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The Soul and the Human Revolution in Bernard Wolfe's *Limbo*

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Albert Einstein once said, “technological progress is like an axe in the hands of a pathological criminal.” Bernard Wolfe’s 1952 dystopian, science-fiction text *Limbo* explores such a theory as the benefits and potential pitfalls of mankind’s rush toward the merging of man with the machine is defined. Wolfe’s cult-classic has been cited in David Pringle’s *Science*

Fiction: The 100 Best Novels and David Samuelson has placed it on equal ranks with Huxley’s *Brave New World* and Orwell’s *1984* as one of the best science fiction works of the twentieth century, one that draws upon the cultural observations of Freud and the mathematical works Norbert Wiener.

The year is 1990, set in the post-nuclear aftermath of a war-torn United States, *Limbo* focuses on the story of Dr. Martine, a neurosurgeon who has hidden on a remote island to escape the atomic war brought on by the United States and a man-made ‘god-machine.’ Upon returning to America years later, Martine discovers that the voluntary amputation of human limbs has become an esteemed course of action for many citizens. Replacing their organic limbs with mechanical augmentations, the enhanced populace of the world are now in a power struggle for access to mining rights for a rare metal to power their new prosthetics, shifting human desire toward an evolutionary singularity, blurring the lines between man and machine.

The text paints the picture of a bleak alternate reality as well as a dystopian future filled with moral choices regarding the future of mankind. In the rush to reach the man-machine singularity, the potential for losing the intangible elements relating to one’s self-identity is intensified as the bio-synthetic union begins. As the physical elements that outwardly define humans are removed, the synthetic replacements effectively supplant the intangible elements of the human. This intangible part may be regarded as the soul, the ‘essence of humanity.’ In the wake of Wolfe’s work of fiction, the posthuman may very well be the future of humanity, but what will happen to the soul in this future? Does it have a social or literary responsibility in the age of mechanical dominance?

In combining the works of Bernard Wolfe’s fiction, as well as interdisciplinary works of philosophy, theology and psychology, this analysis will focus on *Limbo*’s exploration of the soul within the context of the posthuman revolution. Drawing from secondary sources including N. Katherine Hayles, the focus of this analysis will attempt to define the role of the concept of the soul in *Limbo*, analyze its uses within the context of the plot as well as attempts to provide an argument to the question: what makes a human a human?

Chapter 1

The Soul: Its Origin, Theories and Literary Evolution in Posthuman Studies

When discussing a concept as profound and equally as complex as the soul, analyzing a multitude of interdisciplinary studies is necessary to obtain a well-rounded understanding of this vague, yet familiar concept. The soul has roots in multiple areas of study including, but not limited to psychology, theology, philosophy and history. The idea of the soul is an omnipresent notion with deep historical roots and no sign of being universally denied. Indeed, the soul is a concept which proves to be one of the most thought-provoking ideas mankind has ever discussed, and each culture, religious affiliation or philosophical teaching has varying paradigms about the nature or responsibility of the concept. In my attempt to trace its origin, as well as its effects and role in literature, the focus of this analysis revolves around studying its potential uses in Posthuman studies.

This current, first chapter will assemble select quotes and examples that survey the varying ideas and interdisciplinary studies which have influenced the evolution of our thinking of the soul. Rather than attempting to summarize the history of the soul, I will offer a number of examples from the fields of theology, philosophy and psychology and attempt to create a connection between these fields and studying the soul in connection with the theme of the posthuman in literature.

The posthuman can be regarded as an entity which seeks to redefine the evolutionary future of humanity by merging man with machine. The posthuman is both an entity and a literary technique that focuses on enhancing the abilities and thought processes of the current human state. This may be achieved through the introduction of technology integration into the physical human body, or the use of new and innovative critical thinking methods which may alter human cognitive process, resulting in an elevated level of self-awareness. The posthuman may, more commonly, be referred to as a 'cyborg,' a literal hybridization of the organic and the synthetic, the man merged with the machine. But the posthuman is not limited to the corporeal form of the human. It may simply be a small portion of humanity that has evolved far beyond the capabilities which we, as humans, currently have.

To begin this analysis of the soul, it is best to first study the etymology of the term to determine the origin of both the concept and word. According to the Oxford English Dictionary, the 'soul' is "the principle of intelligence, thought, or action in a person (or occas. an animal), typically regarded as an entity distinct from the body; the essential, immaterial, or spiritual part of a person or animal, as opposed to the physical." A concept as widely interpretable as the soul has more than a few uses in varying languages and time periods. Its roots lie in the Old Frisian "sēle, sēl," as well as the West Frisian mentioning of "siel, siele." Other etymological roots include the Old Dutch "sēla, siela" soul, Middle Dutch "siele, ziele, siel," Dutch "ziel," in early modern Dutch also 'person,' Old Saxon "sēolaseola, siala, sēla" soul, Middle Low German "sēle, seele, seile, sile, siele," Old High German "sēla, sēula, sēola, sela, sēle" soul, Middle High German "sēle," German "Seele," Gothic "saiwala," of inexact etymology. Northern Germanic languages also show a variety of forms, which may potentially be influenced by Western Germanic languages. For example, the uses of Old Icelandic "sála, sál," Norwegian "sjel, (Nynorsk) sál, (regional) sæl," Old Swedish "siäl, sial, siel, sel (Swedish själ)," Old Danish "sial, siæl, sæl, sel (Danish sjæl)," and also Finnish "sielu, Saami siellu."

One of the first recorded instances of the uses of 'soul' can be found in early Old English is the *Vespasian Psalter* LXXVII produced in the second to third quarter of the 8th century: "Non pepercit a morte animabus eorum: n[e] spearede from deaðe sawlum heara." In discussing the etymology and origin of the soul, we can deduce that the concept of the soul, as well as its definition and use, may fluctuate depending on interpretation, language or culture. By gaining a base understanding of where the term came from, we may see that its etymology create nuances and connotations to the current semantics which may not have been noticed otherwise.

The soul, in it of itself, is a concept which proves to be both simple to understand, yet complex in its analysis. One's first introduction to such an idea is most commonly found to be a religious interpretation. The soul, in a Western-based religious context, is a formless entity which resides within the physical body. Each person, or living entities, including in some faiths animals, in some faiths, is born with a soul. This entity is believed to be the ethereal culmination of emotion, religious faith, consciousness and even knowledge. Depending on the interdisciplinary study in question, in the following example, cultural anthropology, the capabilities and role of the soul can vary dramatically.

Some tribes of New Guinea perceive the soul as an intelligent, simple entity, whose role in the interaction between the body and soul is to act as a partner to its physical form. For some of these tribes, the soul is perceived as a spiritual antithesis of their physical body, one that is attached to the body during a state of consciousness and detached during a period of unconsciousness, such as during a state of sleep or death. One example of these tribes includes the Papuans, a term for the varying indigenous tribes of New Guinea, who "believe that within them resides an invisible other self, or spirit, which, if it occasionally wanders for a hurried tour from its home in the hours of sleep, goes forth for good at death, to hover for some period at least round the scenes of its embodied life before departing for some lone island or inaccessible summit." Zulu souls "may occupy the roof of a man's hut, and if he changes his abode his soul flits also." (Alexander, 423) For this particular interpretation of the soul, the presence of an otherworldly self proves to be a comforting notion in the relationship between the body and the soul. In the case of the Papuan tribes of New Guinea, the soul acts as an otherworldly figure which lives alongside the individual. It moves in tandem with the individual person except during a state of unconsciousness. Only when one sleeps or dies is the soul then able to wander independently from the body. This separation of the soul from the body displays a level of intelligent design with an emphasis on the soul's reception to knowledge. According to the Papuan understanding of the soul, its separation from the body during a state of unconsciousness equates the Papuan soul to a concept similar to that of a wandering spirit. By comparison to Western philosophy, the Papuan approach differs in the idea that the Papuan soul is independent from the body during a state of unconsciousness. Most Western understandings regard the soul as an ever-present entity linked to the body and only becomes independent from after the death of the physical form.

