). In planning her next move to stay ahead of future Khepri, present Khepri realises that 'every instance of Khepri contains all three positions of past, present, and future – there is no discrimination' (2014: 112). This mishmash of individualities within the same person scattered in time can only result in an equally incoherent and chaotic ontological thought, 'who am I are you we I

am you are me we are me are you am I you are I am' (2014: 156).

At the beginning of 'Recurrence Plot', we see Khepri struggling with her memory. As a child, she could not only recollect 'every event in her life with excruciating detail', but 'also remember *future* events and details in her life' (2014: 21). Because of this extraordinary ability, she felt misunderstood and alienated, so she learnt to stick to the present. This led to a 'defective memory' in adulthood that she progressively recovers by reading ETO. The manual points out that 'memory and imagination' are tools of our consciousness that are able to 'manipulate the rules of the present senses' (2014: 119) and, therefore, our perception of reality. The combination of these two faculties, then, is the key to time travel; of course, 'you can't physically, as a massive body, by a classical physics definition, travel back! But as a quantum body, or a holographic body, you can travel back effectively via memory' (2014: 121). According to ETO, while the memory of the objects in a room allows you to rebuild the setting, imagination projects your consciousness into either the past or the future 'constructing an alternate reality' (2014: 137). This conjecture, however, leads to an extremely problematic question, 'was she only thinking about the memory, or *is* she *there now* […]?' (2014: 174). As expected, Phillips does not offer an answer to the dilemma but rather leaves the reader to contemplate the possibility that time travel may not be as implausible as they believe. The mystery on Khepri's uncommon abilities during childhood is fully disclosed in 'Appendix D', a fictitious 'case study [on] an African-American female of approximately 14.5 years of age, exhibit[ing] extraordinary memory recall' (2014: 216). In the girl's journal, an entry reads, 'every day I have lived burdened with the memory of the future. I knew what would happen in the future, but still had to live out every moment of it' (2014: 218).

In her memoir, young Khepri raises the issue of fate and free will and it is clear that, at this age, she believes her life is governed by the former. ETO, instead, claims that the future is a combination of the two, that 'it is neither one or the other and simultaneously both. Metaphorically, it is like the wave/particle duality of light' (2014: 122). Like in the experiment involving the beam of electrons mentioned earlier, 'whenever we attempt to observe or influence the process', we force light to take the form of either a wave or a particle. However, in the following page, the manual tends to favour free will over fate since it defines destiny as the 'manifestation of intentions/reaching goals' (2014: 123). While the book puts, once again, human consciousness in charge of

the future, adult Khepri ends up with a different outcome. Her experience with time travel, in fact, leads her to believe that her present and future selves 'have some measure of free will in our relative space-time locations, but are connected by a common timeline/moving along the same temporal line' (2014: 112). In other words, while she believes to have a choice upon the minor events in her daily routine, she cannot avoid becoming the future Khepri—whom she calls 'K2'—she contacted. K2 confirms that K1—or present Khepri, the protagonist—is 'not strictly adhering to my timeline. Maybe 98.9%. I still basically know everything you are going to do before you do it. But that 1.1% can cause a lot of trouble, apparently' (2014: 115). This whole discourse on free will, however, is grounded on a Western viewpoint on the matter. In fact, Afrofuturism generally agrees with the theory that 'the very idea that time travel is incompatible with "free will" hinges on a very culturally and paradigmatically bound definition of that latter concept' (Imani 2015: 36). A clear example in contrast with the Eurocentric approach, is the 'Akan perception of personhood'. The Akan are an ethnic group living in Ghana and in the Ivory Coast who link free will to 'the degree of personal regard for ethical action, [which] is inextricably connected to the social identity, to collective as opposed to personal individuality' (2015: 35-36). Thus, while it is true that the connection between free will and time travel can be approached from a collective perspective, implicating ethical and somehow fewer possibilities, Khepri's story is quite self-centred; her individual consciousness surely prevails over the collective one. Therefore, while it is possible to interpret the matter in multiple ways, in this case, a more individual and Western approach should result more convenient and effective.

5.3 A Quantum World

Among the works under analysis, *Recurrence Plot* is surely the one paying most attention to science; the author ingeniously employs both scientific disciplines and a scientific approach to deal with to complex and delicate topics such as those seen in the previous chapter. To begin with, the text features numerous scientific similes and adjectives often in relation to the characters' inner and emotional states. For instance, Khepri's grandmother's 'innocence ended, like an imploded planet' (2014: 10), Khepri's mother

fought ‘against the feeling […] dragging light and matter and all of my regrets’ (2014: 15) and, while performing the first experiment suggested by ETO, Khepri stares into the mirror ‘until the words “*I am*” blended into one motion rolling off her tongue and echoing into a supernova inside and around her head’ (2014: 69). Science becomes even more tangible in ETO. Both the appendixes and the manual, in particular, are integrated with a collection of quotations and passages from more or less scientific works in order to make both the stories and science behind them not only believable, but also plausible. For instance, in its first chapter, not only does ETO quote a passage from an article by Benedict Carey on the brain published in *The New York Times* including the link to retrieve it (2014: 50), but it also present images and graphs to support its line of reasoning.

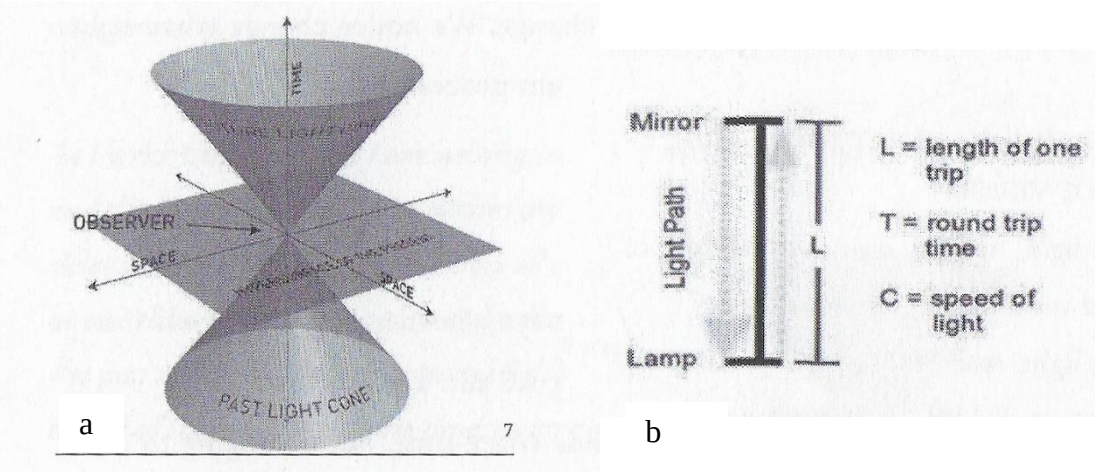

Figure 3a. *Speed of Light* in *Recurrence Plot* (2014: 56), by Rasheedah Phillips;
Figure 3b. *Mirror Experiment* in *Recurrence Plot* (2014: 58), by Rasheedah Phillips

The manual makes frequent use of such pictures; the above images, for instance, show diagrams typical of a physics textbook. The first (Figure 3a), which is almost self-explanatory, depicts the path of a beam of light in time, while the second (Figure 3b) is a sketch demonstrating that since light travels at a definite and constant speed, ‘c’, ergo it is not instantaneous, when we look at an object or an event we are looking at something happened in the past. The diagram, which components are arranged similarly to those in the mirror experiment, provides all the elements to outline a simple equation to calculate the time it takes the light to travel from the lamp to the mirror and back to the observer standing beside the lamp, $T = 2L/c$; where the only variable is the distance between the

lamp and the mirror (L).

