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SPECULATION AND ESTRANGEMENT:
PARALLELS IN THE METHODOLOGIES OF ART AND SCIENCE FICTION

MASTER'S THESIS

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Abstract:

This MA thesis explores the intersection between the methodologies of science fiction and art. Science Fiction has always had a specific relationship to reality and in particular to scientific knowledge. But its influence is not limited merely to the world of technological development and speculation. Science fiction is in a unique position as a genre in that its influence can be felt everywhere, and that its permeability and adaptability are defining features of it. Many surveys of the influence of science fiction have been conducted, but very few have focused on the contemporary impetus to engage in speculative world building, and the ways that these practices intersect with contemporary art and philosophy. This essay gives a brief overview of the history of science fiction, starting in its development in ancient and classical stories into the present day. It also gives an overview of the development and changes in science fiction thought within the field of science fiction studies. Following this it conducts an evaluation of the ways in which science fiction interacts with contemporary theory and practice. Specific attention is paid to the ways that science fiction led to the development of certain modes of accelerationist thought, speculative realism and its relationship to knowledge, and utopian studies as separate from science fiction. Following this a brief survey of contemporary artists whose work interacts with certain principles unique to science fiction will be conducted. Specific attention will be paid to concepts of worldbuilding and estrangement, as well as methods for engaging and presenting postcolonial thought and practice. This paper argues that there is much to gain in studying science fiction, and provides examples of cases where such readings can be useful and productive.

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Introduction

Science Fiction is an incredibly evocative term. It conjures up images of impossible technologies, fantastic voyages, beautiful and hellish visions of the future, journeys through time and space, and countless other fantastic and spectacular things. But, despite the commonality of Science Fiction in media and within the personal imagination, it remains an incredibly vague term. Regardless, it feels more and more that we are collectively moving towards the term in our discussions about the state of the world and our place in it. Climate change, environmental catastrophe, emergent technologies such as artificial intelligence and seemingly omniscient algorithms, these are all the stuff of science fiction. Yet they are all imminent. What happened to the distance between us and what used to be the stuff of pure speculation?

The importance of science fiction in our day to day lives cannot be understated. Science fiction has always been intimately connected with our notions of progress, and deeply connected to our perceptions of possible futures. Beyond mere anecdote, science fiction has a demonstrable impact on innovations and developments within the scientific and industrial sectors. (Jordan et al. 2018: 2) That science fiction and scientific development are intertwined is not a particularly shocking proposition. But less common are discussions about the influence of science fiction in culture at large. Science fiction is known for its ability to permeate rapidly into many elements of culture, and for its ability to rapidly adapt across platforms and media. (Basset et al. 2013: 33) Outside of the interior discussions of genre and hermetic fan speculation, science fiction poses greater questions to contemporary issues such as Climate Change and environmentalism. Discussions of everyday concerns have become increasingly broader in scope, and personal issues are being seen as tied to greater and larger systemic conditions. (Burrington, 2019: 6)

These discussions are tied not only to the specific scientific developments and understandings they stem from, but more to systemic and existential conditions that arise from them. It is for this reason that a discussion of how science fiction interacts with the techniques and process of art making is necessary.

Chapter 1: Theoretical Divergence, Academic Thought and Science Fiction

1.1 Background and Research

The following chapter begins with a brief introduction to the early history of Science Fiction, and then presents an overview of the academic and theoretical literature related to the study of Science Fiction. A cursory discussion of the history of the conventions of Science Fiction scholarship is necessary in order to say anything meaningful or concise on the subject. Science Fiction scholarship is broad and diverse. Since definition of Science Fiction is contentious, terms and concepts must be

clearly defined before they might be accurately applied. It must be pointed out that there is a certain degree of tedium that necessarily coincides with any act of definition.

This paper will make no formal assertions which privilege or elevate certain definitions or theories above others. Adding or contributing to the varied and often tedious debates over definition falls outside of the scope of this paper. However, a detailed survey of the major themes, definitions, and theorists relevant to the topic of this paper will be conducted. This paper holds the view that definitions are inherently flexible and constantly changing, and it is more important to examine the situations

in which a definition may or may not be true than to argue for the validity of one definition over another. The examples of art intersecting with science fiction presented later in this text are meant to mirror this view, as the context of each varies greatly.

1.2 Emergence of Science Fiction

If science fiction is to have a beginning, then there must be a period that comes before. Any claim that a certain point marks the beginning of what we now call science fiction is contentious, and there are several views regarding the timeline of the history of Science Fiction. The so called Long and Short models of the history of science fiction operate on differing assumptions as to what marks the beginning of the genre. The “long history” assumes, as its name might suggest, that sf is a cultural mode of relative antiquity. (Roberts, 2009) Some scholars are more comfortable with the so called “short history” model which roots science fiction in early Gothic literature. (Roberts, 2009) Others are of the opinion that Science Fiction emerged fully formed with Jules Verne and H.G. Wells during the second half of the 19th century. (Jameson, 1982: 149) Nothing exists without context however. In Ward Shelly’s lush illustrated timeline of the history of science fiction he has placed two intertwined and inseparable tentacle like structures which he has named “fear and wonder.”

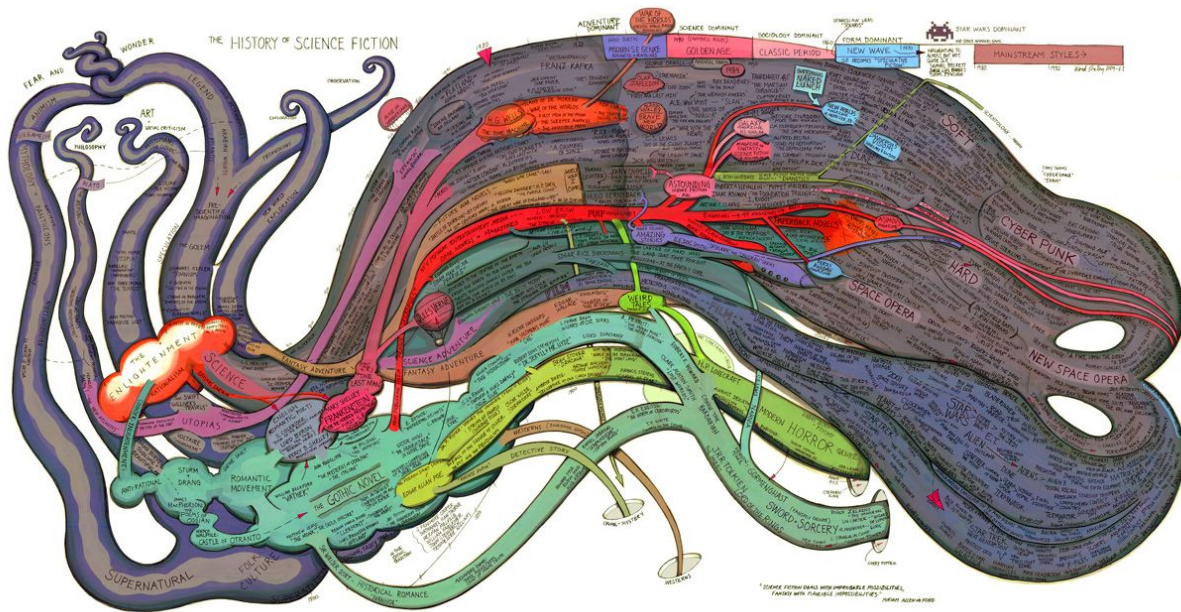


Fig 1. The History of Science Fiction. Taken from <http://www.wardshelley.com>

In the same way that it might be argued that photography began as soon as human vision was fully developed it can be said that the roots of science fiction stem from deep within our psyche. Of course modern science fiction is differentiated from other forms of literature and thought which came before it even though they share the same root. These earlier forms have been dubbed “Proto Science Fiction” by scholars. (Roberts, 2009)