This wandering entity displays the attributes of curiosity, environmental awareness of the mortal world as well as a need for separation from the physical human form. This paradigm harkens to an example found in early literature, to an example found in Homer's *The Odyssey*. Odysseus' mother, in reference to the spirit/soul, states that at death "the spirit flies forth like a dream." This character even references the voices of the soul, describing them as mumblings. These mere utterances of the soul were described as "gibbering shades" which prove to be a hollow replica of the once human speech, effectively giving the soul denigrated human or posthuman characteristics. Doing so evolves the soul from an ethereal version of the physical human form, into a shade, a mere facsimile of what it could have once potentially have been.

Other interpretations of the soul, and those of which are most popular, include those based on religious faith. Depending on the country of origin, systems of belief and cultural atmosphere, the soul could play a varying role in the lives of people of faith. The soul, as an entity most commonly associated with the afterlife or non-physical forms, is believed to exist either in tandem with the physical body or, in certain faiths, not at all. Varying sects of Christianity define the soul as the essence of a living being, responsible for housing morality, ethical values and the culmination of one's religious faith. The emphasis of this religion revolves heavily around the 'salvation' of one's immortal soul. In this scenario, the soul differs from the Papuan's view of the ethereal entity in its purpose and reason for existence. The Christian view can be seen as a struggle. The dynamic between the soul and the physical body presents itself in the form of life. Life for the physical body acts as the battle ground for the body's attempt to 'save' the eternal soul from damnation. This dynamic effectively defines the soul and differentiates it and the body from each other. The soul becomes a being dependent on decisions made in life that may affect the state of the soul in the afterlife. Thus, the body and soul are judged differently in the time after death. This judgment can be seen in varying passages throughout the Christian Bible in both the Old and New Testament.

One example can be found in the first book of Thessalonians, chapter 5, verse 23: “May the God of peace himself make you perfectly holy and may you entirely, spirit, soul, and body; be preserved blameless for the coming of our Lord Jesus Christ” The relationship between the body, soul and spirit prove to be a division of physical and ethereal boundaries. The body’s mortal state of being is the antithesis of the soul’s apparent immortality, yet it is the body choices in life which decide the fate of the soul’s eventual afterlife. For example, the decisions and moral choices made in life via ethical decisions directly correlates to the soul’s final resting place after the body dies. Thus, in this aspect of religious study, one may assume that the fear of dying as a body may not carry as much fear as what might happen to the soul. Unlike the body, the soul continues to exist long after the body dies, eventually moving on to some form of an afterlife, whether it may be in a state of pleasure or suffering.

Multiple faiths have at least two distinct forms of an afterlife that can be rudimentarily defined as either good or evil. A third option may exist depending on the religion in question, which can be identified as morally neutral. Some of these neutral places for the soul’s full passage into the afterlife include Catholicism’s limbo, Christianity’s purgatory or the Islamic Barzakh, which is defined as a state of unconsciousness prior to the time of resurrection. The multitude of interpretations of a ‘heaven’ or a ‘hell’ are extensive and the intricacies of each are far too vast for this analysis, though the base assessment can be made that if one believes in the existence of a personal soul, then such a soul may reside in a place conceptually defined as either good or evil. Once again looking at the Christian Bible, chapter 10 verse 28 of the book of Matthew provides an example of the relationship between the body and soul in the face of death: “And do not be afraid of those who kill the body but cannot kill the soul; rather, be afraid of the one who can destroy both soul and body in Gehenna.” Gehenna is defined in the Hebrew Bible as the Valley of the Son Hinnom, an area outside of Jerusalem and is most commonly associated as a place for the wicked, i.e. Hell in Christian, Islamic and Jewish scripture. While a concept of an afterlife is normally associated with an intangible place born of information gained from scripture or religious teachings, examples like the aforementioned Gehenna offer evidence of man’s need to bridge the gap between the intangible and the tangible.

Whether in the analysis of religion or in another form of interdisciplinary study, the soul is seen as distinct from any physical form. In the following example of the soul, we move away from the study of theology into the realm of psychology and its interpretations of the soul in contrast to the physical human form, in this case, the duality of opposing concepts. This duality of existence is born of man’s desire for better understanding of himself and his surroundings. Separation is a form of mental compartmentalization used for the organization of ideas, as I will explain later in this chapter. As we examine the dynamic between the soul and the body, so we come to understand the human necessity for the existence of opposing concepts, such as a Heaven and a Hell. Dr. Michael R. Trimble, Professor of Behavioral Neurology at the University of London, explains that the duality of opposing concepts is a natural aspect of human cognitive development. All concepts which have two opposing ideals have a place in mirroring the dualism of man. “Whether the opposing elements are Seth and Osiris, matter and spirit, the sacred and the profane, or good and evil, the underlying myths that try to explain the origins and course of the universe also reflect the cognitive dualism of man: masculine and feminine, active and passive, body and soul, love and hate.” (Trimble, 12) Trimble continues his insight into human cognitive development of duality by citing William Blake, who stated that these opposites are necessary for human existence and offered a list of errors caused by dualities in religious scripture. Even though William Blake is an eccentric poet from the Romantic period, Trimble used the following excerpt from Blake’s *The Marriage of Heaven and Hell* to outline mankind’s necessity in the mind for dual, opposing ideas:

Without contraries is no progression...From these contraries spring what the religious call Good and Evil. Good is the passive that obeys Reason. Evil is the active springing from Energy. Good is Heaven, Evil is Hell... All bibles or sacred codes have been the causes of the following errors: 1. That man has two real existing principles, Viz: a Body and a Soul 2. That Energy, call'd Evil, is alone from the Body, and that Reason, call'd Good, is alone from the soul 3. That God will torment Man in Eternity for following his energies.

Blake's line of reasoning implies that humanity cannot be without a concept which does not also contain a contradictory implication, a binary concept of opposing ideas. The soul is the antithesis of the body, and good is the opposite of evil, while some might find science to be the contrary to religion. With regards to religion, Blake had some interesting ideas when it came to defining vague concepts such as 'Evil' and transforming them into recognizable ideas with the use of identifying monikers. Varying religious beliefs have equated 'Good' to Heaven, 'Evil' to Hell and the soul apart from the body. Blake uses this distinguishing of concepts to promote this concept of dualism.

Blake's notion of identification via dualism is a concept which can be related to ontological and epistemological thought. The dualities of concepts such as a 'good' and 'evil' are merely descriptive identifying words to characterize other intangible concepts, such as a 'heaven' and a 'hell.' The philosophical identification of concepts distinguishes those that are tangible to the senses from those which are considered transcendent. This segregation between the tangible and the intangible is what allows the concept of the soul to transcend mere literal identification (the term 'soul') and with it, is an expansive, complicated moniker used to denote the sum of one's faith, knowledge, consciousness, etc. Simply put, the soul cannot be explained without the use of multiple allusions to varying interdisciplinary studies, faiths and practices as well as psychology ideals. Effectively, this collection of studies and religious affiliations are a good indication of humanity's interest in ontological questions, the nature of being. Contrary to epistemology, which concerns the nature of knowledge, ontology redirects human thought and discussion toward the meaning of being, such as the existence of the soul.