Recurrence Plot focuses in particular on quantum mechanics, a branch of physics describing the behaviour of light, atoms and subatomic particles still very enigmatic because of its divergence from ordinary experience. Phillips exploits the potential of this still mysterious science to speculate upon the possibility of time travel. While Khepri discovers the application of quantum physics on her life, for instance she and K2 'are like two entangled particles' (2014: 115), ETO provides the theoretical notions both to explain and expound upon the mechanism behind the incredible events of the last few days. Not only does it cite the 'Key Quantum Physics Principles' (2014: 75), but it also applies quantum mechanics to information technology, a new promising field of research. The passage is half a page long but it immediately stands out, as other excerpts in ETO, for its technical language,

> Whereas a classical bit of information either takes on the value '0' or '1', quantum particles can be placed in superposition, meaning they can be either '0', '1' or '0' and '1' simultaneously. These quantum bits enable powerful new ways to process information (2014: 145).

It goes on by reporting the vulnerability to errors of this kind of application and its 'theoretical solution […] based on entanglement'. At this point, the leap from a scientific discipline to philosophy is quite short. The famous thought experiment based on the idea of quantum superposition going by the name of 'Schrödinger's cat' inspires ETO to apply the same logic to everyday life as they both involve 'a necessary sort of tension, difference, distinction, discrimination, and a constant choice between two states' (2014: 128).

Quantum physics, understood as the existence of 'possibilities rather than actualities' (2014: 76) in particular, is a key factor also in the formulation of 'Black Quantum Futurism'. Rasheedah Phillips describes the theory as

> a new approach to living and experiencing reality by way of the manipulation of space-time in order to see into possible futures and/or collapse space-time into a desired future in order to bring about that future's reality. This vision and practice derives its facets, tenets, and qualities from quantum physics, futurist traditions, and Black/African cultural traditions of consciousness, time, and space (Phillips

2015: 11).

Recurrence Plot, therefore, exists in the 'creative plane […] where these three traditions collide'. One of the ideas underlying both Phillips' works is that of retrocausality, maintaining that the present is influenced not only by the past, but also by the future. This seemingly absurd theory is not entirely illogical. Even though the transfer of information from the future to the present is still believed to 'be forbidden […] due to thermodynamic reasons', recent scientific studies supported the idea that certain measurement choices made by the observer in a particle experiment 'can influence the properties of that particle (or another particle) in the past, even before the experimenter made their choice' (Zyga 2017). While this is a fairly new discipline in the West, rising at the beginning of the 20th century, 'ancient African traditions of timekeeping, cosmology, and spirituality have always encompassed and anticipated the principles of quantum physics' (Phillips 2015: 16). At the end of *Black Quantum Futurism*, Phillips presents a chart associating quantum phenomena, alongside their description, with 'African Spiritual/Religious' phenomena and 'Real-world Correspondence' (2015: 76-77). Here, superposition, for example, is connected to the 'African concepts of rhythm and pattern' and to several natural events such as 'white light simultaneously containing all colors'. Interestingly, the chart also links the double nature of light—behaving as both particle and wave at the same time—to 'Dubosian double consciousness' among other phenomena such as 'optical illusions, mind-body duality' and so on. We have seen that quantum mechanics allows a unique perspective on reality and opens the door to a series of possible outcomes that would not be possible in classical physics; why, then, have we not yet exploited quantum mechanics to time travel? The answer is to be found in the definition of the theory itself. As already mentioned, this theory works on a microscopic scale and its peculiarity lies precisely in the exceptionally divergent way it works compared to our everyday experience. On a large scale, the theory that allows time travel is Einstein's relativity, but this involves travelling at nearly the speed of light to go forward in time or even faster to travel back in time. While the former case presents obstacles on a technological level, the latter is considered inaccessible as the speed of light is a physical limit (Hawking 2009: 128-130). Hence, although it is not possible to apply its laws to our lives, quantum physics still gives access to an unconventional, Eurocentrically speaking, viewpoint towards reality.

Then, while on one hand *Recurrence Plot* draws a parallel between quantum

mechanics and African concepts and traditions, on the other it puts this new approach in contrast with the classical Western one. While the former sees the indeterminacies of particles as possibilities, in Newtonian physics there are no uncertainties, 'things are or are not' (Phillips 2014: 76). The latter philosophy is embodied in Mark, Khepri's colleague. Even though they are both black suggesting a similar mixed cultural background, Mark does not share the protagonist's mental agility in considering a new or different idea; 'with a Masters in Statistical Analysis and plans to pursue a Ph.D, Mark's approach to their work, and to life in general, was methodical, matter of fact, and no-nonsense' (2014: 65). His rejection of ETO, then, does not come as a surprise; his only advice to Khepri is, in fact, to 'toss this crap in the trash' (2014: 66). His adherence to classical thinking becomes even more explicit when Khepri tells him ETO talks about Bayesian probabilities: an interpretation of probability as reasonable expectation, which can be also linked to a quantification of personal belief. Mark's opinion on the matter is that it 'is pure and utter feel good, layman's bull. I went to school for several years to study classical statistics and numbers, and there is nothing subjective about them' (2014: 68). The book seems to imply that, as his attitude leaves no room for a different opinion, so does Western science, which, with its dogmatic stand, rejects original and potentially productive sources of knowledge. Still, Mark is not the only one feeling more comfortable with classical science; Khepri too finds it difficult to embrace the new philosophy. Indeed, she is reasonably overwhelmed by time travel and K2 and, not knowing how to handle the circumstances, 'she wished she could tap her heels three times and return to her normal, classical, Newtonian universe. She knew all the rules of the game there' (2014: 132). As ETO reminds us, time travel in the past in a classical universe is impossible, 'if all events are recorded, stored up and waiting to be arrived into, that means you can't travel to that event unless you're traveling into that event was part of the event in the first place (see *grandfather paradox*)' (2014: 121). This explains the reader's reasonable perplexity at K1 finding an entry by K2 in her journal. In fact, while being aware of the paradoxes their communication might cause, K2 declares not to know whether K1 would receive the entry or not (2014: 81), which sounds illogical since she should already have experienced K1's present. Then, this circumstance must be part of the 1.1% divergence between their timelines mentioned earlier.

Time is commonly defined, at least in the West, as the linear progression of a

sequence of events connected to one another by the principle of causality. The direction of this phenomenon, or the order in which these events take place, follows an increasing entropy, which is the physical quantity measuring the disorder of a system. ETO, however, argues that this definition is arbitrary since

> disorder only appears to increase with time because we measure time in the direction in which disorder increases. This is circular reasoning, disorder being defined and measured by the very concept that it defines and measures (2014: 90).