There are certain types of stories, and certain kinds of thinking that are at least as old as recorded history, which provide the structure for what would later be known as science fiction. There are a myriads of ancient tales in which humans venture into the skies and heavens with the aid of magical objects or creatures. We currently maintain a distinction between the world that we inhabit, and the vast expanses of reality that exist outside of our atmosphere, and there

is a parallel to this in ancient theological conceptions of the heavens. Ancient Societies (including the Greeks, Egyptians, Chinese, Mayans, and countless others) maintained detailed astrological records, and speculated on the nature of the heavenly bodies present in the night sky. The word Planet for examples comes from the ancient Greek, and means traveler, in reference to the observation that some stars remained fixed and others appeared to move in distinct patterns. Notions of what constituted the nature of such heavenly bodies changed over time, but were constant in one regard: celestial bodies were thought of as perfect, eternal and divine, and were indeed worshipped as gods. (Roberts, 2016: 27) However, it was possible to discern certain attributes about these bodies through observation, and here we see a marriage of theological and proto scientific thought. This realm was also seen to be accessible to the imagination. In Greek myth Bellerophon attempts to fly up to Heaven on the back of Pegasus in order to confront the gods directly with their various injustices. Pegasus unseats him in mid-air and he tumbles back to Earth; he appears at the end of the play crippled by his fall. (Roberts, 2016: 28) Later the Roman Scholar Plutarch would speculate on the possible causes for the marks visible on the moon. He debated “whether the moon is made of a fiery, clear substance that acts as a mirror, with the marks visible being reflections of terrestrial oceans; or that the Moon is made of Earth, and its marks are impurities in it.” (Roberts, 2016: 29) Plutarch then wonders whether the moon might be inhabited. Adam Roberts described Plutarch’s fantasy as “...a way of doing science via elaboration and invention, which is to say, it is SF.” (Roberts, 2016: 30)

Early examples of proto science fiction continue to pop up through the classical world, and eventually intersect with the gothic literature of the 18th century. It is here in the shadow of the

enlightenment that the most recognizable examples of early science fiction begin to emerge. The loose threads that make up the genre, however, won't begin to take shape until later.

1.3 Hugo Gernsback and Scientification

The early 1920s saw the rapid expansion and development of what would come to be known as the genre of Science Fiction. It was during this time that discourse about Science Fiction grew, and the genre gained a certain amount of notoriety to distinguish itself from other genres. As a result, there was an increase in interest from every level of society. Publishers began printing early Science Fiction works in magazines, authors began to develop and expand their ideas, and the emergence of Science Fiction studies began to make their appearance. Chief among those who were dedicated to expanding and elevating the discourse surrounding the young genre was Hugo Gernsback. So influential was Gernsback that this era of Science Fiction, which is associated with the rise of the Pulp, has come to be known as the Gernsback Era. (Roberts, 2016: 256)

Hugo Gernsback was born in Luxemburg in 1894. He emigrated to the United States in 1904, and remained there until his death in 1967. Gernsback ultimately hoped to found a new genre based purely on “scientific-didactic terms,” and to “reshape SF by purging all mystical or magical elements from the science spiritualism dialectic that had initially formed it.” (Roberts, 2016: 256) It is because of Gernsback that we today use the term Science Fiction. Although before this terminology eventually caught on, he relied on the more awkward term “scientification.”

There is the usual fiction magazine, the love story and the sex appeal kind of magazine, the adventure type and so on, but a magazine of “Scientification” is a pioneer in its field in America.

By “scientification” I mean the Jules Verne, HG Wells, and Edgar Allan Poe type of story - a charming romance intermingled with scientific fact and prophetic vision. (Gernsback, 1927)

Scientification, as a term, would almost immediately be replaced by the term “Science Fiction.” In the editorial for the first ever edition of *Amazing Stories*, we see one of the earliest attempts at defining Science Fiction and establishing an historical relationship with the literature that preceded it. As we can see, Gernsback’s definition is quite simplistic. But Gernsback was known to be a romantic, and his excitement for the future of the genre is palpable.

There are three points which we can take away from Gernsback’s editorial. The first is that Science Fiction is meant to be entertaining. The title of the Magazine alone makes this point clear. These are amazing tales of wonder and excitement. The second point makes it clear that this type of literature must have a relationship with scientific fact. He makes it clear in the introduction that this kind of literature has only been made possible in the near past due to the rapid rate of industrial and scientific progress. He states:

It must be remembered that we live in an entirely new world. Two hundred years ago, stories of this kind were impossible. Science, through its various branches of mechanics, electricity, astronomy, etc., enters so intimately into all of our lives today, and we are so much immersed in this science, that we have become rather prone to take new inventions and discoveries for granted. Our entire mode of living has changed with the present progress, and it is little wonder, therefore, that many fantastic situations - impossible 100 years ago - are brought about today. It is in these situations that the new romancers find their inspiration.

The final point of Gernsback's editorial is that Science Fiction is meant in some way to be educational. Gernsback was interested in more than just the fictional potential of the new genre, but the ways that the genre was tied to the production of a contemporary reality in which scientific progress was the norm. Although science fiction might be thought of as educational in that it has a direct relationship to scientific development and thinking, it is important to note that science fiction is not the same as non-fiction about science. (Bassett et al. 2013: 11)

Gernsback, although revered by many, is not without his critics. Brian Aldiss, a British Science Fiction Author, argued that Gernsback needlessly pushed an 'instructive' imperative which acted as a straightjacket upon the SF imagination, and "[introduced] a deadening literalism into the fiction." (Aldiss, 1995: 204) It might be argued that Gernsback contributed directly to what some would view as the "juvenilization of a genre that ought to have grown into a profound, philosophical and above all adult mode of art." (Roberts, 2016: 259) And indeed Science Fiction has been haunted by the stereotypical notion that it is intended primarily for an immature audience. This is true of many genres, and the term "ghetto" has been used to describe everything from Science fiction, to comics, to romance. There were of course significantly greater societal forces at play that led to this development, but regardless of the outcome, Gernsback was able to solidify science fiction's place as an established and recognized genre.

1.4 The Turn Towards Type: Darko Suvin and Cognitive Estrangement

After Gernsback coined the term and established the channels of legitimacy through which Science Fiction would operate there began a number of debates as to what Science Fiction

actually was. Traditionally J.O Bailey's 1947 book *Pilgrims through Space and Time* has been placed at the origin of critical thought on Science Fiction. It is an early example of a typological study attempting a survey of the entire genre. However, its scope was relatively limited, and most interesting was that Bailey centralized the concept of Extrapolation as defining Science Fiction.

With the turn towards pop culture studies in the 1970s, Science Fiction found a new place in academia. Optional courses began to appear at universities. The first regular, for-credit courses were taught by Mark Hillegas at Colgate College, and H. Bruce Franklin at Stamford University in 1961. By the early 70s there were a number of academic journals and societies which focused their efforts towards the study of pop culture, and Science Fiction in particular. It is against this backdrop that Darko Suvin published his 1972 essay "On the Poetics of the Science Fiction Genre" in *College English* volume 34. Suvin begins, as many others have before him, by attempting to define the genre. However, his attempt goes further by developing a more robust set of conditions and concepts than any before it. He would later go on to expand his assertions in his 1979 book, *Metamorphoses of Science Fiction*, which has been at the core of Science Fiction studies for the last fifty years.

Suvin introduced two primary terms to the field of Science Fiction studies that changed the field: the *Novum*, or a preoccupation with novelty or the new and unfamiliar, and cognitive estrangement. Suvin refers to Science Fiction as the "literature of Cognitive Estrangement," and states that "...the attitude of estrangement... has grown into the formal framework of the genre." (Suvin 1979:4,7) Suvin argues that these terms allow a useful framework with which to differentiate Science Fiction

from other genres. To Suvin it is particularly important to differentiate Science Fiction from non-fictional Utopianism and naturalistic literature, and non-naturalistic fiction.