This distinction between ontology and epistemology is important in relation to the concept of the soul, due to the soul's ability (as a term) to influence the fields of theology or psychology. Ontology or epistemology's perception of the soul affects how it is interpreted, and what the term 'soul' could mean in the field of philosophy. Within this field, the 'soul,' in the following example for ontology, is a concept encompassing faith-based belief and the sum of human consciousness. Friedrich Nietzsche, for example, promoted this ontological view of the soul by looking into the word's implications and potential to influence to redirect conversations toward the rise of a word as opposed to simply stating a stance for it. In the case of the soul, and as previously mentioned, the term 'soul' is simply an term for the description of a concept which is said to be the sum of one's faith, consciousness or being. Bearing resemblance to one's devotion to the belief of a soul, Nietzsche's version of Zarathustra tells the tale of a man whose self-imposed isolation led to a revelation of the soul, viewing it as a catalyst for influence and as a culmination of varying ideals. Nietzsche's version of Zarathustra opposed standard Judeo Christian doctrine by discussing religious morality as something that was not divinely inspired, but was influenced by its Pagan background. Nietzsche's figure of Zarathustra was a strictly moral individual who frowns upon his followers for their lack of knowledge regarding their own morality. After ten years in seclusion, Zarathustra proclaims that God is dead and that humanity must overcome their own mindless lack of knowledge or blind devotion to vague moral codes to eventually transcend to a state of *Übermensch*. This state of being, of German origin, translates literally to 'above-human' or 'super-human.'

This state called for followers of a faith, or humanity in general, to look beyond vague moral values based on religious ethics and to reevaluate these values. But, whether by his own intent or not, much like Zarathustra, this state of *Übermensch* is largely ignored by Zarathustra's followers and Nietzsche rarely, if ever, promoted this concept well beyond his 1883 book *Thus Spoke Zarathustra*. Although the concept of the *Übermensch* was never fully expounded upon by Nietzsche, the concept proves to be an identifier for the state of human conceptual evolution. Nietzsche's story of Zarathustra implies that the soul is a term whose nuances and ability to influence makes the word itself, a powerful and persuasive moniker. The mere mention of the term, as well as exploring its influences makes the concept of the soul a powerful tool in religious or philosophical revelation. Nietzsche's story is important in the fact that it focuses on the importance of exploring the soul's potential to guide its believers towards a path of ethicality or religious goodness. Nietzsche's introduction of *Übermensch* is another concept of note as it may be regarded as a precursor to the study of the posthuman. While different in definition, both studies relate to the altered, enhanced man. The man that is better in either physical form or elevated thinking.

Throughout the following chapters of this analysis, the state of human evolution in the Posthuman is defined through physical enhancements. Through the state of *Übermensch*, humanity faces a moral evolution. This state defines the super-human in a way in which he/she is no longer hindered by faith-based values born of repositioned traditions. Human morality is based on the substance, etymology and meaning of a word as opposed to its institutionally based standards and traditions. The meaning of a word would rely on the moral code of an individual, not on God or some form of intangible being. When dissecting a word or concept, especially something as vast and complex as the soul, our thinking must ascend to the concept that would be embraced by the *Übermensch*. A state in which we must take the soul and look beyond the religious affiliation normally associated with it. The soul must be viewed as an indicator of studies which include not only theology, but psychology, philosophy and posthuman studies. Intellectually moving beyond the theological ramifications of the soul and studying all aspects of what it entails can be considered one of the best first few steps in understanding the soul's role in posthuman studies. Regarding Nietzsche's concept of the *Übermensch*, one cannot help but create a connection between it and the posthuman, even if solely in name. While *Übermensch* translates into 'super-human' or 'above-human,' similarly, posthuman is translated into 'after human.' Differentiating itself from the *Übermensch* taught by Nietzsche, the posthuman relates to the advancement in humanity's evolution, in the case of *Limbo*, it is mankind's integration with machine. Although, "*Übermensch*" describes a human being that has become more powerful in his thought processes or physical form, it proves to be a similar concept to Wolfe's interpretation of the posthuman, as a state of humanity to describe itself as being enhanced in some way.

When discussing the great number of works related to the study of the posthuman, there are a multitude of factors which contribute to classifying a work as such. The posthuman relates to an entity which redefines or seeks to re-conceive humanity. This re-conception may be defined as an evolutionary step following that of the transhuman, a state in which the boundaries and limitations of the human individual are surpassed in some way. This surpassing of limitations allows the new trans- or posthuman to be far more advanced than the current state of humanity. Although this advancement in the human condition does not translate to a vast alteration in the appearance of standard human form, the posthuman may still be recognizable as human or may be similar in appearance by still having features of a human, such as limbs, face, etc.

According to the World Transhuman Association, the posthuman is a being "whose basic capacities so radically exceed those of present humans as to be no longer unambiguously human by our current standards." (Bostrom, 5) Nick Bostrom, a faculty of Philosophy at Oxford University, continues by differentiating the transhuman from the posthuman, stating that the posthuman is the outcome of technologically progressive evolution in humankind, and the transhuman is a step toward that end goal. Bostrom and Humanity+ have formally defined transhumanism in both the following definitions:

(1) The intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities. (2) The study of the ramifications, promises, and potential dangers of technologies that will enable us to overcome fundamental human limitation, and the related study of the ethical matters involved in developing and using such technologies...We can also use technological means that will eventually enable us to move beyond what some would think of as "human". (Bostrom, 4)

Bostrom and the World Transhuman Association's quick reference guide on the transhuman also shed a small light on the posthuman. The posthuman is here defined as a human who has evolved far beyond his/her personal limitations in multiple aspects, which include exceeding the boundaries of human physiology, mental well-being and consciousness. The transhuman, by comparison, can be considered a step toward the eventuality of posthumanism. This phase in human evolution is a starting point in the evolution of the human and affirms the desire in using technology to further improve mankind. When comparing the posthuman to the transhuman, we must also compare the transhuman to the human. When looking at each field of study, we see that each study in the 'human' debate is an evolutionary step toward progression. The humanist mentality treats humans as important individuals, emphasizing freedom, tolerance, and rational thinking. The transhumanist movement is the next evolutionary step which carries the same ideas, but accepts the fact that humanity has not reached the final stage of their development. Advancements in not just technology, but human thinking or ability create this progressive step toward the eventuality of the posthuman. The posthuman may not be limited to the corporeal form of the human, or it may just be a facet of humanity which has evolved far beyond the capabilities which we currently have. It is an entity which is capable of mixing the organic with the synthetic, the full capabilities of the logical with the intellectual and the conscious with the unconscious. This state, while still an entity which may be considered posthuman, may also be categorized as a 'cyborg.'

With this understanding, as we come to realize that the posthuman could be the eventual outcome of humanity, we must explore how the soul has come to play a role in this evolution. In the posthuman world, the implied intent is that human knowledge will seek a state in which universal understanding and higher thought processes are emphasized and encouraged. With this in mind, the immaterial concept of the soul has a place in the field of posthumanism and/or its literary works.

To begin to contribute to the debate as to the soul's place in posthuman studies and literary works, we must first provide examples of the soul's implied existence in the field of posthuman studies. The state of the human or animal soul is circumstantial, depending on the outlook, faith and interdisciplinary study in question. When relating the soul in the context of the posthuman, it is beneficial to examine which entities are said to be in possession of a soul. Humanism dictates the importance and priority of the well-being of humanity.