With the introduction of relativity, Einstein questioned the absoluteness of time by demonstrating that for an observer travelling at a speed comparable to the speed of light, time flows slower. Despite Einstein's proof that time is not a fixed quantity but its perception depends on the observer, Western science still finds it difficult to consider other perspective on the concept of time. An interesting example is that reported by Kenyan philosopher John Mbiti who writes that for many African populations 'the future is virtually absent because events which lie in it have not taken place, they have not been realized and cannot, therefore, constitute time'. Of course, some events like natural cyclic phenomena are inevitable and are labelled as *potential time*. These are in contrast to *actual time* 'which is therefore what is present and what is past. It moves 'backward' rather than 'forward'; and people set their minds not on future things, but chiefly in what has taken place' (1999: 17). From this angle, retrocausality appears not only reasonable, but also logical. This idea reaches the apex in *Recurrence Plot* in 'The Shift', or 'Afina', where time starts flowing backwards. Two months after '*The Shift*', people are stuck in loops because they are forgetting their '*old past/new future*',

> past memories now only show up in the world of dreams for most of us, evaporating with the morning dew like any other dream. Eventually it begins to sink in that the future and the recent present are behind us, and that we are now witnessing history become the yet-to-come (Phillips 2014: 178).

When applying retrocausality, or an African-like approach towards time, to a Western society, then, we incur into a paradox exposed by continuous temporal oxymora. The author deals with this structural inconsistency by having all humanity losing its memory; still, as the reader might expect, such a story cannot last long. Nevertheless, despite its

brevity, the narrative is an engaging interpretation of what such a situation would look like. Although 'certain African, Native American, and Asian communities, whose languages depended on a more cyclical notion of time, […] are said to be doing better with the shift' (2014: 180), the world as we know it is still falling apart. Not only time, but all the natural laws have been reversed; 'we are all now moving from chaos to order. The universe is shrinking, the Earth is hurdling back into the shadow of an already-traveled path…' (2014: 181). In the meantime, on a microscopic level, 'the speed of light is decreasing', 'at the quantum scale, classical causality breaks down' and the timelines of every human being are flowing backwards towards zero (2014: 181-183). As expected, the narrative does not venture into exploring what happens at that point; still, a scientist invites people to rely on 'human perception, expectation, and experience [that] are far more powerful and responsible for shaping the physical world than we give them credit for' (2014: 184).

5.4 Boxes and Mirrors

Even though *Recurrence Plot* is particularly interested in science and in deconstructing the Western scientific ideology while offering a new approach, it also features a subjective dimension and social considerations.

The science, in particular physics, permeating almost every aspect of the narratives is counterbalanced by equally valued popular and traditional beliefs. For instance, while Mark embodies the Western ideology and reads the horoscope 'for fun', for Khepri 'astrology carried the same utility as checking the weather. […] She usually read her horoscope religiously, like a daily scripture' (2014: 67). Despite having a very rational mind, she does not disregard traditional beliefs and is open to all kind of ideologies, even those that cannot be explained by reason. Although astrology does not come up often in the book, it still takes over the last appendix offering an insight into Khepri's privacy. By displaying her 'Natal Chart Excerpt' and a graph—both presenting only scientific information on the position of planets—followed by a three-page-long interpretation, Phillips shows how science is usually employed in a non-scientific environment; in other words, she exploits the scientific authority of astronomy to provide

an insight into the character's psychological dimension, which is exactly what astrology does. This is just another example in *Recurrence Plot* exposing a

> constant interpolation of science and spirituality, to the extent that science seems to *lead* to spirituality and vice versa, and at the same time, each approaches the other so closely that they become indistinguishable (Langer 2011: 148).

The reciprocal non-exclusivity of the two fields is reiterated in the book's attention towards numerology. Mia, Khepri's mother and the protagonist of the first chapter, is certainly the most spiritual character in the book. Not only does she firmly believe in astrology and zodiac birthstones, but she also hints to a pattern of dates and ages running within the family implying some sort of mystical meaning. The birthdays of three women in her family—her mother, herself and her daughter—fall in March, the first month of spring symbolising birth and life. The number seven and its multiples are a constant throughout the book recurring in dates, ages and time of the day. Not only does this number bear great importance in many cultures in its association to perfection and creation, but also, with a brief reference to constellations, the narrator seems to imply another connection. The insistence on the number seven and the astronomical reference, should remind the reader of the Pleiades, also known as the 'Seven Sisters' as we already saw in the chapter on *Nova*. The emphasis on female genealogy, then, is both explicit in the text and is reiterated in the subtle details. In a broader perspective, although not all the main characters are related, the female thread 'reinstates women as creators of worlds, a status that is often refused to them in traditional religions and other public institutions' (Aker 2014).

Even though racism and race issues is far from being a main concern in Phillips' work, there are still a few episodes reminding the reader how blacks living in a white society cannot aspire to a racial-free life. Khepri is aware that she was assigned the article on the experiments conducted at Parallel University because it 'had heavy racial, legal, and political implications that were too hot for most of the other ass-kissing journalists to touch' (Phillips 2014: 44). Working for a paper 'owned and run by aging, moderately conservative white men stubbornly holding onto their privilege' turns this already delicate task in both a challenge for Khepri and a chance to prove what she is capable of. This is just one of the countless reminders that 'being one of the youngest investigative

journalists, one of the few people of color at the *Sun Times,* she stood at the intersection of two of the most disfavored categories of social existence, black and female' (2014: 45). Although he has an opposite mindset, being gay and black draws Mark closer to Khepri's struggles; yet, 'he seemed to have a lot more in common with the white men in the building as a man […] than he did with her as a Black woman' (2014: 63). Then, despite the ethnic closeness with her colleague, Khepri still feels an 'alien within the culture of the paper' (2014: 46). The ethnical alienation comes up again in the chapter 'The Convention' in which Deenah's 'freshly twisted dread-locs and rich earth-toned skin' are considered 'alien' (2014: 163) at a convention for the PTSD presentation. The association between the woman and extraterrestrials, here, lies both in the reaction of people to her body that generates 'simultaneous intrigue and disgust', and in their surprise in seeing that 'she, a woman –and a Black one at that– was an authentic nerd' (2014: 164). Generally speaking, *Recurrence Plot* presents the issue of racism through mild stereotypes and prejudices; however, a character in the chapter 'You' expresses a surprisingly strong opinion: 'the black man is guilty because he's black, and he's black because he's guilty' (2014: 196). The present work does neither wish to explore nor open a debate on the complex problem of racism, still, the last conversation of the book presents a compelling starting point for such discussion. During an altercation with a woman at a store over not wanting to pay for food, Raheim, despite his unlawful behaviour, makes an interesting point,

> "You see how they treat us? We're just a bunch of niggas to them, we're all suspicious, violent niggers. Check it, cuz I'm a Black man in America, right? You know what that means! They don't give a fuck about me, so why do I care about them? But see, it's fucked up cuz America created niggers, right? They made us, then they hate what they created! Right!?" (2014: 196).

In this light, the 'Theoretical Background' in 'Appendix A' acquires particular meaning. We already discussed the role of individual memory in time travel, but, according to researchers at Parallel University, there is also a genetic 'ancestral memory' influencing one's 'health, psychology, or behavior' (2014: 205). A particular example is the 'Post-traumatic Slavery Disorder', which maintains that

> the repeated trauma experienced by people of African descent during slavery and the decades of oppression following it, have passed from generation to generation, resulting in the dysfunctional, self-destructive behaviors patterns that can be witnessed in Black cultures around the world (2014: 205).

Despite not holding clinical acknowledgement, such disorder is explored in a book by Dr. Joy DeGruy Leary entitled *Post Traumatic Slave Syndrome: America's Legacy of Enduring Injury and Healing* (2005). Whether genetics has something to do with this kind of conduct or not, certainly white-based Western societies do not favour black people.