In introducing the concept of the Novum, Suvin posits a spectrum "...running from the ideal extreme of exact recreation of the author's empirical environment to exclusive interest in a strange newness," what he refers to as the Novum. (Suvin, 1972: 373) The Novum has much in common with historical literature detailing amazing journeys to far away lands, or sometimes even to places as near as the next valley. These stories detail a certain thrill of adventure, and an unceasing curiosity about the greater world. The reader is confronted with the unfamiliar and foreign, and the events of the narrative act as a mirror to the domestic subject. However, he argues that "...the mirror is not only a reflecting one, it is also a transforming one, virgin womb and alchemical dynamo: the mirror is a crucible." (Suvin, 1972: 374) Through this analysis, he places the development of the Science Fiction imaginary firmly in the adventurous spirit of humanity. Science Fiction does more than play to this innate drive though, "Science Fiction takes off from a fictional ('literary') hypothesis and develops it with extrapolating and totalizing ('scientific') rigor." (Suvin 1972: 374) He compares Christopher Columbus' and Jonathan Swift's writings, stating that they share much in common, and both offer up a factual report of fictions which lead to a confrontation of a set normative system. He describes this as a "Ptolemaic-type closed world picture - with a point of view or glance implying a new set of norms." (Suvin, 1972: 374) This normative confrontation is what he defines as "the attitude of estrangement." (Suvin, 1972: 374)

In this context Estrangement can be thought of as being similar to the Brechtian sense of the term, while it maintains its own characteristics. Bertolt Brecht made use of Estrangement to

remind the audience that what they were watching was indeed a play, to refuse the audience the privilege of purely perceiving the action on stage as something separate from themselves. Brecht originally referred to Estrangement as the Alienation Effect, and would later refer to it as the Estrangement Effect (German: Verfremdungseffekt). This alienation or estrangement is in reference to the traditional mode of audience participation and identification with the theater. In the traditional manner, the audience could reasonably assume the role of a passive and unseen spectator. The intended effect of Estrangement in the theatrical sense is that the audience is hindered from simply identifying with the characters in a play. According to Brecht: "Acceptance or rejection of their actions and utterances was meant to take place on a conscious plane, instead of, as hitherto, in the audience's subconscious." (Brecht, 1964: 91) Brecht looked to forms of Chinese theater to point to strategies that actors and directors would use to induce this effect.

As interested as Suvin was in the things which made a Science Fiction story, he was equally interested in all the those which didn't. In 1978 he published an article titled: On What Is and Is Not an Science Fiction Narration; With a List of 101 Victorian Books That Should Be Excluded From Science Fiction Bibliographies. To Suvin "if any determination is also a negation, each negation is also a determination." (Suvin, 1978)

Specifically excluded from bearing the title of Science Fiction are:

- Non Fiction
- Anything written in a Non-Realistic Mode
- Naturalistic fiction with minor Science Fiction elements
- Supernatural Fantasy
- The Lost Race Tale

While the scope and rigor of his observations are interesting and impressive, an in depth structural overview of the Science Fiction genre is outside of the scope and ambition of this thesis. However, after Suvin's exhaustive work there was a divide in Science Fiction scholarship between structuralist and poststructuralist scholars.

1.5 Baudrillard and Simulacra

Baudrillard also expresses an interest in Science Fiction and its methodology which he ties to his ideas surrounding simulacra and simulation. To Baudrillard the way that Science Fiction relates to our contemporary reality is of the utmost importance. Science Fiction is often closely tied to our current means of producing reality. And in some modes Science Fiction is often seen as being a direct extension of particular industries or scientific practices. To Baudrillard this is tied to the notion of a contemporary imaginary, in which the intellectual act of perceiving the world is connected to the material means of production at a given time. Through this Imaginary are shown "extrapolations of mechanics or energy, velocities or powers approaching infinity—Science Fiction's fundamental patterns and scenarios are those of mechanics, of metallurgy, and so forth." (Baudrillard, 1991)

Science Fiction Functions differently in different types of worlds. In the pre-industrial (or early industrial) world, Science Fiction Utopias proposed a new ideal world in comparison to the limited world available. Meanwhile, in the potentially limitless contemporary world of production Science Fiction ADDS, and multiplies the possibilities of the world.

Baudrillard lists three orders of Simulacra:

(1) natural, naturalistic simulacra: based on image, imitation, and counterfeiting. They are harmonious, optimistic, and aim at the reconstitution, or the ideal institution, of a nature in God's image.

(2) productive, productionist simulacra: based on energy and force, materialized by the machine and the entire system of production. Their aim is Promethean: world-wide application, continuous expansion, liberation of indeterminate energy (desire is part of the utopias belonging to this order of simulacra).

(3) simulation simulacra: based on information, the model, cybernetic play. Their aim is maximum operationality, hyperreality, total control.

In the third state the model has surpassed the real, it is immanent. The model requires management manipulation, and there is no longer anything to separate this from the "real." There is no more fiction. But Baudrillard makes a distinction between reality and the real. Reality has already outpaced fiction.

"Perhaps the Science Fiction of this era of cybernetics and hyperreality will only be able to attempt to "artificially" resurrect the "historical" worlds of the past, trying to reconstruct in vitro and down to its tiniest details the various episodes of bygone days: events, persons, defunct ideologies—all now empty of meaning and of their original essence, but hypnotic with retrospective truth. Like the Civil War in Philip K. Dick's *The Simulacra*; like a gigantic hologram in three dimensions, where fiction will never again be a mirror held to the future, but rather a desperate rehallucinating of the past." (Baudrillard, 1991)

The call back to the mirror here is directly related to Dark Suvin's previous comments about the mirror that Science Fiction stories hold up to the reader. Baudrillard's prospects for the future are always bleak. In this final world of Simulacra the real becomes our utopic vision, but it is once we can only look back towards. In its final form, simulacra only needs the real as a pretext, and since he claims the distance separating us from the real and the imaginary has been completely subsumed by the model. Simulacra is already a drama and dance of fictions folding in on themselves, and requires the same mindset. We are no longer able to maintain the distance from managing simulacra that is required in order to turn the imaginary towards the task of producing a utopian vision, of realizing the utopian imaginary.

Baudrillard's work helps us to situate Science Fiction within the larger social concerns surrounding the rise of mass consumer culture, and the spread of Neoliberal Capital after the collapse of the Soviet Union. Also Baudrillard gives an interesting example of the ways that one might analyze and interpret Science Fiction from outside of the core assumptions of genre theory. Baudrillard never mentions Science Fiction in reference to any other kind of genre. He speaks of fictions generally, and he speaks of types of stories that might appear in Science Fiction literature (and literature in general) such as Utopian tales and cybernetics, but his arguments all fall in line with a general sense of the fictional and the imaginary. Baudrillard would likely argue that all fiction is stuck and confined by the same set of restraints when it comes to the decreased distance we maintain. With this decrease in distance, science fiction becomes process rather than imagination. In fact the disruptive potential of science fiction becomes secondary to the impetus to continue along certain paths of innovation which are seen as being self-evident. (Thacker, 2001: 157)

1.6 John Rieder and The troubles with definition

John Rieder Posits a challenge to the traditional methods of understanding up until this point. His analysis is firmly planted in Genre Theory, and he attempts to move the discussion of Science Fiction away from formalistic comparison towards something historical and mutable. He points to shifts in the understanding of genre at the end of the 20th century. Specifically, towards Rick Altman and his 1984 essay "A semantic/Syntactic Approach to Film Genre." In this essay Altman states that: "genre theory has up to now aimed almost exclusively at the elaboration of a synchronic model approximating the syntactic operation of a specific genre." (Altman, 12) In linguistic analysis Diachrony and Synchrony are two methods of analysis which differ greatly. In the Synchronic model language is assessed at a specific point in time. A Diachronic approach however, considers the evolution of language through over time. Synchronic analysis can be seen as being at the core of Darko Suvin's attempts to develop a functional definition of Science Fiction.

He makes 5 propositions about Science Fiction given his assertion that genre is an historical process.

- Science Fiction is Historical and Mutable.
- Science Fiction has no essence, no single unifying characteristic, and no point of origin.
- Science Fiction is not a set of texts, but rather a way of using texts, and of drawing relationships between them.
- Science Fiction's identity is a differentially articulated position in an historical and mutable field of genres.
- Attribution of the identity of a Science Fiction text constitutes an active intervention in its distribution and reception.