Many philosophical and theological beliefs regard humans as one of the only entities to have the ability to possess a soul. This hierarchy of beings can be dependent on varying interdisciplinary studies. The human is almost universally regarded as having a soul, while animals, plant life and inanimate objects may vary in their predisposition to innately having or potentially attaining a soul. Returning to Christianity and the Bible, multiple books offer their stance on God's appropriation of the soul to different entities. One example can be found in the book of Job, chapter 12, verses 7-10: "But ask the animals, and they will teach you, or the birds in the sky, and they will tell you; or speak to the earth, and it will teach you, or let the fish in the sea inform you. Which of all these does not know that the hand of the LORD has done this? In his hand is the life of every creature and the breath of all mankind." In this example, we see that 'God' has entrusted 'life' to all living beings including animals. In their existence lies the essence of life, which we may be considered the soul. The animal and the Earth itself have been given both a soul as well as 'knowledge' of the existence and omnipotency of God. Although this essence is essentially skewed due to the fact that the essence which is taught in the Bible, is said to dwell in all living things, is only meant to promote faith in God and does not include a clarification regarding other entities, including plant life. The aforementioned quote from the book of Job mentions "the life of every creature" and "the breath of mankind," but the existence of a soul in this example is debatable, as it depends on the interpretation of 'life' or 'breath,' and each may or may not equate to vastness of the soul. The animals mentioned in the book of Job are depicted as being reliable sources in their knowledge of God's distribution of the soul in all living things, presuming that each of these entities are in possession of one. In the book of Genesis, God is said to have given life and a soul to humanity as well as given them full dominion over plant and animal life. While later books such as Job offer opposing viewpoints, the nature of animal or plant life is considered intelligent yet subservient to humans. This issue of subservience of species regarding the soul proves to be an interesting concept when considering the term 'animal' is derived of the Latin root 'anima,' or soul. Intelligence may not necessarily translate to one entity having a soul over another, yet subservience to another intelligent being may be an argument for one's lack of a soul. But this thought process regarding the hierarchy of living things is what has come to be known to most philosophers of the soul or theology as the viewpoint of the "savage." Mentioned in L.D. Arnett's *The Soul: A Study of Past and Present Beliefs*, early civilizations are characterized by their rudimentary understanding of the soul. Effectively, this thought process reduces the soul down to a concept that is a differentiating factor between intelligent and non-intelligent beings, humans and others as well as defines the soul as something of equal design as the corporeal human, only "smaller." Many psychologists, philosophers and theologians argue against the promotion of the savage education due to its inability to see the complex ideals which tend to govern the soul. It represses its potential and narrows the scope of such a concept into a smaller version of the physical form. One example of an argument made comes from Arnett's aforementioned article, Arnett cites social anthropologist Sir James Frazer. Frazer's *The Golden Bough* consists of seventeen volumes published between 1890 and 1915. These texts offered a modernist approach to discussing religion as well as regarded it and theology as a whole as a cultural phenomenon. Doing so allowed Frazer to focus on this now mainstream movement of faith in a detached fashion without regarding it as a social norm, but a cultural movement or step which seems to greatly influence human thought processes. Frazer states that religion and its teachings should be considered only a cultural movement and not at all the best medium for logical thought. Rather, religion and faith must be considered an evolved step in philosophical thought processes, effectively evolving from archaic ideas of "magic" to religious belief to, eventually, scientific thought. In regards to Frazer's view on the savage's viewpoint of the soul, an example he mentions is the all-too common notion that the soul is a smaller version of the physical form rather than the culmination of life, knowledge or conscious.

It simplifies it into a mere 'driver' of the body as opposed to being the culmination of the very essence of a being:

As the savage explains the processes of inanimate nature by supposing that they are produced by living beings working in or behind the phenomena, so he explains the phenomena of life itself. If an animal lives and moves it can only be, he thinks, because there is a little animal inside which moves it. If a man lives and moves, it can only be because he has a little man inside who moves him. The animal inside the animal, the man inside the man, is the soul. (Arnett, 124)

This process of thinking in defining the soul is simplified to the point of miniaturizing that which is only known outwardly. If a living being is defined and seen via their outward appearance, that appearance is the easiest form in which one can define that person, thus, the savage concept of the soul is defined in scale as opposed to substance. Frazer's example of the savage analysis of the soul defines consciousness as a driver who merely controls the body and is given mortal monikers for its existence. For example, this soul is meant to be a "smaller" version of itself "living" inside the body which controls the form. Frazer's thought process on this uninformed view of the soul is that of enlightening those whom give human traits to a concept which is meant to be the antithesis of the human. If a soul is to be the ethereal manifestation and antithesis of a living being, it is unreasonable to assume that the soul is governed by physical human traits. It also indicates that the activity of humans or animals is governed by the presence of the soul. Frazer's view of the savage also indicates that the soul's presence is also governed by the lack of activity, essentially questioning its existence during a state of sleep or unconsciousness. This idea harkens back to the Papuan understanding of the soul.

Similar to Frazer's summary of the "savage" thought process of the soul, the simplification of the soul and its existence as a type of 'unsubstantial human image' is shared by Sir Edward Burnett Tylor in *Primitive Culture and Anthropology* as told by Arnett. Tylor, an English anthropologist and harbinger of the scientific study of cultural evolution, held a similar example in the "savage" nature of simplifying the complexities of the soul. Tylor's explanation of the 'lower races' defines the soul as an almost ghost-like figure. The soul, or spirit, is defined as the ethereal iteration of the physical human form, able to possess not only the body of its own self, but animals and inanimate objects as well:

Tylor says the personal soul or spirit among lower races may be defined as follows: "It is a thin, unsubstantial human image, in its nature a sort of vapor, film or shadow; the cause of life and thought in the individual it animates; independently possessing the personal consciousness and volition of its corporeal owner, past or present; capable of leaving the body far behind, to flash swiftly from place to place, mostly impalpable and invisible, yet also manifesting physical power, and especially appearing to men waking or asleep as a phantasm separate from the body of which it bears the likeness; continuing to exist and appear to men after the death of that body; able to enter into, possess, and act in the bodies of other men, of animals, and even of things." This definition has wide application, is, in fact, a general definition, yet as one having universal significance it was not so claimed by the author. This conception of the soul "preceded and led up to the more transcendental theory of the immaterial and immortal soul, which forms part of the theology of higher nations." (Arnett, 124)

Tylor's definition of the soul, as stated by Arnett, is that of a generalized idealization of the concept. The significance of this definition defines the soul as an ethereal entity independent from the body, yet responsible for the body's consciousness, past and present actions as well as knowledge. This definition of the soul contains similar traits and capabilities which can be more accurately defined as a 'spirit' or 'ghost.' The ghost or spirit, while similar to the soul in varying defining factors, is defined more so as the antithesis of the body's physical form, only existing after death. This proves to be a varied iteration of the immaterial soul, as the ghost only exists postmortem, while the soul is said to exist prior to birth, in the present while the body lives as well as after the body's death. The spirit, which Tylor describes, proves to be different from the aforementioned examples of the soul such as those mentioned in religious texts. The similarities in Tylor's explanation of the spirit bear more of a resemblance to that of the Papuan soul, although a major difference lies in the differentiation between the soul and spirit.

Understanding the distinction between the soul and the spirit also comes into play in describing one's dedication towards a cause, ideal or faith. The spirit, on the other hand, may refer to one's devotion to an ideal or a remembrance of one's past devotion to a cause, easily relatable to honoring the memory of an idea or someone. For example, a person may say that the soul of a person still resides in a place or with a person, an entity or representation of the person after death. But the spirit is a concept which is better left to individual interpretation depending on the person or ideal in question. One example of this may include the question of upholding the 'spirit' of a principle or person in relation to an action taken in remembrance. We may see this in the current political climate in the form of Kim Jong-un, supreme leader of North Korea, also known as the Democratic People's Republic of Korea. Kim Jong-un, following in his father footsteps, the late Kim Jong-il, can be considered to be following 'in the spirit' of his father's legacy. In this particular instance, the concept of the soul differs in the relation to the concept of the spirit; the soul may be regarded as an ethereal antithesis of an entity's form. The spirit, on the other hand, may linger as well, similar to the soul, but resides in the minds of those who wish to continue the ideals or progressions of an influential, now gone or deceased individual or message. The division of the soul from the spirit can be summarized in the concept of remembrance. The soul is the remembrance of the existence of a person, animal or entity while the spirit is a lingering remembrance which others may define as the persistent memory of a late individual or people's personality, message or life goal.