As already mentioned, objects are a key ingredient to memory and, therefore, to time travel. This explains why, in pivotal moments of the plot, the narrator dwells on, and sometimes even lists, the items in a room. Just the contact between her fingertips and the objects inside in the thrift store where she finds ETO allows Khepri to forget her own problems; that is because 'each object had its own secret history, a story stored up inside of it, radiating from the center of its mass' (2014: 25). Phillips reinforces this concept during an interview in which she states that 'object are artifacts of memory and meaning, storing up energy […] These artifacts of memory tell events as they actually happen—as they have been experienced' (Janté 2016). While *Recurrence Plot* marks the importance of objects themselves, the first chapter insists on one in particular. Mia's story revolves around the figure of a box; the item comes up both metaphorically, her house is described as 'her very own box' and the objects inside it in one way or another retrace boxes, and literally. The narrative begins with a 'small box […] carved out of a dark wood the color of the sea sitting in a silver of moonlight […] which read *Family Circle*' (2014: 8). While this incision and the adjectives related to such objects convey a feeling of comfort and warmth, when Mia opens the box she finds the cause of her death. Inside there is a bracelet 'made of twelve gemstones […] each stone with a unique shape and bearing an engraved astrological sign' (2014: 13). 'I love you. I am sorry. Break the circle. Don't open the box' (2014: 15) are the last words she says to seven-year-old Khepri before going to the bathroom and mysteriously kill herself, as her mother did. Although the story does not disclose neither why she does that nor how, it suggests that she made the extreme decision when 'the sun hit the Pisces stone, reflecting back into the mirror as Mia lifted her eyes from the bracelet on her wrist to look at her reflection…and in that moment she could *see* herself clearly' (2014: 15). Her psychological struggle, which transpires throughout the

story, is literally projected onto mirrors that function not only as time travel machines, but also as a way to externalise one's consciousness. This idea is analysed by ETO, which points out that

> I cannot "see" myself without a reflection. But yet, the reflection is an image which is not looking at anything and the self is not observing the self as seen in reverse. The image on the other side of the mirror does not return the gaze (2014: 58).

Mirrors, then, can turn into hypnotists capable of 'holding [one's] own gaze hostage' (2014: 69) leading the victim into dangerous territories. In this light, Mia's suicide acquires a new and less magical connotation. The inability to change her life makes Mia feel like her own 'reflection in the mirror […] Powerless, trapped under the weight of its own gaze, only able to reflect her world, never able to change it' (2014: 10). In fact, she does attempt to take back agency over her life by finding the courage to finally open the small box; however, as we saw, this choice led to exactly what she was desperately trying to avoid, namely, the vicious cycle resulting in the same 'recurrent plot' of her mother.

In conclusion, we have seen that *Recurrence Plot* highly values the metaphysical dimension and subjunctivity. Yet, instead of taking a spiritual approach, it concentrates on science and it exploits scientific disciplines to delve into the potential of the human mind. In this sense, Phillips' book is a laboratory operating into an unexplored territory where the author succeeds in demonstrating not only that science and fiction do not exclude one another, but that they are actually tightly joined together; indeed, 'words contribute to the perception of linear time, perhaps even create it, our sense of time logic' (2014: 125). Furthermore, by integrating the stories with citations of real-world books and documents, the narrative makes the reader wonder where the boundary between the two realms lies. It requires no effort for the audience, then, to sympathize with the main protagonist, Khepri, whose 'confusion of fact and fiction [is said to come] from a psychological trauma' (2014: 22). Fortunately, though, just as the suffering of black people gave rise to Afrofuturism, Khepri's pain, rather than leading to self-destruction, facilitates her into the exceptional experience of time travel.

6. *A Killing in the Sun*

Regardless of the ongoing debate on the inclusion of African literary productions in Afrofuturist literature, Dilman Dila's collection of short stories *A Killing in the Sun* perfectly fits in the parameters of the phenomenon as it promotes black culture by merging not only different literary genres but also magic with science. The book provides both a portrayal of the encounter between Western and African culture from an Afrocentric perspective and a powerful commentary on typical Afrofuturist themes such as colonialism and the aftermath of Christian indoctrination. Finally, the chapter considers Afrofuturism in the broader context of African fiction alongside two contrasting exemplary cases.

6.1 Afrofuturism Reaches Africa

As we already saw, Afrofuturism was born in the United States, then expanded to former British colonies, as in the case of Jamaican author Nalo Hopkinson, and is now spreading in the country from which the movement takes its name, Africa. However, there seems to be a general disagreement on the nature of this last extension. While Nnedi Okorafor refuses to be labelled an Afrofuturist because she does not want to put limitations on her works, Dilman Dila questions the very application of the term to African writing. Indeed, he believes that 'African Americans [...] operate in a slightly different world. I'd prefer the term AfroSF/Horror/Fantasy, etc, or African SFF, so as to market products that are from the within continent' (Dila 2015a). The assertion has a cultural basis; despite sharing a common ancestry, 'African Americans, and Africans in the diaspora, though disadvantaged compared to their siblings from the other mother (whites), enjoy a richer pool of resources and opportunities compared to us who work and live in the continent' (Dila 2015a). While the distinction pointed out by Dila is certainly appropriate, the novelty of Afrofuturism and its ongoing progress have not set definite constraints to its nature yet. Thus, the inclusion of African fiction in the movement, at this point, depends entirely on the definition we adopt, which is subject to variations as already discussed in

the first chapter of this dissertation. Although Dila's viewpoint is closer to Dery's definition of the phenomenon, his collection of short stories, *A Killing in the Sun*, certainly promotes black culture on an international level and helps to shape a future in which Africa is not at the margins of the global cultural scenario. In this light, then, Dila's book is consistent with the interpretation provided by Womack and is here considered an Afrofuturist work.

Like Okorafor, Dila too believes in the potential of science fiction and technology in shaping the future. However, he thinks that the 'technological revolution' of Africa should not come from the West, but has rather to be triggered by 'indigenous knowledge' (Dila 2015b). Not only is the latter just as valuable as the former, but is sometimes even more advanced. For instance, Dila reports that 'traditional healers in Bunyoro [a kingdom in Western Uganda] had perfected the science of caesarean operations to help mothers, long before the missionaries arrived' (Dila 2015b). Then, while African scientific knowledge was undergoing a natural development, the advent of the Europeans seems to have slowed down if not even halted this process. Dila maintains this is due to Africa's lack

> of confidence in itself. It believes that there was nothing before the Europeans came, that we were backward, and that whatever we have came from Europe. […] Indigenous technologies cannot evolve because African scientists think such technologies are inferior. […] They need to believe in their past, in their abilities, they need to believe that things can come out of Africa without the input of richer nations, and that is where science fiction can play a key role (Dila 2015b).

Then, while Okorafor tends to think science fiction as a useful tool to envision a better future, Dila seems to lean towards a more practical approach. Yet, he believes the genre can contribute to an African technological independence as long as 'the stories that come out […] champion local histories, […] glorify indigenous knowledge and technologies' (Dila 2015b). When talking about technology and science in general, we tend to think about Western machines and discoveries; however, as Okorafor interestingly points out, the 'separation of science fiction and fantasy [is] culturally specific. […] In non-Western culture, the mystical coexisting with the mundane is normal' (Zutter 2016). In this light, then, the natural mix between technology and magic in *A Killing in the Sun* should not surprise the reader, but it should rather be welcomed as a logical consequence of a cultural

reality.