(Reider, 2010: 193)

This list of assertions amounts to some degree to a deconstruction. A deconstruction of a previously held mode of referring to genre and classification. In this mode, instead of looking to a set of definitions we can ask "...how and why the field is being stretched to include these texts or defended against their inclusion; how the identification of them as Science Fiction challenges and perhaps modifies the accepted meaning of the term." (Reider 2010: 194) Despite Suvin's influence in the field, he was not the first, nor far from the last person to attempt to conduct a formalistic survey of what is or is not Science Fiction. This debate continues, and the kind of gatekeeping as to what is or is not Science Fiction has in some ways given the genre and the community surrounding it a negative reputation. Ursula K Le Guin points to this in an interview with Vice Magazine, stating :

"Some Science Fiction writers decided a while ago that true Science Fiction can only be based on the so-called hard sciences—astronomy, physics, chemistry, engineering, computer science, and so on. The word "hard" brings some gender luggage along with it. And sure enough, these guys find stories based on the "soft," or social, sciences to be a debased and squashy form of the genre. They see it as chick lit for geeks. So, OK. If anybody wants to build a ghetto inside the ghetto and live there, fine with me." (Le Guin 1929)

Rieder's assessment of science fiction makes room for more discourse surrounding the interactions that science fiction has outside of the confines of genre. In previous typological definitions the emphasis was on reduction, and strong efforts were made to make sure that only specific works which met all known criteria were adequately judged as science fiction. However, these definitions are always operating behind the works being produced that push the genre

forward. Ironically they do not anticipate, in the fashion of science fiction, new developments. The baseline assumption is that the core principles of the genre, and its foundation in hard science remains intact. But what happens when the nature of science at the core of science fiction comes into question?

1.7 Quentin Meillassoux

If we incorporate Rieders theories regarding the mutability of the Science Fiction genre in our discussion, we open up many avenues of discovery. Every scholar up until now has taken for granted that Science Fiction is somehow related to scientific knowledge and discovery. And given the mutability of the genre, advances in science would alter the content of what appears within Science Fiction. How does this change though in the face of changing attitudes towards science and our understanding of it? In the same way that we do not conceive of genre in the manner of the 1920s, why then should we conceive of science in the same manner. This is when the idea of Extro Science Fiction as posited by Quentin Meillassoux becomes useful.

In principle, experimental science is impossible and not unknowable in fact. Extro Science Fiction thus defines a particular regime of the imaginary in which structured - or rather destructured - worlds are conceived in such a way that experimental science cannot deploy its theories or constitute its objects within them. The guiding question of extro-science fiction is: what should a world be, what should a world resemble, so that it is in principle inaccessible to a scientific knowledge, so that it cannot be established as the object of a natural science?

(Meillassoux. 2015: 5-6)

Meillassoux makes a point to differentiate what he refers to as Extra Science Fiction (abr. XSF) from regular Science Fiction. Science Fiction, he claims, is the act of imagining a possible future with an emphasis on the changes in our scientific knowledge and their consequences. Though the outcomes are strange, alien, unbelievable, there is always the assumption that there is possible to conceive of a scientific understanding of future phenomena even if they seem inconceivable to us now. "Hence, of course, the generic name to designate this type of literature: fiction can produce extreme variations, but at the heart of it a science is always present, albeit in an unrecognizable form." (Meillassoux. 2015: 5)

Meillassoux is interested in this distinction and particular line of reasoning for very different reasons than the others who write about Science Fiction extensively.

1.8 Analysis

With a general overview of the methods of science fiction it becomes possible to interrogate those methods to extrapolate on the possible uses and interactions they may have. Discussions of what science fiction is not are almost, if not more common than discussions about what science fiction is. (Suvin, 1978) This implies an inseparable relationship with the world of ideas and concepts that exist outside its bounds.

Chapter 2: Interactions of Science Fiction

2.1 Overview

Now that a brief history of the history of Science Fiction has been established it becomes possible to examine the possible interactions between science fiction and other modes of contemporary thought. This chapter will present several issues of contemporary discussion and analyze the ways that they are related to science fiction, and how through utilizing science fiction's methodologies they might be better understood or incorporated into broader discussions.

The chapter begins by presenting a brief overview of the history of utopian thought. Utopian thought is closely linked to science fiction, but is a self contained area of study in its own right. In the following section is dedicated to providing a brief overview of accelerationist thought, why it is of concern, and how it is related to science fiction. The third section will do the same with the emerging discourse surrounding the Speculative Realist approach within contemporary continental philosophy. The final section will show the intersections between colonial and post-colonial thought and make an argument for the use value of such a comparison.

2.2 Utopianism and Science Fiction

Utopian thought has its own history and theory entirely separate from that of science fiction. The histories, however, are inseparably intertwined. Regardless of that, it is possible to speak of science fiction without ever mentioning a utopia (or dystopia) and likewise, it is not obligatory to

mention science fiction in any utopian discussions. However, the relationship between Utopias and science fiction is not to be understated as seen in the following quote from Darko Suvin:

“utopian fiction is not only, historically, one of the roots of SF, it is also ... one of its forms ...

Utopian fiction is the socio–political subgenre of SF, it is social-science-fiction or SF restricted to the field of socio-political relationships or to socio-political constructs understood as crucial for the destiny of people” (Suvin 1988: 38).

In order to discuss utopian theory it is necessary to give at least a cursory definition. One definition of Utopia, given by Lyman Tower Sargent, defines utopia as “a non-existent society described in considerable detail and normally located in time and space” (Sargent 1994: 9) It is also important to point out that utopia is derived from the Latin “outopia” meaning “no place,” and is not to be confused with “eutopia,” which means “the good place.” The reverse of this would then be a “dystopia,” or “bad place.” Dystopian and Eutopian literature and thought are both rooted in the basic blueprint of the utopian model and its mode of projection.

The first mention of utopia was in Sir Thomas Moore’s *Utopia*, published originally in 1516 in Latin, and translated into English in 1551 by Ralph Robynson. Moore’s utopia was not a perfect place, rather More’s *Utopia* was a “no place.” It did not represent his idea an ideal place, but served as a blank canvas upon which he sketched a world which was intended to estrange the contemporary reader from the conditions of their existence, encouraging them to see their own world from an alternate perspective. (Rogan, 2009: 309) This is directly related to the concept of estrangement posited by Suvin. In the context of his time Moore presented a model which operated outside of the expected bounds of more naturalistic and religious literature of his time.

Moore was a devout Catholic, but in his Utopia the religious practices differed greatly from the prevailing Catholic sentiments of the time. Moore never would have argued that the model he proposed should replace the existing model, but instead points to the model in general, and develops it fully. The emphasis is on the interaction between the viewer, as grounded in their own set of historical conditions, and the fully realized society presented, which exists within a different set. That is not to say that some utopias are not prescriptive however.

Utopia as developed in the 1500s by Thomas Moore is as closely linked to the emergence of the humanist sciences of the renaissance as later modern SF was to mechanization and industrialization. Likewise, utopias of different eras present and seek to represent and frame different problems and solutions. For example, eighteenth-century literary utopias and utopian political treatises tended, to focus on the importance of reason, and the applicability of reason to social governance and the health of the social body. (Rogan, 2009: 310) These utopias are characterized by a certain sense of idealism and universalism which was present in the humanities at the time. Utopianism was also later addressed by Marx and Engels, who were intensely critical of utopian blueprinting. They found that utopian writing and thought did not adequately concern itself with the revolutionary transition to the future socialist state. (Rogan, 2009: 312) For Marx and Engels the utopian blueprint was too rooted in the estrangement of those participating in the blueprinting, whereas the specifics of any ideal socialist state to them must be reflective of the needs and desires of an unalienated proletarian class. This class has yet to come into power, and so those needs and wants are remain unknown. (Rogan, 2009: 312)

Utopian literature might easily be thought of as the social political wing of science fiction. However, the act of imagining a utopia has a naturally destabilizing effect. Utopias naturally point outside of an away from our contemporary reality. Particularly in the Baudrillardian sense of third order simulacra, simulations are the primary means through which we interact with the world. The utopian ideal might then be tied to the second order of production. When individuals engage in the practice of realized utopias in the form of unreal no-place zones in which to play out our paltry fantasies our sense of awareness of our historical condition becomes crushed. (Marin) This is the danger of a commercialized utopia. Utopian action demands more than simple speculation and imagination. In "The Problem of the 'Flawed Utopia,'" Sargent describes eutopia as an act: we "must commit eutopia knowing that it is not perfect and that, like the ideal polis in Plato's Republic, it contains within it the seeds of its own destruction. We must commit eutopia again and again because . . . not believing in the possibility of betterment, however flawed, condemns us to live in someone else's vision of a better life, perhaps one forced on us ... denying eutopia ensures that we live in dystopia." (Sargent 2003: 230) In the Baudrillardian sense, the act of imagining and participating in our own psychic utopias works to emphasize the distance between fiction and the real, or reality. Darko Suvin concludes, in his "Theses on Dystopia 2001," that all the "variants of dystopian-cum-eutopian fiction pivot not only on individual self-determination but centrally on collective self- management enabling and guaranteeing personal freedom. Whoever is not interested in this horizon will not be interested in them. And vice versa" (Suvin 2003: 200). Utopianism has value as a means of developing personal and collective visions which allow for more thoughtful praxis, but they also may be utilized by actors to subsume potential prospects for the future.