Once again, citing religion, the soul and the spirit are able to share similarities as an indication of one's faith and the representation of it. An example of this can be found in a small passage in the New Testament, specifically, the book of Luke, chapter 1, verses 46-47: "And Mary said: 'My soul proclaims the greatness of the Lord; my spirit rejoices in God my savior.'" In this instance, Mary is described as defining her soul and distinguishing it from the spirit, allowing each to have their appropriate role or responsibility in defining her faith. The soul, in Mary's case, is her proof of the existence of a God and the proclamation of her faith. The spirit, celebrates the existence of a God and lends voice to her faith. The soul can be considered the manifestation of faith, while the spirit may be considered the voice used to describe and promote this manifestation, almost as if it was a language. The importance of distinguishing the soul from the spirit is that of identifying each concept's role in life and assessing how it may affect the bearer. By most accounts, when the soul is indicated, it exists in tandem with the physical body, existing prior to the body's existence and living on and transferring its 'essence' to another body. While the spirit may represent the intangible concept of human dedication, the soul may be considered a representation of one's faith or may be considered the sum of knowledge, if we are to acknowledge Plato's idea of metempsychosis, for example.

The importance of understanding a multitude of perspectives on the soul, even ones which may be considered not fully informed or one-dimensional, is crucial to gaining an understanding of the soul's capability as a literary idea. Bernard Wolfe's *Limbo* focuses on the evolutionary future of the liberal human subject. This focus of study in varying posthuman works primarily regards humanity's self-imposed evolution through the means of cybernetics and digitalization of information. The posthuman dictates the state in which the individual has surpassed the limits of natural human capabilities and has effectively evolved into a being which still might resemble humanity, but are essentially far more advanced in ability. The abilities of the synthetically enhanced individual are multiplied as the implementation of machines allows the users to gain physical abilities far beyond the capabilities of the standard human body. As will be developed in future chapters, Bernard Wolfe's *Limbo* revolves around humanity's transition from its current state of organic self-identification into a state which defines humanity as a spliced entity, one which combines elements of the natural human body with synthetic limbs. This union effectively makes any posthuman within the text 'better' than their non-posthuman counterparts.

When contrasting the soul to the field of posthuman studies such as this, it is important to draw a comparison between the soul and the 'partitioned' nature of the posthuman. Specifically in Wolfe's text, we see that the human body has been divided between the organic and the synthetic via artificial limbs. Similar to the body's division of labor based on limbs or parts of the body, the soul is theorized as capable of being partitioned as well. This concept of the divisive soul allows it to be regarded and responsible for more than the summarization of faith or the human spirit. This allows the soul to be divided into fields of responsibility which may then allow it to be identified as an umbrella term which dictates consciousness, faith or spirit. The soul may then be considered an all-encompassing phrase which identifies all the intangible concepts of the human body. Regarding the organizational methods of the human brain's capacity for organization or understanding, it is not unnatural to divide the soul into distinct parts. Philosopher and scientific researcher H. B. Alexander explores this philosophic and scientific expression in defining the soul in his 1912 journal piece, *The Conception of the "Soul."* This particle excerpt provides a summarized overview of the soul's ability to be partitioned as well as providing a psychological approach to a philosophical idea. While he states that his work is only meant to be a provisional sketch of notes on the concept, Alexander provides a brief excerpt on humanity's psychological nature in dividing the soul into parts to encompass varying facets of human emotion:

"The Partitive Soul.-From this plurality of souls it is only a natural step to regard the soul as divided into a number of fairly distinct parts. In our own popular thought there is frequently an entitative distinction between Soul, Spirit, Mind, and Consciousness; and it is to be doubted if the mass of men have outpassed Purchas's conception of the soul as "conflate of the Mind, Spirit, and Animal Soul, or Idolum." Certainly the strong hold which the old-time "faculty " psychology still retains even upon scientific text-books and treatises, compartmentalizing perception, emotion, volition, reason, etc., is palpable evidence of the vitality of this primitive way of thinking. Nor can it be denied that the physiological analysis of experience given by the "Five Wits," which the miracle plays loved to personify, is in itself a somewhat powerful and striking support to the compartmental mode of conceiving mental life; while in our own day the curious and complicated phenomena of multiple personality have given a semi-scientific ratification of old-fashioned beliefs in multiple entities connected with the same body." (Alexander, 425-426)

Alexander states that humanity's initial distinction between the soul, mind and/or spirit is a natural action in analyzing the psychological patterns of human thought. The need to organize and create distinctions is a way for people to process a vague, intangible concept and analyze it using semi-scientific rationale and reasoning. Conceiving mental life in a compartmental code applies to not only knowledge and memory, but also to emotion and consciousness. This division of the soul plays host to a comparison between its compartmentalization and the compartmentalization found in Wolfe's *Limbo* through physical human form. While we may catalogue the soul and define multiple roles in the fields of emotion or consciousness, we may also catalogue the body in defining boundaries between synthetic and organic, science and religion, and the physical and the intangible.

As a multitude of interpretations of the soul in varying studies has been explored within this essay, we see that the concept of the soul may differ greatly depending on the perspective taken. But across all studies, the concept of the soul has been explored as an intangible antithesis to the body, to be an all-encompassing representation of life before and after the physical form. In theology, the soul represents the summarization of one's faith. In psychology, it represents the human mind's tendency toward creating a concept which proves to be bigger and more versatile than its physical form. In posthuman studies, it may represent a tired, timeworn relic of a time in which humanity did not fully understand or reach its full capabilities as a species. In the case of *Limbo*, the human race has effectively become better in every physically conceivable way. In this text of enhanced human evolution, the soul plays a smaller role in the face of a technologically driven human revolution. If indeed human emotion is linked to the soul, then we may see that the synthetically enhanced people in *Limbo* still have a need to understand the soul's influence in their technology-driven society. As I'll elaborate on in later chapters, the role of the soul has varied and has been responsible for multiple concepts in human thought. But its role in Bernard Wolfe's *Limbo* extends the view of the soul into the realm of science-fiction and technology. As an indicator of humanity or intelligent design, the soul plays a part in this posthuman world in deriving a definition for humanity and its role in the impending human-machine evolutionary singularity.

Chapter 2

Technology and Identity in the Posthuman World of *Limbo*

The United States found themselves in the midst of a postwar economic and ideological recovery after its war efforts in Europe and the Pacific. After the bombardments in Europe and the devastation left behind in the Pacific, the world entered a new phase, a phase in which human thought, ideology and the general consensus pointed toward the potential threat and fear of a post-nuclear world. A world in which, at any moment, we as a species, would have the capability of destroying ourselves. A world, hundreds of years after the onset of the Enlightenment, in which logic and reason are emphasized over tradition, revelation or faith. In this world of cultural and industrial revolution, Bernard Wolfe published his first and most famous fictional text, the science-fiction novel *Limbo*, published in 1952.

Wolfe's other works of fiction revolved around the theme of the dystopian science-fiction genre and most were featured in Heffner's *Playboy Magazine's Playboys' Book of Science Fiction* between 1960 and 1972. They follow *Limbo* and include *In Deep* (1957), *The Magic of Their Singing* (1961), *Logan's Gone* (1974) and *Lies* (1974), all of which met with poor reviews. Wolfe's other notable works included *The Great Prince Died*, which was published in 1959, a narrative following the final days and assassination of Leon Trotsky during his exile in Mexico City, a text born of his own personal experience as Trotsky's aide.

Technology, in all its wonder and its advancements, has proven to be a complimentary indicator of the evolution of the human race. In almost every facet of human evolution, it was ingenuity that allowed mankind to survive in a progressively hostile world. Man was once cold, thus he created fire. Man was once weak, thus he created tools. Every challenge that man has faced has been met with ingenuity, technological and medical advancements that serve to further the existence of the human race. During the nineteenth century, influenced heavily by the Industrial Revolution, the human race began witnessing the benefits of its progress in technology in the form of advances in medicine, transportation and communication. But progress in these fields is not limited solely to benefits. Dangers in technology have arisen in the form of weapons of mass destruction, segregation via borders and invasion of personal privacy. While human beings learned to evolve in their thinking and understanding of each other, they also learned to use technological advances against each other.