6.2 Africa Takes Back Control

One of the peculiarities of Dila's book in this instance is that, unlike the other three works analysed, it provides an insight into African culture and traditions not from a nostalgic diasporic perspective, but from the eyes of a man who was born, raised and still lives in Uganda. Entitled after its fourth narrative, *A Killing in the Sun* is a collection of ten short stories that, despite belonging to different literary genres such as horror, fantasy and science fiction, includes a significant scientific and technologic component functioning as a distinctive feature of the West in cultural discourse with the local reality.

Science, both Western and local, is a pivotal element in the plots from the first story and, though it generally takes up an imposing and authoritative role, it appears in different forms. In 'The Leafy Man', for example, Japia, a local herbalist and healer, struggles to survive Miss Doe. This is a new breed of anopheles genetically modified by a company called 'Pest and Germ Control Corporation' while trying to eradicate malaria, 'their plan was to out-populate and replace the natural mosquitoes with the disease free bugs' (Dila 2014: 4-5). However, things did not turn out as expected. Because of its incredibly fast growth 'from egg to adult', the insect infested the village within a week and rapidly drained most of the animals of their blood. The company, then, sprayed the village with insecticide but, instead of killing the insect, 'the chemical triggered off a mutation. Overnight, Miss Doe ballooned from the size of a normal mosquito into a monster as big as Japia's thumb' (2014: 5). Interestingly, the narrator does not seem to criticise Western scientific knowledge, here in the form of genetic manipulation, as the company responsible for creating the 'vampire' had a humanitarian goal in mind, but rather its application on a non-Western environment which is emphasised by the rebellion of nature against human engineering. Still, the narrative does not welcome Western science which hostility towards local scientific knowledge is embodied in the

> government [that] did not recognize herbalists as proper doctors and scientists, but Japia was on a mission to change that attitude. He had served the village as a

> healer for nearly thirty years, from the age of ten when he inherited the healing spirits after his father died. He had dropped out of formal school, and acquired knowledge the ancient way. He became an expert in plants and diseases and he was a gifted shaman. But to the dismay of the community, he dissociated herbal medicine from spirit worship (2014: 4).

This meaningful passage makes at least two significant points; firstly, it reiterates the author's claim for the urgency of trusting and investing in local medicine and knowledge. The narrative, indeed, puts the chemical insecticide, which not only failed in its job but also made the situation worse, in contrast to Japia's natural protection made of orange leaves that seems the only shield capable of keeping Miss Doe at a distance. Secondly, contrary to common Western belief, not only does Japia separate 'herbal medicine' from 'spirit worship', but he also 'believed mixing the two had hindered the proper research and development of native medical science' (2014: 4). Japias's conclusion reveals the Eurocentric misunderstanding of shamans as exclusively associated to magic and spirituality; as Dila himself points out,

> in Ugandan slang, shaman science is called Afrochem, which is short for African chemistry, and it is an assertion of the alternative sciences employed in what others call magic. But it also relates to the phenomenon where many traditional healers have adopted Western technology, yet still attach spiritual importance to disease, and yet still believe in the power of spirits (Dila 2015b).

Then, while in the West science and magic are thought to exist on opposite planes that cannot intersect by definition, in African tradition the two are not only reciprocally non-exclusive, but are often even considered the same thing.

This coexistence is even more evident in 'The Doctor's Truck', which seems to be built on Delany's assertion that,

> at the material level, our technology is becoming more and more like magic—with a class of people who know the incredibly complex spells and incantations needed to get the stuff to work, but almost none of whom can get in there and fix it (Dery 1994: 192).

Grant, a white man in town for a United Nation project, seems to reverse the matter: even though he cannot provide a reasonable explanation of how Dr. Okot's pick-up could drive

itself into killing a little girl, he maintains that what the locals believe to be a 'ghost' is actually 'something that can be explained scientifically' (2014: 73). After pointing out that 'your witchdoctor's blood and pig bones have not done anything', Grant tries to convince Dr. Okot that 'the metaphysical forces you call ghosts are not supernatural. They are elements of nature, like the wind, and they can be manipulated with technology' (2014: 79). Surprisingly, while the plot revolves around the image of the white man as both the embodiment of reason and logic and as the saviour, he is the one witnessing the murder and clearing Dr. Okot's name, the ending overturns this impression when the doctor discovers his true nature: Grant is actually a con artist. By installing video cameras and wiring the vehicle he is able to control the truck by remote and kill the girl; then he tries to get Dr. Okot to hire non-existent friends of his for a few thousand dollars to get rid of the 'metaphysical forces' controlling the pick-up. Hence, not only is the technology brought by the white man seen by Ugandans as magic, as that seems to provide the most plausible justification to what happened, but scientific knowledge is also used as an instrument to trick and extort money. Technology is not the only Western scientific imposition on the locals; Dr. Okot moved to the village to work in a new and well-equipped hospital. The project, however, soon failed for the lack of patients as 'it ignored the culture and history of the locals [who] preferred traditional medicine'. Having studied Western medicine, Dr. Okot 'had been quick to dismiss [traditional medicine] as primitive and backward, until he witnessed a herbalist curing a boy of cancer' (2014: 74). Interestingly, experiencing both approaches did not induce him to choose one and discard the other, instead it encouraged him into 'a radical project, in which the hospital would embrace traditional medicine, as well as the cultures and sciences of the place, rather than impose an expensive and foreign health system'. Unfortunately, however, the project failed because, on one hand, Dr. Okot did not manage to convince his employers of its validity and, on the other, the population was 'happy with their medicine men. They did not need him, or the hospital' (2014: 74). According to Dr. Okot, behind this failure lies the fact that 'wazungu [a Swahili word for a white person] always thought they knew what was best for Africans'. His experience led him to firmly believe that the hospital initial project 'was a grand example of how 'stupid white men with a superiority-save-Africa complex' try to force their views on other people' (2014: 72). The story, then, clearly illustrates that, while it is true that Africans may not understand Western advanced

technology, this does not entail that their knowledge is less valuable. Western science, with its forced manipulation of nature, on the one hand fails to impose itself on the locals and on the other it attempts to deceive the population. In this sense, then, Western science is soundly defeated by traditional knowledge founded on magic and on a nature-friendly approach.

The contrast between the African and Western attitudes towards technology is again put forward in 'A Wife and a Slave'. The story is set in a unified and independent future Africa ruled by the Emperor by means of 'fantastical technology' which origin 'became a source of great speculation. Most Africans simply put it down to magic, to knowledge from the ancestors. They said that their gods had finally woken up to fight against foreign gods'. Of course, 'the Emperor acknowledged these superstitions' as they guaranteed exclusivity over his government. Naturally, 'the rich countries in Europe and America did not believe in this superstitious explanation. They believed the Emperor had a secret, and they wanted to know it' (2014: 119). Yet, no matter how hard they tried to invade Africa, the Emperor always defeated them and, in order to 'demonstrate that he possessed something more powerful than nuclear weapons', he even 'wiped out New York City' (2014: 120). This victory could have been a moral payback for the entire population; instead, the Emperor chose to 'enslave the people in a new doctrine of hate. […] Every tribe regained its identity as a nation of its own' (2014: 120). 'Instead of decolonizing the mind' (2014: 108), he reiterates the colonial rule. The result is an

> Africa for Africans. Arabs and Asians were expelled. White people were rounded up and thrown into slave camps. […] Africans involved in inter-racial relationships were shot dead for betraying their race. As the hate campaigns raged, there cropped up a mad attempt to return to the African way of life before the Europeans came, or to what they believed were authentic African cultures and values (2014: 120).