2.3 Accelerationism and Science Fiction

According to Steven Shaviro “Accelerationism is a speculative movement that seeks to extrapolate the entire globalized neoliberal capitalist order.” (Shaviro, 2015: 8) Accelerationists wish to encourage and realize the internal contradictions inherent to late stage global capitalism in hopes that it will bring about the eventual collapse of the system. Although given that capitalism thrives on perpetual crisis the collapse might be better seen as a form of self exhaustion.

Of central importance to Accelerationist thought is the relationship that people have with new technologies and advances in them. It is all too easy to exclaim that everything developed in the service of Capital is inherently Bad. We see a new form of luddism emerging from this. “Alex Williams and Nick Srnicek attempt precisely this in their Manifesto for an Accelerationist Politics. They call for a new left politics that is “at ease with a modernity of abstraction, complexity, globality, and technology.” Williams and Srnicek seek not to embrace the violent excesses and contradictions of high-technology, neoliberal capitalism but rather to capture this capitalism’s most advanced and intensive technologies, so that these technologies can be “repurposed towards common ends. The existing infrastructure is not a capitalist stage to be smashed, but a springboard to launch towards post capitalism.” (Shaviro, 2015: 12) There must be a push towards a dialectical understanding towards the phenomena of late capitalism rather than a mere moralistic denunciation. Jameson expands upon this by pointing to a secret hidden dimension to hyper consumer organizations such as Wal Mart which in their current form work to expand capitalist dominance, but utilize strategies that might be co-opted for the betterment

of society under different circumstances. Shaviro notes that these phenomena must be understood dialectically rather than thoughtlessly denounced. (Shaviro, 2015: 12)

In this way Accelerationism and Science Fiction are inherently linked because they are specifically linked to constant new development (novum) but also with an intense cognition. Accelerationism offers a sort of counter to Baudrillard's dead end of simulacra, where the brighter days are all escapes as opposed to based in reality.

2.4 Combining Speculative Realism and Science Fiction

Speculative Realism is an emerging branch of contemporary philosophy which focuses on de-centering human experience from the ways that we think about and perceive reality. The arguments of Speculative Realism are based in a critique of post-kantian philosophy, specifically in the notion of "correlationism." Speculative Realism has a direct link to science fiction through Quentin Meillassoux, who talks about Extro Science fiction, and more specifically the ways that it allows for the possibility not just of things outside of our understanding, but questions our ability to fully and reliably utilize science to understand everything.

In science fiction and extro science fiction we see authors concerned with the question of how we perceive and interact with the unknown and the unknowable? Within contemporary science fiction, a notable example of a series that confronts this problem in a novel way is the Southern Reach Trilogy by Jeff Vandermeer. It's hard to say exactly what "happens" in the southern reach trilogy, since by design the reader is kept away from the inner workings not only of the fantastical elements, but also the mechanisms behind the byzantine agency to which the main

characters belong. The first book "Annihilation" follows a doomed expedition which has ventured into the heart of "Area X," an area of the world cordoned off by a government. It is a place where the normal rules of the world break down. Modern equipment ceases to work, colors and sound at the edge of one's vision seem heightened, and people seem unable to agree on what is before them among other things. It is divided from the regular world by an invisible barrier that simply appeared one day, separating the area inside from the world outside. There is only one way in or out, and numerous expeditions have gone inside to ascertain what is happening, of which only one person has ever returned. The book follows the members of the latest expedition (all women), which is comprised of: a psychologist (the leader), a surveyor, an anthropologist, and a biologist (the point of view character).

In one way, Area X functions as a world outside of interpretation, one where only speculation matters. With the breakdown of normal rules and understandings of the world This is the reason the choice of the main character being a Biologist is of prime importance. Why every one of the members of each expedition who venture into the area are identified only by their professions. There is a narrative reason for this of course, but an extra textual reading of this narrative necessity speaks to the breakdown of interpretive and analytic modes of thinking and processing. On a symbolic level, the anthropologist, the psychologist, and the surveyor all find their skills useless in Area X. Theirs are professions which are linked to human utility, or towards anthropocentric studies. Biology however, concerns itself with systems outside of the purely human realm, and even though it is a human discipline, it keeps the potential of non human experience as an option. As a result, the Biologist is the only character that we know survives to the end of the first novel. However, she is undoubtedly changed, physically, mentally, and thematically.

This idea of changing through contact is one of the most interesting and important themes presented in the novels. It echoes Anna Lowenhaupt Tsing's theory of contagion. She posits contagion as an answer to the question: "how does a gathering become a happening," and states that "as contamination changes, world making projects, mutual worlds - and new directions - may emerge." (Tsing, 27) The logic of contagion strips away the safe categories of the self contained individual, which is essential to current methods of interpretive thought in science and philosophy.

The mechanism as we understand it behind Area X's operation lies in the eruption of the "zone" from a single individual who has been infected by some alien force. Area X is ultimately a contaminated copy of an original, neither the same as it was, nor something developed by design. It is referenced numerous times throughout the book that Area X is very much imperfect in the way that it copies. Also the text that the entity known as the "crawler" scrawls along the walls results from the final thoughts of the contaminated individual before he is consumed in the genesis of the area itself. What purpose the text serves is unknown, and likely insignificant, but it perfectly represents a collaborative result through contagion, the changing of a process through interaction. Likewise in the ending one of the characters throws himself into the heart of the contagion. He is not entirely sure what this will do, and likewise in the ending it is not revealed what actually occurred. The Biologist muses on this, wondering "what [he had] found down below? Had he found the true Area X, or had his death been the catalyst for the change she had felt, that manifested all around them?" (Acceptance, 327) Ultimately all that we know is that something changed, the system changed. A gathering became a happening. And although

it is “known that although nothing could be reversed... it could be changed, it could change” and that the sacrifice had “added or subtracted something from an equation that was too complex for anyone to see the whole of.” (Acceptance, 329)

This idea of an “equation too complex” is elucidated on by certain characters, one of whom proposes Terroir as a framework for understanding Area X. Terroir’s direct translation from french is a “sense of place,” and what it means is the sum of the effects of a localized environment, inasmuch as they impact the qualities of a particular product. (Authority, 131)

Normally Terroir is used to refer to wine production, and is deemed too vague and unwieldy to be used as an explanation for any serious phenomenon. The theory is further expanded upon, with one character stating that “the point of Terroir is that no two areas are the same. That no two wines can be exactly the same because no combination of elements can be exactly the same. That certain varietals cannot occur in certain places. But it requires a deep understanding of a region to reach conclusions.” (Authority, 131-132) It is here that we can see the important of place over specifics, of systems over individuals, and the importance of describing landscape and its own internal interactions outside of us as individuals.

Another example might be Terrence Malik’s film *Upstream Color*. The blending of memories, and the sense of people being trapped in a system outside of their control and comprehension, but which is ultimately one in which they play a vital part. The sheer enigma of such a thing. In this film there is also “no going back.” If the ending can ultimately be interpreted as taking control of one’s place in a system, it does not deny that the system exists, or that it can necessarily be changed, only that one might find a sort of happiness and contentedness within the system for themselves. It is to learn to live with the change, to see through the change.

Chapter 3: Science Fiction and art

3.1 Overview

The Previous chapter outlined ways that science fiction interacts with contemporary issues and theories. This chapter will turn towards specific examples of art and artists who either work with, or alongside certain methodologies central to science fiction. Art is equally contentious a subject matter as science fiction. It is no easier to make value claims as to what art is or is not than it is to do the same for science fiction. This paper makes the case that similarly to science fiction art is a malleable and ever changing set of practices that are unified around certain key concepts without depending on them entirely. Art making is based in the same base human instincts that gave birth to science fiction after all.