Some of the innovations made by the human race over the past century have breached the gap between the biological and the synthetic, machine and man, both in a beneficial, life-saving manner, as well as in a life-threatening manner. In Wolfe's dystopian, post-apocalyptic *Limbo*, this synthesis between the synthetic and the biological is the focal point of a fictional 1950s America. Imagine, if you will, a world where the human body is considered obsolete, dated, a relic of the un-enlightened past. The human body is transformed into something more advanced, the next evolutionary stage in human development. Wolfe's text describes a world populated by "Immobs," a cultural and social movement among those in America and the Soviet-controlled East, who replace up to four of their limbs for the benefit of increased physical abilities and higher social standing. These Immobs, or immobilized individuals, are a contradiction within themselves. The human body everyone is born with is seen by them as not only a weakness, but a symbol of their lesser social standing. They pursue a self-imposed evolution, in both the physical form and the intangible, mental and spiritual perception of themselves.

Limbo arrived at the tail-end of a war-torn world, in which nations were coming to terms with the effects and the potential threats of nuclear weapons. Wolfe's text takes place in the postnuclear landscape of a 1990s United States following the devastation left by nuclear war between the United States a god-like computer known as the EMSIAC. The text follows the experiences of Doctor Martine, a neurosurgeon living on a remote island in the Pacific after having abandoned his post as a field surgeon for the United States military during this third World War. After abandoning his post, Martine steals a military aircraft and eventually settles on an uncharted island, wherein he meets the Mandunji, the native tribe of the small Pacific island. Once on the island, Martine comes to discover that the native people perform a primitive form of lobotomy to remove aggressive impulses. The people identified as Mandunji means literally, "*those whose heads are without devils...the sane ones, the normal,*" by contrast, those identified as Mandungabas are defined as "*those from whose heads the devils have been chased.*" The act of a lobotomy, as Martine knows from early 1900s Western medicine, is known as Mandunga, which is defined as an act meant to "*chase the devils from the head.*" (Wolfe, 22) Martine's arrival on the remote island is met with both acceptance and interest as he is able to not only participate in the now defunct practice, but educate the people of the island in proper technique and precautionary measures to prevent botched jobs or infection. The participation of Martine in this primitive form of lobotomy has an ulterior motive. Helping the Mandunga allows Martine to further his study and research of the physiology of the brain, the human tendency toward aggression and emotional responses to new or varying stimuli.

Martine is able to study the effects of such a procedure during his time on the island, and by introducing Martine's personal motive for taking part in what can be considered today as medical malpractice, Wolfe uses foreshadowing, as *Limbo* develops into a text not only about the dangers of technological evolution, but a study of the human tendency toward violence, aggression and the exploration of what makes a human a human.

The first indication of an ever-shrinking line between man and machine as well as the technological revolution which has taken place during Martine's absence is found early in the text, when a group of cybernetically-enhanced athletes arrive on the island with the implied intent of Olympic training. These enhanced humans, or, as they are known in the text, "Immob," are equipped with flexible, nuclear-power limbs which allow for varying superhuman functions or utility, as described in the following excerpt:

All of these men had four artificial limbs, always four, but the ones in front, the ones who had cleared the path through the jungle, were wearing specialized instruments in place of their right arms. Some had what looked like flame-throwers, long tubes terminating in funnel-shaped nozzles which were still smoking, a moment ago they had been spitting out fifty-foot tongues of fire (the bassoons); others had long many-jointed claws on the ends of which were mounted high-speed rotary saws (the sopranos). Some twenty of these men emerged from the thicket. When they stopped, those in the lead pulled the tools from their arm stumps, picked up regular plastic arms which were hanging from their belts and snapped them into place in the empty sockets. (Wolfe, 20)

In this introduction of the Immob in *Limbo*, we as readers are able to make two distinct conclusions regarding the evolution of humans during Martine's time away from Western society: technology has merged with the biological and this evolution has developed or has been developed by a culturally movement, as indicated by the use of the term "Immob." This term represents not only the people who have replaced their limbs with artificial alternatives, it also describes the culture which influences the act of enhancement as well as creates a word to describe or label what it stands for. The term "Immob" is the shortened form of the word "immobilized," a term describing the act of preventing one from moving or operating as a normal being. The intent for immobilization may vary. In the case of Theo, the leader of these enhanced athletes who arrive on the island, as well as the athletes themselves, Immob is defined as a social pacifist movement adopted a few years after Martine's desertion. This doctrine promotes the pacification of the naturally aggressive human through the extreme measure of amputation of the natural human limbs. It is a social movement meant to promote peace and disarmament after the devastation left by the nuclear aftermath of World War III.

As a prominent promoter for this new-found movement, Theo arrives at the island of the Mandunji with the intent to train himself and his team for the upcoming Olympics to be held in the still-recovering United States. Although, as we come to find out later in the novel, this is only the purpose and intent of one man in contrast to the other athletes arriving at the island, who come to find a precious metal. *Limbo's* early focus introduces the reader to multiple characters which drive the narrative and explore the man-machine relation, but another subject to focus in this text, which the plot revolves around, is not a character nor an idea, but a metal. In this case, the pivot point for the narrative and the catalyst in the creation of conflict focuses on the desperate search and struggle to obtain columbium, a rare and precious metal used to power the world's newfound artificial limbs.

While both the protagonists and antagonists of *Limbo* struggle to gain the remainder of what's left of this rare and valuable resource, we see that Wolfe's text is not only a study of the potential of human ingenuity and its integration with evolution, but may also be viewed as a case study of what makes human beings human. The essence of humanity is questioned as Immo culture becomes a symbol of a prominent status to strive for. Once such a status is achieved, the preservation of Immo status via the prosthetic limb must be maintained with columbium, the rare metal used to power the aforementioned prosthesis. The struggle in *Limbo* depicts two competing nations' struggle to attain this precious resource through secretly violent means in a world which has accepted a non-violent lifestyle. The idea behind immobilization, which will be expounded upon later in the chapter, is to obtain universal peace through the amputation of limbs which are seen as the means to war. With the introduction of artificial limbs and immobilization, the text's promotion of peace through extreme measures is consistently challenged via escalating violent events that take place throughout *Limbo*.

Bringing the focus of this chapter closer to the study of the artificial limbs, these prostheses or "pros," as they are known in *Limbo*, are the source of the text's socio-political pacifist movement as well as the catalyst for the promotion of human fear, resulting in aggression and ever-escalating tensions between two warring nations. As mentioned previously, we first encounter these pros as well as their potential for versatility on the island of the Mandunji. The artificially enhanced athletes who arrive on the island come with the implied intent to train for the Olympics, but what stands out most prominently to the people of this island are both the appearance of these people's arms and legs as well as the versatility of their use:

They were wearing shorts and T-shirts with large blue "M's" on their fronts, their limbs were exposed. Instead of arms and legs they had transparent extensions whose smooth surfaces shone in the sun. Each of these limbs was a tangle of metallic rods and coils, scattered all through each one were tiny bulbs which lit up and faded as the limb moved, sending off splatters of icy blue light. (Wolfe, 19)

The initial three chapters of *Limbo* establish setting, plot and characters, but what they also establish is the fact that humanity, in all its ingenuity, has redefined what 'normal' is. The people of this remote island have been 'left behind,' technologically speaking, and have become obsolete in comparison to these enhanced superhumans. A new state of high social rank has taken place in Martine's absence from the Western world, and this is comprised of something which can be considered, biologically, 'less human.' With its blinking lights used to indicate movement as well as the transparent skin that allows one to see the metallic gears and coils which operate in the limbs, these pros provide an interesting dichotomy in a story about remaining human in the midst of human technological revolution. Although, in this iteration of the next step of human growth, the evolution of humanity consists of a splice between two entities: the human and the machine, as outlined by Katherine Hayles in *How We Became Posthuman* and illustrated in Wolfe's *Limbo*.