In his insane attempt to go back to an idealised uncontaminated Africa, however, the Emperor brought terror and misery not only to the non-Africans, but also to the locals. This is the world in which Kopet, the protagonist and one of the few Africans who was not affected by the brainwash of the hate campaigns, is forced to live in. The measures are so extreme that they become ridiculous. Kopet sadly realises that his wife 'was lost. In her place was this automaton manufactured in a factory of mass hysteria, this strange

woman who reduced herself from a lover to a slave' (2014: 120-121). The indoctrination is both extremely influencing, she insists on washing her husband's hands because 'a true African man is not supposed to wash his own hands after a meal' (2014: 122), and overly restrictive. People are not even allowed to listen to most of the music they used to listen as 'the Emperor claimed such musicians promoted African inferiority because they used white musical instruments and the white language' (2014: 115) or even think about their former 'colonial names' such as Mike and Kay (2014: 121). This absurd situation is what pushed Kopet to hide his beloved books, CDs, and, more importantly, to hide and have an affair with a white woman escaped from the slave camps. He is so desperate that reading about 'the lost world, where black were the oppressed', makes him realise that even though 'he did not know if that was a better world, […] he [still] wished to go back to it, if only to once again swim in the love of [his wife] Kay' (2014: 130).

This story appears to be set in the same universe of the previous, 'Lights on Water', which introduces the reader to the Emperor's 'fantastical technology'. While the Swahili words in the book usually come with a brief description, the terminology referring to these machines, which are neologisms reminding of both English and Swahili, have to be understood from the context. Already in the first page, the reader comes across the word 'bruka' in association with 'ornithopter'. Delany's explanation of this term applies perfectly to other words in the story such as 'vidisimu', a sort of television, 'vidicanvas' and 'vidipapers'; 'to read the word is to know what an ornithopter is—if you recognize the roots: *helicopter* and *ornithos* […] An ornithopter must be a small plane that flaps its wings—like a bird' (Delany 1990: 295). Yet, the confirmation of the meaning of 'burka' comes in 'A Wife and a Slave' where there is a hint at how it works; 'Kopet slid his bird out of the garage. A solar engine in the tail enabled him to fly with closed wings. Most of the brukas stuck in the confusion were older models. They had no engines' (2014: 110). Furthermore, the Emperor's yearning for a united and homogeneous Africa was applied also on a genetic level. Pregnant women had to swallow 'kalona' monthly because 'they claimed it immunised the unborn against a plethora of disease, but [the protagonist's] mentor had told him the truth. It gave the baby a dark hue. It ensured everyone was the same shade of charcoal' (2014: 95). Kimi's mother, however, refused to take the medicine and now the girl had to cover herself every day with kilo ointment. Songo, her father, decides to take her on an unauthorised, and therefore dangerous, journey to show her the

truth. Still, he is aware that 'it would take her a long time to unlearn the poison they had fed her since she was a little child. […] little drippings of deadly data that made her hate herself, that made her doubt if he was her father' (2014: 90). Then, both stories are set in a country built on lies where 'the truth was dangerous' (2014: 99); in an Africa governed by a tyrant who would do anything to ensure his country went back to a precolonial state. The colonial discourse comes up again in the second story of the collection, 'The Healer';

> The Cuku and the Twa had been enemies for centuries. The Cuku had skin the color of ripe bananas, and bright red hair that grew straight and stiff like grass. They believed Oks had created the world and given them dominion over all living things. They saw themselves as superior to the Twa, whose skin was the color of roasted coffee and whose hair grew thick like sheep wool. In the past, a great, impenetrable desert had separated the two nations. Then the Cuku invented flying ships, crossed the desert, conquered the Twa and enslaved them (2014: 17-18).

Despite the nations being separated by a desert instead of the sea and the ships becoming 'flying ships', it does not require much imagination to see the parallel with the European colonialism in Africa. Yet, once again, the protagonists are aware that 'before they could defeat the Cuku in war, they had to first decolonize the minds of the Twa' (2014: 20).

Alongside colonialism, 'The Healer' offers a powerful commentary on Christianity in a setting built on magic and adorned with flying ships and robot horses. Even though the two populations worship the same holy book, different interpretations led them to divergent lifestyles and beliefs.

> Oksism philosophy told the Cuku that this world was a temporal home, that it was the kingdom of the evil Wiir and that their real home was a paradise somewhere beyond the stars. Having abandoned magic, they adopted destructive technologies to run their lives; cutting down trees, building factories that spewed poison into the air, making machines that filled the water with filth (2014: 23).

The description carries on into further details on the ways the Cuku managed to destroy the environment; again, it does not take long to realise that the passage is offering a depiction of Western philosophy and society. Yet, not only does the author trace an analogy with the real world, but he also provides a judgement and a solution to the religious debate on the existence of a supreme being. The narrator informs the reader that

'Oks did not exist' and that Oksism was made up by a king thousands of years ago because he was afraid of magic (2014: 23). On the other hand, Twa

> relished their status as slaves because of one verse [in the holy book]; '*And Oks shall bring his lost children back in airships, and they shall be sold as slaves for disobeying him and wandering away from home.*' They believed if they obeyed their masters, they would live forever in paradise (2014: 19).

Although the verse does not appear to refer to any particular passage in the Bible, the style surely recalls that of the Old Testament. The harsh and judgemental tone of the story is expounded in an entry in the author's web site. The paragraph begins by maintaining that 'paradoxically, the dominant religion in industrialized countries, Christianity, gave the green light to scientific innovations that put our future at risk'. It then goes on by underlining how Christianity teaches that our life is just a transitory state and that people eventually belong in either heaven or hell. He also confesses that the matter is elaborated in 'The Healer' because he believes that 'this kind of thinking has contributed to reckless, scientific adventures in not only creating new life forms, but also creating things that harm the planet' (Dila 2015b). Contrarily to expectations, the story presents the protagonist Benge as a prophet of a false god. With the goal of freeing the Twa from the Cuku in mind, not only does he gain their trust by working as a healer, but he also declares to be a servant of Oks for 'it was too early to tell them that Oks was a fallacy'. However, he later announces that Oks 'asked me to deliver to you a simple message. You've been deceived for long. The book has been misinterpreted' (2014: 28). The people's reaction to such revelation is either to question their religious belief, or interpret such announcement as 'a test of their faith' (2014: 31); in any case, the outcome is an unavoidable, but welcomed, war. The deceitful nature of religion comes up again in 'Lights on Water', the future world built on lies par excellence. Among the 'myths and legends' keeping people from venturing into the sea,

> the most famous was in the Book of Life, in the tale of Mojech who led the people of Jok out of slavery from a land called Hamerikah. [The king of the oppressors] raided Jokland and took slaves in great ships. They worked for him for a thousand years until Jok sent Mojech to free them. King Wasiton refused to release them, so Jok struck Hamerikah with a hundred plagues until he succumbed. Unable to

> sail the ships, Mojech parted the waters of the sea with his magic staff and the slaves walked back home. It took them forty years (2014: 91-92).

Not only does the legend evidently retrace Moses' steps in the Book of Exodus, both in the plot and in the choice of names, but it also hints at African slavery in America. Even though Christianity features in other stories, 'A Killing in the Sun', for example, revolves around the ironical longing for a priest of a man about to die precisely because he killed one, the book provides an overall negative depiction of Christianity. Not only is it taken for a tool of power employed to deceive and subjugate people, but it is also considered as the main cause of environmental problems.