Nicolas Bourriaud insisted in what he called the ‘pressing need’ for contemporary art not simply to offer a reflection of the world in which we live, but to actively shape the way in which we inhabit it. As Bourriaud wrote: “The role of artworks is no longer to form imaginary and utopian realities, but to actually be ways of living and models of action within the existing real, whatever the scale chosen by the artist” We can see this trend manifesting itself through conferences and discussions such as the Speculations Conference at PS1 and the Futures and Fictions conference at Goldsmith’s in 2015. There is a lively discussion in the contemporary art world about the nature of art going forward in the face of global catastrophe, and discussions centered around science fiction have been central to many of these.

This chapter will present several case studies in which it might be interesting to draw comparisons between science fiction and art. The aim here is not to argue that science fiction and art are always, or should always be thought of in parallel. Instead it is to emphasize the ways that the two practices can interact and develop each others principles and concepts in new ways. Each of the case studies has been selected because they each highlight a certain element or characteristic from the techniques of science fiction. Science fiction in the form of literature has always been about imagination. But science fiction as literature is limited by the constraints of that form. There are certain things that are better represented or explored through other media, and art offers a toolset with which to create and present that goes beyond representation and extrapolation. Likewise, the experience of engaging with artworks as opposed to with literature opens up a different affective mode. Science fiction has always been about Affect (Roberts, 2016), but the efficacy of its affect is tied to its means of consumption. How then does this mode change when incorporated into a format which is free of the traditional limitations?

The first section will center the concept of “world building” as proposed Dr Amelia Barkin’s in her discussion of inhabitation. The second section will examine the ways that science fiction engages with the concepts of postcolonial thought. The final section will focus more specifically on the use of estrangement in the social documentary work of Taryn simon and Larry Sultan.

3.2 World Building And Inhabitation

Julie Becker was born in 1972 in Los Angeles. She studied briefly at the Hochschule der Künste, Berlin, in 1991, and received a BFA in 1993, and an MFA in 1995, from the California Institute for the Arts in Valencia. Her work, primarily photography, video, and installation, focuses on appropriated and reimagined narratives.

Her complex installation, *Researchers, Residents, A Place to Rest* (1996), earned her early critical acclaim. Installed at the Kunsthalle Zürich, it comprised a closed architectural complex divided into three sections, containing various elements and references, and combining miniature, crafted interiors and life-size environments. Spaces in the installation that resembled a waiting room, a library, and living areas contained both objects and research. Printed matter, video, and aural backdrops provided imagined, intimate details from the lives of the installation's two fictional residents: Eloise, a character from the popular children's books about a young girl who lives alone at New York's Plaza Hotel, and Danny Torrance, the young boy who lives with his parents in the empty Overlook Hotel in Stephen King's novel *The Shining* (1977). One of Becker's later works, *Federal Building (Whole)* (2002), further demonstrates her interest in interiority and the unsettling ambiguity of both extremely private and public spaces. The 29-minute video shot on Super 8 focuses on a bank building visible from Becker's studio and cuts between shots of the building itself and its scale model, set to the soundtrack of a Mariachi band, from a cassette Becker found on the original site.

In *Researchers, Residents, A Place to Rest*, Becker constructs a psychological labyrinth. The piece is very much concerned with space, and the way that certain people inhabit it. Many of the

miniature diagrams within the space bear a striking resemblance to Single Room Occupancy hotels, a form of low income housing once ubiquitous in areas with a high concentration of low income individuals, namely inner city areas of New York or Los Angeles. SROs represent an incredibly transitory space on the edge of society, often the last stop for vulnerable individuals before outright homelessness.



Fig. 2. Researchers, Residents, A place to rest (1993-1996). Taken from www.ica.art

There is a level of reflective engagement that comes from having scale diagrams displayed within an artificial space that itself is meant to act as a form of diagram. While physically moving through the space with their body, a viewer is also mentally moving through the smaller spaces

presented in the piece. It represents a form of reflexive dissociation where one can exist in both places at once.



Fig. 3. Researchers, Residents, A place to rest (1993-1996). Taken from www.ica.art



Fig. 4. Researchers, Residents, A place to rest (1993-1996). Taken from www.ica.art

Whole is a unique piece in that it works with a distinctly dystopian sense of worlding. The title along provides a hint at the scope of the work. It is everything wrapped into one unified whole which is then represented in parts and pieces. It is impossible to approach a whole, the whole of our day to day reality is entirely too much for us to process. However, we think in parts and pieces, and these pieces come together through the processing power of our brains and critical apparatus to form a fractured whole. This is necessarily a form of worlding. And yet, when presented with a representation of worlding the process (which we engage in every moment of every day) becomes foreign to us. We can see the whole that Becker is constructing. We know that her work is meant to construct a portrait of a kind of world at a particular time in a particular place (LA, which is itself essentially dystopian). However, it breaks apart. We view it,

shimmering in the distance through a force field, which is projected on the surfaces of photographs, in the re arranging pixels of digital video, and which coats the connections between pieces of assemblage. Everything is unified in its discontinuity.

Inhabitation and the emissary, the unified whole of a cohesive world coming together. These are all the elements of world building. World building has long been recognized as a major tactic in science fiction writing. Utopian literature is a form of world building for example. World building could also be argued to play a significant role in the works of contemporary artists preoccupied with the immersion of the audience within a specifically constructed spatio-temporal environment. Dr. Amelia Barkin notes the distinction between “the inhabitation or immersion in a world versus an encounter with a work.” (Barkin) World making when applied in a more artistic sense removes the narrative impetus, and frees up the world to exist in a more open ended context. What Julie Becker does with her work is to borrow world building elements from her daily reality. The low income underbelly of LA, subject to the ruling forces of capital oppression becomes the world building foundation of her work. However, she draws away from narrative, and engages in a process of estrangement with her subject matter. We see this in her use of urban legends and suburban mythology in the form of pop culture. These are unconscious worlding techniques that we engage in as individuals living within a shared system of cultural touchstones. But taken out of context of their interactive value, they are free to expand into something more. To truly speak to the whole that they are a part of. It is by reducing mundane interconnected elements to static objects or small scale closed systems that we can begin to see the connective tissue of such works. Without a basement, without cheap Marijuana, what frequencies can we receive from this piece of worldbuilding material?

Art of a certain type renders discussion of inhabitation possible. In a literary sense, habitation of science fiction works is almost entirely impossible. Barkin states that "...part of what makes a work of art inhabitable is its believability: the manner in which the imagined world is able to convince or entice a spectator to either dwell within its ethos or commit to its conceptual alliances." (Barkin) This alignment might happen mentally through the process of reading or otherwise absorbing science fiction literature, but the act of being present in a space, moving through it physically and intellectually as well as narratively expands the notion.

Another example of an artist who develops work which might fall into the category of "world building" is Thomas Demand. Demand is well known for remaking found photographic images into life-sized three dimensional paper and cardboard models. He then re-photographs them, and exhibits them to scale as large glossy prints. This is a world produced entirely out of cardboard and paper, a world that resembles our own. However, it can be seen as being but sufficiently different enough as to constitute its own reality. "Demand's world is serial; it has a history of its own, and its difference is 'enhanced' by the consistent application of alternate physical (and conceptual) laws." (Barkin) Demand's work also engulfs the viewer and draws them in with the strange completeness of it, similarly to Becker's. It is a type of estrangement, although different from a purely representation model.



Fig. 5. Zeichensaal (Drafting Room, 1996. Taken from Tate.org.uk.

Of primary concern to artists whose work could constitute world building is a set of internal logic. Becker's work shows this concern in its minutiae, and Demand's work shows this through his repetitive process. They both maintain a relationship to the real, to representations of our reality and the spaces that we inhabit both physically and physically.