In Wolfe's text, the human and the machine do not converge to create an entirely new being; rather they exist in the form of a man-machine, two identities fused to create an amalgamation of potentially polar opposite ideas. The hyphen, as alluded to in *Limbo*, the works of Donna Haraway and Katherine Hayles, outline the importance and significance of the use of the hyphen as a literary technique to splice, as well as its potential creating a new subject for literary and social study. Donna Haraway, a Distinguished Professor Emerita in Department of History of Consciousness at the University of California, Santa Cruz, is the author of *A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s*, a text which can be closely compared to the hybridization of entities via the hyphen in *Limbo*.

Haraway's text is an argument for the emergence of the cyborg, along with its fusing of identities, which has forced scholars to reconsider what gender means. The combining of men-women, man-machine, and body-soul are in a consistent struggle for identity as advancements in technology, ideologies and gender politics force the social and literary communities to redefine identity. Hayles uses Wolfe's *Limbo* as an example in depicting the uses of the hyphen to combine identities which have effectively surpassed the 'normal' human. As Hayles discusses the significance of the hyphen within the context of *Limbo*, we begin to see that identity has taken on a different form. Using Haraway's idea of fusion of identities, Hayles is able to create a connection between *Limbo*'s use of the hyphen in creating a hybridized entity and the concept of the circuit, which leans more towards a transformative union. In this hyphenated union, Hayles argues that a "cybernetic loop" is created as the traditional structure of identity is found to be obsolete, leading to a new form of subjectivity. This subjectivity, as outlined by Hayles, creates a clear distinction between the hyphen and circuit as well as what they represent in a text revolving around the creation of a new social identity:

Limbo edges uneasily toward this subjectivity, and then only with significant reservations. Instead of a circuit, it envisions polarities joined by a hyphen: humanmachine, male-female, text-marginalia. The difference between hyphen and circuit lies in how tight the coupling is...and how much the hyphenated subject is transfigured when he becomes a cybernetic entity. Whereas the hyphen joins opposites in a metonymic tension that can be seen as maintaining the identity of each, the circuit implies a more reflexive and transformative union. When the body is integrated into a cybernetic circuit, modification of the circuit will necessarily modify consciousness as well. Connected by multiple feedback loops to the objects it designs, the mind is also an object of design. In *Limbo* the ideology of the hyphen is threatened by the more radical implications of the cybernetic splice. (Hayles, 115)

The importance of the differentiation between the hyphen and the circuit is apparent in *Limbo* in its establishment of identity in the Immob culture. These "amps," or amputated beings, are neither human nor machine, but a hybrid, a transcendental step in the in the eventual culmination of the two entities. Thus, we see that the phrase man-machine is more readily used as opposed to a new identifying moniker, such as 'cyborg.' It is important to note the concept of the hyphen in *Limbo* as well as in any study of the Posthuman, as it is a speculative being which stands to reinterpret the human. This reinterpretation of the human in *Limbo*, using the hyphen as opposed to the splice allows for context of each separate part to be acknowledged. People of Immob are a construct of both man and machine, the hyphen becomes a symbol for the act of voluntary amputation. This coupling of the two terms allows for the identification of not only the combined entities, but the action as well.

In *Limbo*, the human is not only a defunct entity, but it is also a catalyst for the paradigm shift experienced by both the reader and Dr. Martine, as they are forced to accept and understand the fusion of man and machine via the hyphen. The hyphen is important to note not only as a literary technique, but in what it represents throughout *Limbo* as well as the study of the Posthuman. What it represents is the union of two entities. In the case of the Immob culture, the creation of the man-machine relation. While the subject of the cyborg is not a new concept in the literary genre of science-fiction, what the characters in *Limbo* attempt to establish to differentiate the cyborg in this text is the fact that humans have been redefined into a pattern of unions, hyphens and amalgamations, as best described by a university professor by the name of Alfred Korzybski.

Although it is unknown as to whether Wolfe wished to depict Alfred Korzybski as a university professor within the text or simply used his name. Korzybski is more prominently known as a Polish-philosopher and scientist whose best known for developing his theory of general semantics. This theory dictated that human knowledge of the surrounding world is restricted by both the human nervous system and by the arrangement of language. During a lecture on the study of humans and technology on page 135, Korzybski's lecture states that man is an integral unit in the culmination of multiple identities and simply cannot be studied in separate parts:

Hyphens had been inserted between his various parts by modern psychologists and philosophers, the emphasis had shifted from part to Gestalt, man had come to be defined as a mass of patterns and connectives and interactions...But Korzybski emphasized, one had to go much further before a science of human nature became possible. For man is not simply a functional unit, a bundle of hyphenated complexities which are themselves hyphenated – (mind-body)-(instinct-thought)-(conscious-unconscious)-(id-ego-superego)- (cortex-thalamus) – he is such a unit in a surround. (Wolfe, 135)

Korzybski's lecture indicates that the human is not a singular entity, but is only one half of an entity created via the hyphen. Mankind carries a dual signifier portrayed via the hyphen, as stated by Korzybski, mankind is a bundle of complexities and cannot live without the existence of its alternative. For what is mankind's body without the mind? Or his/her conscious without the unconscious? Or, in the more prominent case for *Limbo*, the man without the machine? *Limbo* is a text of binaries, but then again, the same could be said about humans in general. As the human race continues to grow and evolve on a path based around technological advancements, and as the dependency for said innovations grow, one is not flawed to fathom the idea that one day, man will not be able to survive without machine in literal way. As humans evolve, so too does the identity of humans. The liberal human subject is no longer contained by single word identifiers they now require hyphenation to properly describe the fused components of what is now a human.

The culture of Immob and their pros revolve around the precious and rare element "columbium" which powers their mechanical augmentations. Much like the aforementioned hyphenated relations, the prosthetic limbs of the Immob cannot function without this power source. The nations which exist in the alternate reality of Wolfe's text thrive on the advances made in prosthetic technology as well as the procurement of columbium, mirroring the race for procurement of the ever-dwindling global supply of fossil fuels which plagues many country's foreign affairs policies today. Columbium is secretly fought over in a post-nuclear cease-fire agreement between the capitalist Inland Strip and the communist East Union (post war United States and Soviet-influenced Eastern U.S.), secretly fought over due to both nation's adoption of the Immob culture which forbids any form of weaponizing of new or existing technologies as well as forbids the action of self-defense which is viewed as preparation for violent action. Thus, each country's dependency on the rare and precious element is fought over in secret via Trojan horse operations which consist of classified test drills as well as secret excavations. This cloak and dagger relationship between the two secretly competing nations can be seen as another instance of comparison between the fictional and reality, in this case, the secret war fought between the United States and the Soviet Union during the Cold War era which took place between 1945 and upwards of 1991, thus creating more hyphen couplings defining human identity, some of which existed long before this time: fact-fiction, war-peace and friend-foe. The importance of noting these relationships coupled via hyphens dictates the relationships between tangible and intangible ideas found in *Limbo*.

For example, the man-machine is now a more accurate identifier to the people of Immo as opposed to simply man/woman. This hyphenation creates a new, more accurate state of an individual which describes both entity and supplementary component. The Immo of *Limbo* have gained terms which identify both their procurement of new limbs as well as their loss of their natural organic limbs.