In conclusion, while the five stories selected here are those giving more prominence to science fiction, they also deal with a variety of topics typical of Afrofuturism such as the European colonisation of Africa. This is both readapted to create a new story and employed as the starting point from where to build a new, even though not necessarily better, future. Another conspicuous element in the collection is the oppressive role of local authority, which not only is often associated to Western science in opposition to local knowledge and beliefs, but it also imposes technological progress regardless of the African reality. Still, whether the scientific intrusion comes from the outside or the inside as in 'Lights on Water' and 'A Wife and a Slave', technology is never clearly dissociable from wizardry. The kind of science that manipulates and messes with nature is counterbalanced, and as in 'The Healer' sometimes even beaten by, local magic and superstition. Generally speaking, then, *A Killing in the Sun* sees science as a tool belonging to or brought by the white man to subjugate and control Africa while, at the same time, it underlines its inadequacy and fallibility in comparison with local knowledge.

6.3 Western Science vs African Magic

The origin of the contrast between Western and African knowledge can arguably be traced to the colonial period. Professor V. Y. Mudimbe understands this period as ruled by three main powers:

> the colonial state, science, and Christianity. They ground three principal arenas of conversion: the colonial commissioner's transmutation of "savage spaces" into "civilized settings"; the anthropologist's codifying of humans, institutions, and beliefs by their particularity vis-à-vis a functional model; and the Christian missionary's self-sacrifice among "primitives" in the struggle between the "true light" and local tradition. […] These powers decided the adequacy or inadequacy of the organization of African territories and, accordingly, promoted such inventions as "natives," "tribes," and "colonial states," modelled on thematized classifications (Mudimbe 1991: 4).

Evidently, these three ruling forces had the same jurisdictional role over the sources of knowledge and their reliability. Such mindset only valued technological progress and what Europeans believed to be scientifically provable, and erased any other kind of wisdom, such as 'narrative, particularly folktale and legend', without considering its 'central function of cultural memory' (Langer 2011: 129). In this light, 'the resorting to myth and the supernatural [in postcolonial science fiction and Afrofuturism] could be argued to signal a postcolonial criticism of Western enlightenment notions of rationality, empiricism and novelist realism' (Fludernik 2012: 927). Magic, then, takes on two complementary connotations. The European approach towards African understanding of science is based on Arthur C. Clarke's well-known axiom that any sufficiently advanced technology is indistinguishable from magic and, therefore, implies a hierarchical ladder of knowledge and intelligence at the bottom of which is the African understanding of the world. On the other hand, African culture sees magic as an unintelligible force that, despite, or better due to, its irrational nature, represents an invaluable source of knowledge capable of reaching the obscure mysteries precluded to science. Magic and the supernatural, then, become powerful tools distinctive of African culture in the 'undermin[ing of] Western discourses of government, rationality and ethics and their colonizing pretensions' (Fludernik 2012: 927). In this perspective, the science in Afrofuturism can be seen as a 'process of simultaneous recuperation of indigenous scientific literacy and incorporation of those elements of Western science that prove beneficial' (Langer 2011: 130).

6.4 Taking Africa to Space

'I think Africans have loved the genre of science fiction for as long as the movies have been making their way to there. I think people are just not used to the stories in novel form because it hasn't been done before, not consciously' (Onifade 2015). Okorafor's observation may be a good starting point to explain not only the scarcity of science fiction novels in Africa, but also the abundance of short stories that has been circulating lately. The popularity of this literary mode among African authors could be due to its 'variety of motives and perhaps the very lack of anything like uniformity in style and structure' (Albright 1974: 8) that become particularly useful and convenient when experimenting with a new genre. Okorafor too dealt with this literary mode at the beginning of her writing career; an interesting example of her early production is 'The Magical Negro' (2004). Although it includes no science fictional element, this fantasy short story manages, despite its concision, to encapsulate the urge to break the relationship of subjugation between blacks and whites and, in this sense, carries an Afrofuturist undertone. The beginning in medias res sees a brave warrior with 'long blond hair', unsurprisingly named after the Norse god Thor, running from 'horrible black […] shadows' (Okorafor 2005: 91). When he realises there is no way out and that he is about to die, an 'African man' comes out of the shadows and irritably gives him some vague advice on how to defeat the shadows. Thor is left baffled and does not know what to do; the Magical Negro then seems to address the sky and bursts out, 'Whatchu think I am? Some fuckin' shuckin', jivin', happy Negro still dying for the massa' cause my life ain't worth shit?' (2005: 92). Thor stands speechless not understanding 'the strange dialect he was speaking' and wonders whether that man's 'horrible color' of the skin and bizarre facial traits are due to the fact that he had 'internalized the evil of the shadows' (2005: 92). The story ends with Thor killing himself and the Magical Negro unexpectedly addressing the reader, '"Sheeeit," he drawled, looking directly at you, the reader. "All this bullshit you readin' is 'bout to change. The Magical Negro ain't gettin' his ass kicked 'round here no more."' (2005: 92). Although it is the white man who apparently resembles a god, it is actually the Magical Negro who not only seems to have the situation under control, but is also aware of his narrative role and is in contact with a superior being—perhaps the writer himself. Okorafor's story, then, functions as a metaphorical taking

agency by blacks not only in the subversion of a fixed role within a predetermined narrative, but in eluding such narrative in the first place.

In a broader context, the last few years have seen an increment of short stories collections dedicated exclusively to African science fiction. Most of these narratives are set in dystopian or apocalyptic locations and share a common geographical area, Africa. There are a few exceptions, however; among the most noteworthy are those taking Africans, as well as African culture, into space. An example is 'Azania'; this is a short story by Nick Wood in *AfroSF: Science Fiction by African Writers*, a collection of short stories which includes 'Moom!', the first prologue of *Lagoon*. Wood's narrative sees a four-member African crew sent to colonise a faraway planet, 'Azania', 'partially mapped by the African Union Robotic Missions'. This remote setting promotes a nostalgic tone towards the group's motherland even though the planet is described as 'a veritable waiting Eden' (2012: 81). While in quarantine inside their spaceship, She, the vehicle's quantum computer, continuously exhibits African landscapes and trees in particular. More specifically, at first the digital walls display 'Muuyo—the African baobab' (2012: 81), then, just before taking a major decision, Captain Aneni 'look[s] up at She's swaying branches and '*tccchhh!*' with irritation, "I am tired of baobabs, She, give me a fever tree."' (2012: 88). Trees, then, function not only as an evocative element, but also as a mirror to the captain's emotions. Along with nature, the crew also exports African culture and traditions of which, as Aneni remind us, there are many variations not only inside the country but also within the small crew, 'I hold a truncated ceremony of *kurova guva*—welcoming the spirits of the deceased, although Anwar leaves to say his own prayers. I know remembrance rituals differ across the continent, so I keep it brief and generic' (2012: 93). Another interesting element is the captain's gender. Aneni is a democratic and approachable leader who nevertheless proves capable of making difficult decisions when needed. Tired of the quarantine, she secretly decides to go against the protocol and step out of the spaceship. When She refuses to carry out her order of opening the door because she believes Aneni is 'not ready for all possible challenges that may arise', the captain first asserts, 'I am a woman', then promptly adds, 'I am an *African* woman!' (2012: 95). To summarise, while tackling compelling topics such as gender equality, the narrative seems to suggest that while on one hand spirituality and traditions are the key to psychological health and memory, on the other science as one might expect, represents

the only way to space. While ‘Azania’ includes few scientific references, for example Aneni’s expertise in ‘space psychosis and zero-G neurosurgery’ (2012: 83) or the fact that ‘quantum She can have two different minds at the same time’ (2012: 95), it clearly focuses on the characters’ struggle in facing a challenging and distressing situation and, in particular, on how to take Africa to space. This idea was recently reconsidered in the field of digital visual art by Jacque Njeri. In her project *MaaSci*, the Kenyan artist portrays the Maasai tribe in space; she ‘recreates Tatooine city—a fictional sparsely inhabited desert planet from the movie series "Star Wars"—while incorporating elements of Maasai culture’ (Mukhtar 2017).