Yet another example can be found in Pierre Huyghe's *Untilled* (2012). *Untilled* was installed at Documenta 13 and built on a compost site. *Untilled* generated a strange environment in which natural and human-made elements were charged equally with an intense and unlocatable sense of intentionality. A dog with a painted leg inhabited the grounds; psychotropic plants were hidden amongst the undergrowth and pollinated by a hive of bees living on a sculpture of a

reclining nude. The strange individual elements all worked together to create an alien atmosphere. Stated that: "As I start a project, I always need to create a world. Then I want to enter this world and my walk through this world is the work. What takes me a long time is to create the world". This is a piece that aims to simulate the conditions of a self contained environment connected via esoteric links and inhabited by self sustaining actors. Pierre Huyghe has always shown an interest in work that speaks about itself. In his collaborative work No Ghost Just a Shell (A reference to the famous 1995 cyberpunk classic Ghost in the Shell), he purchased the rights to a stock anime character from a company in Japan, and gave the copyright to fellow artists who might use her likeness in whatever artwork they pleased. The character was named Anlee, and after a significant number of works were made, Huyghe essentially gave the copyright ownership of the character back to itself. Anlee owns itself by every legal definition. In this way a world has been built, and is then inhabited by itself. Maintains ownership of itself. Continues to exist in some form outside of any engagement or interaction with it.



Fig. 6. Pierre Huyghe and Phillippe Parreno, *The Ann Lee Project*, 2002. Taken from Artforum.com

When looking for an example of a more active and lively example of artist engaged in a world building process there is no better example than *News From Nowhere*, the name of a collaborative project between Korean artists Moon Kyungwon & Jeon Joonho. It comprises films, installations, workshops, lectures, and a website. It's name is taken from the 1890 novel by William Morris. In speaking about the beginnings of the project they state:

“The primary focus in developing the project was the restoration of art - which is currently afflicted with deformity - and an investigation into the positive relationship between art and life. In this journey of investigation, the point of departure that we shared with many people was, “Let’s go back to the beginning!” Though it is a rather stereotypical point to start from, it was the point to which we had to return to examine the status and role of art today. The set of

suppositions we constructed were useful to approach this question: What if the conditions we are exposed and bound to were eliminated and the entire human civilization had disappeared into the water? The survivors of the catastrophe would start new lives in the barren environment. If one has to build a house for the newly exploring human race, what should be considered as the most important thing? What about fashion and design? And, what about art? Such questions and the answers we came up with have been at the center of the New from Nowhere project.” (M&J, 53)



Fig. 7. Still taken from El Fin Del Mundo (2015). Image taken from <http://socks-studio.com>

Moon Kyungwon and Jeon Joonho’s work news from nowhere is a form of straight science fiction. They rely heavily on worlding techniques and can incorporate many of the elements of what Ian Cheng refers to as the “emissary methodology” of worlding. They are specifically focused on the future. Theirs is a science fiction grounded in a projection of current conditions

and society into the future. “What happens after?” is the central question in their work. How do we organize, what do we do? Where do refocus our energy, from where do we derive meaning and values. Central to their focus is community. To Kyungwoon and Joonho, “the Role of art - which originally motivated Moon and Jeon’s collaborative venture - occupies a symbolic position in their output: they are deeply invested in the hope that art can play a significant part in the reflections they initiate and the collective work of identifying values and ideas for a new world.” (Munder, 2015: 8) They are not interested in the individualistic nature of survival. These are not disaster preppers, or Wasteland survivalists fighting against the elements. They spend precious little time dwelling on the intermediary step between disaster and a reconstructed society of sorts. This is of interest, since the function is on infrastructure, community organization, and socially constructed meaning. These can be thought of as a form of science and technology. How we use and organize our science technology and resources is just as important as the implications and functionalities of those things themselves. “According to Fedorov, art uses technology with the goal of preserving living beings. There is no progress in art. Art does not wait for a better society of the future to come - it immortalizes here and now. Human Beings can be interpreted as readymades - as potential artworks. All of the people living and all of the people who have ever lived must rise from the dead as artworks and be preserved in museums. Technology as a whole must become the Technology of art. (Boris Groys, Supercommunity, 391)

There is a problem with imagining ourselves after the end of the world. There is a problem with imaging “the end of the world” to begin with. According to Deborah Danowski and Eduardo Viveiros de Castro “The end of the world projects backwards a beginning of the world; the future fate of humankind transports us to its emergence.” (Supercommunity, 455) We know from

Walter Benjamin's Angelus Novus that the future is always behind us, we do not face the future as we emerge into it but rather are drawn. Science fiction authors often times speculate on the nature of future societies, or alien societies. However, within literature, or film, or other "static" mediums the individual experience is often central in these situations. It is the experience of an individual with which we can relate that acts as our gateway into the estranged situation.

However, the decentralized, evolving, and community focus of M&Js work allows for a complex fleshing out of the societal elements in a much different way. Their focus on workshops and outreach programs, creates an opportunity for one to engage in the process themselves instead of merely witnessing it removed from your direct experience through the medium of presentation. The emphasis on fashion is also particularly interesting. Fashion has always been integral to Science Fiction, and it has always been a facet of the fanciful imagination to imagine what the people of the future might dress like. Even the Italian Futurists (famous Fascists) engaged in this fancy. But this has always been ornamental or decorative, or explained in the context of other phenomenon (functionality). Here the focus is placed squarely on fashion not in an ornamental role, but in a position fundamental to our human understanding of how we build our realities. There cannot be a conception of a constructed world if we are not actively building every element of it, and the design of our clothes has always been a fundamental part to how we as individuals inhabit and inherit our bodies and selves in spaces both social and material. By centering an element that has always been present within Science Fiction through a format that removes it from the usual explanatory trappings of Science Fiction M&J are able to say something new about the topic. They are not merely speculating, they are building a conception. This is an example of active speculation as opposed to idle speculation. How something looks is essential to our ability to understand it, and in imagining how people might cover their bodies...

In developing the project M&J were specifically interested in developing the work as a collaborative venture. They engaged in collaboration with individuals and agencies that were interested in designing and speculating at future necessities. These include:

- Rotterdam based MVRDV created “I-City/We-City”, a structure in the form of a bubble that floats around in the water-filled world of the future
- Tokyo based Takram produced a water supply system that uses artificial organs
- Toyo Ito created urban planning for communities that start to build themselves again in the tsunami affected areas in Japan

The collaborative nature of their project is unique to the medium in which they have chosen to present it. Through symposia and exhibitions they have more fully developed a complex image of the future. Their work is in line with utopian tropes, but subverts the traditional blueprint model of utopian thinking in that it does not dwell on the elaboration. Likewise, it is a post apocalyptic event that does not dwell on catastrophe. The results of the global environmental catastrophe are apparent, but the interest is in communal development, and the assumption that there is not simply an end. But also that the current system will not survive. Their emphasis on the community building aspects of speculative worldmaking practices is tied to a fundamental effect of science fiction, that of framing expectations which change over time as a means of mediating these expectations between and across different knowledge communities. (Bassett et al. 2013: 37)

It is important to note that the world building and speculative processes of M&J do not mirror real R&D projects and processes no matter how much they collaborate with designers and theorists. In doing so they would no longer be engaging in world making, they would be

expanding the current reality. What they have accomplished aligns them with Basset et al. and their assertion that: “what is interesting about SF – as a world maker – is precisely that it does not deliver on what is already predicted and expected. Fiction – even poetic language – breaks as well as makes worlds. And metaphor innovates by lying.” (Basset et al. 2013: 12)

3.3 The Afronauts and Postcolonialism

Set against the backdrop of the Space race between the Soviet Union and the United States (one of the most compelling pieces of Science Fiction immortalized into Science History), the Afronauts centers on the otherworldly ambitions of a newly independent Zambia. The work is based on the odd case of the Zambian Space program which developed following the country’s independence in the 1960s.



Fig. 8. Copyright Cristina De Middel. Taken from www.lademiddel.com

The historical background to the project is based in the effort by Edward Mukuka Nkoloso to supposedly put Zambians on the moon and eventually Mars before the US and the Soviets. The Project is often maligned as a joke. In the most severe and reactionary cases it was used by members of the British media to prove why Zambia was unable to rule itself, and as a disgusting justification for the previous colonial system. However, whether or not the program was “serious”

is almost a moot point. Science Fiction shows a conception of the possible, or what might be imagined. The Science Fiction of some is taken more seriously than the Science Fiction of others. Whose fictions are considered legitimate enough to turn into Facts. How is fiction made into history, and how is the ability to actualize and act upon dreams distributed. As with Art we cannot talk about Science Fiction without discussing the problems of legitimacy and accessibility. Science Fiction was originally the realm of white male intellectuals. “Serious” men who imagined such absurd things as a “realistic utopia.”