Figure 4a. *Maasai in Space* (2017), by Jacque Njeri

Figure 4b. *No Gender, Just Leaders* (2017), by Jacque Njeri

The two images are digital collages taken from the *MaaSci* collection. While the former (Figure 4a) is reminiscent of the album *Mothership Connection*'s cover by Parliament especially because of its setting, the latter (Figure 4b) stands out for its colour palette. If it were for the black and white elements alone, the picture would seem a photograph of two any astronauts on a deserted planet. The only hued detail, however, makes it clear that the astronaut on the foreground is African; maybe this is what Aneni and her crew look like when they finally get out of the spaceship and greet their new home by 'danc[ing] African tai chi in our first real alien dawn' (Wood 2012: 98).

Conclusion

The title of this thesis bears three connotations: while the first is of astrophysical nature and hints to dark matter, the other two depend on whether we interpret the word ‘matters’ as a noun or a verb. The goal of Afrofuturism is to use the former reading in terms of artistic media to convey the message of the latter; in other words, the movement wants to show not only that black culture should be disseminated on an international level because of its artistic value, but also that it ought to be considered fundamental in envisioning the future. Moreover, as Kodwo Eshun points out, ‘if global scenarios are descriptions that are primarily concerned with making futures safe for the market, then Afrofuturism’s first priority is to recognize that Africa exists as the object of futurist projection’ (2003: 291). In the European collective imagination, however, an Afrocentric future or one having African traits sounds, if not paradoxical, at least contradictory. In the Western envisioning of an inevitable technologically advanced tomorrow, there seems to be no place for the quintessential primitive and underdeveloped country and its culture. By having aliens invade Nigeria, linking modern science to African culture and portraying indigenous African tribes in space, Afrofuturism not only debunks this misconception, but it also proves that African and black culture belong to the future, and that sometimes they are even more fitting and desirable than Western knowledge. Hence, even though there is still no general agreement on the definition of Afrofuturism, its interest in promoting both black culture, not only for the present but also for the future, and a non-Eurocentric perspective of Africa unites works by black artists regardless of their geographical and cultural backgrounds.

Even though the scientific aspect of science fiction is not a binding element in Afrofuturism as Okorafor’s short story exemplifies, the origin of the movement alongside science fiction led to a substantial presence of science in Afrofuturist works. While during the nineteenth century science was determinant in assigning an identity and moulding the Western image of black people, a century later it became an instrument to convey the culture of the African American community. In the field of music, the juxtaposition of African traditions and science, especially technology, created a bridge between a culture generally seen as primitive and a future where it even becomes the protagonist. Astronomy, and space in particular, with its science fictional connections became, and

still is, both a metaphor for the African American past and a symbol for unexplored territories where there are no rules. Here the artist is allowed to create their own image not only for themselves but also for the entire black community. Therefore, science and science fiction are employed in music both as ideal spaces where it is possible for the artists to reinvent themselves and as tools to comment upon society, which is also how Samuel R. Delany handles them in *Nova*. Outer space serves as a neutral ground in which to reflect upon both the past and the multicultural reality of the twentieth century. Even though black culture, history in particular, and ethnical tension are marginal elements in the narrative, its multiethnic social system, its black protagonist and the optimistic outlook on the future, especially in association with the Outer Colonies, count *Nova* among the first Afrofuturist novels. While on one hand the novel focuses primarily on the characters and their quest, on the other it relies on science to support the entire plot especially when dealing with extraordinary events such as the explosion of a star. Interestingly, however, behind the scientific explanations lies a quite intricate pattern of mythology and superstition that counterbalances the rationality at the basis of *Nova*'s universe. Likewise, science in *Lagoon* functions as an insurer, in particular in relation with the aliens and their exceptional abilities. Despite the science fictional tone of the narrative mostly due to the extraterrestrials, Nnedi Okorafor's novel insists on African folklore and especially on the mythological creatures inhabiting it. Still, as the novel itself declares from the very beginning, the actual protagonist of the story is Lagos; indeed, the aliens are used as an occasion to expose the city's diverse community and contradictions. Moreover, the entire narrative is built on the coexistence of opposites. While their anatomy is of an ethereal nature, these creatures appear to Lagosians in tangible human bodies offering humanity an advanced technology. Again, while such mysterious machinery promises to bring a concrete and radical change to Nigerian economy, the lack of scientific explanation on its functioning draws it closer to the realm of magic than to engineering. The coexistence of magic and science is even more explicit in Adaora who, despite being a marine biologist and being characterised by her analytical thinking and logic, is not only called a 'witch' by her husband, but has also superhuman powers that are never explained in scientific terms.

The fusion between the two spheres of knowledge reaches the climax in *Recurrence Plot (and Other Time Travel Tales)* where fiction and quantum mechanics

become indistinguishable from one another. Not only does Phillips succeed in blurring the line between fiction and reality in a complex structure of narrative levels, but she also explores the potentiality of applying quantum mechanics to the large scale in a sort of thought experiment resulting in time travel. Furthermore, the book provides an interesting parallelism between this branch of physics and African culture while paying particular attention to the concept of time. While physics and scientific theories in general are clearly the main tracks driving the narratives, *Recurrence Plot* deviates into apparently contrasting fields such as psychology, spirituality and astrology. Thus proving that even the most divergent fields of knowledge are not isolated from one another, but they rather exist in complementary relations within the intricate network of knowledge. In this perspective, the book seems to suggest that a collective and interactive examination of diverse disciplines could potentially lead not only to a deeper understanding of our world, but also to an unprecedented wide-ranging progress. The undermining of the untouchable authority of traditional science, and Western culture in general, reaches the peak in Dila's *A Killing in the Sun* where its role is completely subverted. Not only is Western science and technology portrayed as an oppressive tyrant serving only the white man's interests, but most of the times it also turns out to be erroneous and deceitful. However, instead of coming out as an afflicted victim, Africa stands up to its long-standing oppressor by offering an alternative to the traditional Western sources of knowledge. This solution is based on and employs the idea that 'science fiction […] foregrounds the concept that indigenous and other colonized systems of knowledge are not only valid but are at times more scientifically sound than Western scientific thought' (Langer 2011: 130-131). In this way, Dila presents a new kind of future where Africa, and black culture by extension, is raised from the marginal position it has been occupying in the international cultural scenario and is placed on the front line.

In conclusion, from a chronological point of view, Afrofuturism began by inserting black cultural elements in science fiction narratives and is now exploiting the genre as a mediator to disseminate black culture on an international scale. While there seems to be a greater preoccupation with environmental issues among African authors and a particular attention towards narrative structure in African American works, Afrofuturist artists share 'a different way of thinking about science fiction […] one that *includes* both a scientific and a spiritual worldview' (Langer 2011: 130). Whether it be in

space, as in *Nova* and ‘Azania’, on our planet, as in the case of *Lagoon* and *A Killing in the Sun*, or in the character’s mind, as in *Recurrence Plot,* Afrofuturism provides a new and unique perspective not only on science, but also on the way we perceive reality itself.

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