Fig. 9. Copyright Cristina De Middel. Taken from www.lademiddel.com

Science Fiction is inherently tied to a certain view of knowledge and production of that knowledge. That of the scientific method. However, science and its history and accessibility is not a neutral topic. It is tied to the Western enlightenment tradition, but the western enlightenment tradition is also very closely related to systems of colonialism, racism, and xenophobia. "The achievement of an estranged, critical perspective on one's home culture always has been one of the potential benefits of travel in foreign lands. In the fifteenth and the sixteenth centuries, Europeans greatly expanded the extent and the kinds of contacts they had with the non-European world." (Rieder, 2) This estrangement was warped in part into the colonial imagination that led to the enslavement of much of the known world by European powers possessing massive technological advantages over others. As Europeans engaged in Colonial Practices "...they also developed a scientific discourse about culture and mankind. Its understanding of human evolution and the relation between culture and technology played a strong part in the works of Wells and his contemporaries that later came to be called science fiction." (Rieder, 2) Technologies as they have been established act as a means through which to impress one's will on the world. In some senses Magik (referred to here as a form of non scientific causality) and technology both function similarly in that they are attempts to manipulate the conditions of reality to achieve some result that is seen as beneficial to the user. But technology is not neutral by any means.

According to John Rieder, Science Fiction story tropes often play off of white European colonial fears:

- Invasion, in which HG wells compares the invasion of the earth by Martians as similar to European colonial wars and adventurism in Africa

- Anthropological Anachronism, that there is a clear path of progress (Africans are comparable to Stone age humans, as we supposedly might be to aliens)
- The power of the Overwhelmingly more advanced and intelligent, echoing sentiments of colonial guilt. In which case empathy was not used to correct the wrongs of colonialism, but rather to justify it.



Fig. 10. Copyright Cristina De Middel. Taken from www.lademiddel.com

In this way Photography and Science Fiction Share a history. Both are heavily involved in the colonialism of the 18th and 19th century, and were tools for constructing a sense of identity, and for formalizing an expansive net of awareness over the known world. Through her work, Middel manages to turn a tender and sympathetic eye back towards a subject that was previously

robbed of agency. The true power in the *Afronauts* is not in what it portrays, but in how it portrays it. The perceived fancy and whimsy of the original project is paid no mind. Instead, the earnestness and inspiration is on full display. But it is also addressed on its own terms. Regardless of whether or not Edward Mukuka Nkoloso would have actually been able to put someone, or a cat for that matter, into outer space is besides the point. The desire is treated as genuine. When viewed from this perspective we might see that this project, and this book, engage with the subject matter not as a form of historical oddity, but as an object of genuine science fiction. A form of science fiction that is able to inject the voice and culture of the disenfranchised into our discussions of the future, when these were people who often were relegated to the role of someone to whom the future merely happened to. The desire to drag yourself to the stars, to see it for yourself. Even if the United States and the Soviet Union did make it to space, for the majority the practices that they engaged and participated in would be as fictional as any story.

3.4 Evidence and The Unfamiliar - Photography and Social Documentary as methods of Estrangement

Much of Taryn Simon's work fits neatly into the mold of a certain type of documentary photography. However, there is a distinct strangeness that oozes from her work. Technically this might be influenced by her decision to work with archival and academic forms that owe much to academic classification and research. The mere presence of estrangement is not enough to warrant a comparison to science fiction as estrangement is a preexisting concept with many applications. But it must be said much documentary photography is greatly enhanced by, makes

use of, or is successful because of a certain distancing effect provided by the work.

Photography has always had some element of estrangement built into it as a medium.

It is particularly interesting to see how many of the subjects of Simon's book are related to technology or industry. Examples include Dynamo III, which is used to study magnetic fields and the impending pole reversal of the Earth, A cryopreservation unit at the Cryonics institute in Michigan, A Cloud seeding apparatus from Weather Modification, Inc in North Dakota, and transatlantic sub-marine cables in Avon New Jersey, among others. Many of these technologies are related to obscure or classified research or projects which make them prime objects for the estranged imagination. Anything which is kept at a certain distance by necessity develops a certain mystique, but Simon's photographs do nothing to bring the viewer closer to these objects or the fictions surrounding them. This is in part because these are not stolen images. Salman Rushdie notes in the foreword to the book that they are "formal, highly realized, often carefully posed pictures, which require their subjects' full co-operation."



Fig. 11. Cryopreservation Unit. 2004. Taken from *An American Index of the Hidden and Unfamiliar*.

Beyond the images of science and industry all the images in the book portray subjects that are key to the landscape of the American imagination. These things are hidden and unfamiliar, but they have a home in the assumptions and fictions that make up the specific imaginary conception of the United States both to residents and outsiders. What the United States represents can easily be thought of as its own Meta-Fiction made up of constituent fictions; some of which Simon presents in this work. There are two photos in the book taken at the Skywalker Ranch in Marin County, California.



Fig. 12. Lucasfilm Archives, Props and Set Pieces. 2004. Taken from *An American Index of the Hidden and Unfamiliar*.

The first shows a storage room filled with props and set pieces from the original star wars movies. Costumes and props fill the space. The perspective is linear, drawing the eye towards the center where a massive image of the Death Star II is displayed. In the original films the Death Star is displayed as a mirror image, but here it is displayed in its true orientation. The Star wars films are some of the highest grossing films in the history of cinema. They are seen as being directly responsible for the popularity of science fiction in the contemporary sense. To see the relics from the production of these films laid out in such a manner has a strange effect. On the one hand, the viewer is brought closer to the world of the films through such an intimate

glimpse. But the nature of their storage and preservation solidifies the distance that exists between us and the films. Fans of the Star Wars films are known for creating replicas of the costumes and props used in the film, and images of regular people attending conferences in highly detailed stormtrooper armor are quite common. It is difficult to determine from the image alone the authenticity of the pieces on display. This points to the ways that this particular fiction and mass culture at large are intermingled through performative action, and demonstrates the pervasiveness of the influence of science fiction on a mass scale.

Another example of artists working in social documentary photography who tap into the methodologies of science fiction are Larry Sultan and Mike Mandel. Their collaborative work *Evidence* was assembled from found photographs collected from the archives of seventy-seven aerospace weapons and energy corporations and research bodies located in California. Sultan and Mandel took two and a half years to complete the project, and in that time they viewed over two million photographs. By the end of their research the pair had collected more than five hundred images, that were eventually reduced to fifty-nine in the final edition of the book.



Fig. 13. Untitled Evidence. 1977. Taken from Larrysultan.com

Their work is closely linked to the society in the United States that was centered around scientific processes and progress, and which elevated the process to a degree of cultural significance that pervaded every level of society. Specifically, California was seen as the seat of the sciences that were crucial to defining the cold war mentality in the United States. When

presented in such a way there is an almost identical distancing effect compared to the images of Taryn Simon, and indeed they are based in the same techno-social sphere.



Fig. 14. Untitled Evidence. 1977. Taken from Larrysultan.com

When talking about the relationship that photography has to science fiction one might immediately turn to Susan Sontag, who stated that: “At one end of the spectrum photographs

are objective data; at the other end, they are items of psychological science fiction.” (Sontag, 1997: 163) In this way, photographs through their relationship to the past, and also through their development as a technical mechanical process necessarily engage with the same methods of estrangement.

Conclusion

Science fiction as a speculative process has applications outside of those typically assumed for it at large. Because of the prevalence of its influence, and because of the increasing complexity of issues facing the world today science fiction could be argued to have more importance than ever. This paper has shown how science fiction is useful in understanding and interacting with contemporary philosophical and theoretical issues, and how in turn those looking to express complex topics often turn to science fiction as a form of methodology for expressing complex topics.

In the context of contemporary art the role of science fiction has gone largely unexplored. Discussions about art that relate to science fiction are largely related to those works which specifically fit into and represent tropes that might be found in science fiction literature and media such as an emphasis on technology, extrapolation into the future, or complex world building techniques. These readings are valid, but they are lacking in scope. This paper has shown how science fiction strategies and methodologies such as estrangement have a place in art beyond the typical conceptions of what constitutes science fiction. Even something as mundane as documentary photography has much to gain from aligning itself with certain science fiction methodologies.

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