Korzybski's study of the human referred to in Wolfe's text is just one example of the *Limbo*'s use of hyphens to combine identities, which can be considered to be the precursor of the 'splice,' which is seen in the works of Hayles as well as Norbert Wiener, who heavily influenced *Limbo*. Wiener's 1948 text *Cybernetics* helped pave the way for modern interpretations of cybernetics' interdisciplinary studies which include, but are not limited to, biology, mechanical engineering, perpetual control theory and philosophy. Cybernetics, as defined by Wiener in the mid twentieth century, is "the scientific study of control and communication in the animal and the machine." This field, with its multitude of interdisciplinary studies, revolves around the relationship between the living organism and the machine. In the case of *Limbo*, the emphasis of cybernetics lies within man's acceptance of transition from a purely organic body to a partially synthetic one. As was noted previously with Wolfe's and Hayles' use of the hyphen to create a combined identity, Norbert Wiener's study of cybernetics focused more on the 'splice.' The splice, unlike the hyphen in the case of *Limbo*, goes beyond the mere imitation of organic limbs, but the idea and the act of immobilization is "hardwired into the human nervous system to form an integrated cybernetic circuit." (Hayles, 120) Although Wolfe followed the works of Wiener closely in the creation of *Limbo*, and in many instances blatantly referenced his work via the prose of the fictional Dr. Martine, it was Wolfe's use of the hyphen as opposed to the splice that was made most prominent in *Limbo*. In Hayles' study of Wiener's splice as well as Wolfe's use of the hyphen, she brings the focus of this study to Wiener's exploration of motion, its effect on the liberal human subject as well as its effects on the field of cybernetics:

This movement toward the splice is figured in *Limbo* through tropes of motion. Here Wolfe follows Wiener's lead, for most of Wiener's examples concentrate on dysfunctions of movement. The intention tremor provided Wiener with one of his first experimental successes. Through a mechanism that duplicated the behavior of an intention tremor, Wiener diagnosed the problem as an inappropriate positive amplification of feedback and showed how it could be cured. Other kinds of movement dysfunctions are similarly diagnosed in the 1948 *Cybernetics*. Even phenomena not obviously associated with motor skills are figured as various kinds of motion. Thinking, for example, is figured as movement across neural synapses, and schizophrenia is represented as a feedback problem in the cognitive-neural loop. Wiener's emphasis on movement implies that curing dysfunctions of movement can cure the patient of whatever ails him, whether muscular, neural, or psychological. Given this context, what could be more cybernetic than to construct war as a dysfunction of movement? In this sense, *Limbo* follows the line of thought Wiener mapped out in *Cybernetics*, down to particular phrasings that Wolfe appropriates. Because in many respects he follows Wiener so closely, the departure he makes in insisting on the typographic hyphen rather than the cybernetic splice is the more significant. In the end, however, his resistance to the splice fails to restrain cybernetics' scarier implications, much as Wiener's resistance to the cybernetic penetration of boundaries failed to prevent the dissolution of the liberal humanist subject. (Hayles, 120)

According to Wiener, and in the context of Wolfe's text, we can come to the conclusion that war as well as man's natural tendency toward aggression, as it is explored in the beginning during Dr. Martine's explanation of the Mandungi's primitive form of lobotomy, war could be the result of a dysfunction of movement, thus, beginning the birth of the cyborg. In Wiener's *Cybernetics*, and to expand further on the study of motion and its relation to cybernetics and *Limbo*, an intention tremor, muscle contraction or other reaction causes a dysfunction of movement in the human body due to a reaction to a stimulus. After such a reaction is noted, an algorithm model which dictates the reproduction of such a reaction is introduced so as to reproduce the stimulus which caused the reaction, but not the reaction itself. The deduction can then be made that the intent of such an experiment is meant to recreate the human as an explainable subject whose inner workings are known, as opposed to an unknown amalgamation of organic mechanisms and neural impulses. The field of cybernetics creates a correlation between the unknown inner workings of the human subject and the controlled laboratory experiment, and attempts to bridge that gap by forming a hybrid (cyborg) via the hyphen. In studying the technology within Wolfe's *Limbo* we see more than the mere nuclear-powered, plastic limbs which govern an elite few of the human race in this fictional post-war world, we see a transformation of identity, which is one of the fears which Martine (and even Norbert Wiener himself) succumbed to. Cybernetics is used to correct the dysfunctions while also improving upon 'normal' functions. Thusly, in direct comparison between the study of cybernetics and the augmented people of Immob, we can see that the cyborg signifies much more than a human which has undergone replacement. We see that he/she is an improved hybrid entity, not a human, but something of an evolutionary step forward in humanity.

A few instances in *Limbo* of a correction for these 'movement dysfunctions' in the human condition can be seen in the examples of war as well as the human tendency toward aggression. Early in the text, our first introduction to Dr. Martine is through his role and existence on a remote island as an enlightened surgeon performing lobotomies on the native people. In order to rid their minds of the "demons" (aggressive tendencies) which dictate behavior, Martine uses lobotomy as a method to literally cut out these emotions in order to create a more idyllic member of the village's community. In a literal sense, Wiener's philosophy of movement dysfunctions translate into this instance of science attempting to change emotion, as a doctor attempts to surgically remove aggression from a patient. This removal of a part of one's being can be seen as an example of Wiener's description of cybernetics, an act of correcting an aspect of human nature, form or tendency and improving upon it; similar by comparison to those whom remove their organic limbs and replaced them with mechanically better prosthetics. But, like the use of the hyphen, one cannot simply remove an aspect of a person without also affecting its polar opposite, as described by Martine. "Martine nodded and stepped back, beginning to strip off his rubber gloves. "Done it again," he said to himself... I've cut out the aggression, I've also cut out the orgasm, can't seem to separate the two." (Wolfe, 11) In the case of Martine's use of lobotomy, and subsequently his study of the brain and the human, he deduced that emotions and identifying factors exist in dualities unified by the hyphen. Examples include the aforementioned identifying factors of a human which include aggression-pleasure, body-soul, man-machine and/or empathy-indifference.

In relation to aggression, and bringing the focus back to technology in *Limbo*, another example of the text's correction of movement dysfunctions can be found in the Inland Strip and the East Union's movement towards a technology-driven Olympics as an alternative to war.

This promotion of competition between two technologically advancing nations help to promote the concept of immobilization and peace via healthy competition as an alternative to war, adjusting the dysfunction of aggression and replacing it with competition and the promise of shared innovations between the two nations. The irony in this alternative to war revolves around the fact that it is meant to promote healthy competition wherein the athletes may be in a position that is considered unhealthy. Prosthetics are used to replace organic limbs which were lost in some way, effectively restricting the capacity of movement and performance in some way. But in the case of *Limbo*'s portrayal of amputated athletes, the Olympics revolve around the evolution of prosthetic technologies to create a better athlete. The irony occurs when we as readers analyze these superpowered Olympics in comparison to the events of true to life Olympics. We typically expect amputated athletes to be in a state of unhealthy being, but in *Limbo*, they are the most powerful and talented athletes in the world. An interesting comparison is that of Oscar Pistorius, a South African sprint runner and Paralympic. Pistorius was the first double amputee to participate in the Olympics during the 2012 games in London, taking part in the men's 400 metres race and the 4 x 400 metres relay team. In direct opposition to *Limbo*'s quadruple amputee athletes, Pistorius' performance in the Olympics was met with opposition as many believed his carbon-fiber, Jshaped prosthetics gave him a distinct advantage in opposition to other runner's natural legs. In *Limbo*, healthy competition is used as an alternative to war. But the so-called 'healthy' competition in this text proves to be a juxtaposition of the normally perceived view on athletes. Prosthetics are meant to replace an organic limb and typically hinders functionality of the body in some way, but in *Limbo*, these prosthetics transform the normal human's abilities into that of a super human. It does not make them adequate, but it makes them significantly better.

Prosthetic enhancements were developed by both nations and the super-powered Olympics were just as much a spectacle of potential of advanced engineering as they were about athletic prowess, with the promise of each nation sharing their knowledge with the other upon the games' end. But, as we see on page 331, the concept of healthy competition is put to rest as we see that human aggression and violence is brought upon this alternative to war as the athletes of the East Union use prosthetics with the capabilities of firearms to fire upon the crowd of spectators, effectively reducing the notion of immobilization to a forgotten aspect of the Immob movement. For weeks prior to these Olympic games, Vishinu, leader of the East Union, makes the public aware that this year's games will be different from the previous years. He and the people of the East Union have expressed displeasure with the imperialist smugness of the Inland Strip and vow to prove that they are the better cyberneticians, which they did as they triumphed over every single event.

With the use of hybrid identities and the correction of aggressive behaviors, a pattern of emotion begins to emerge in *Limbo*. The technologically enhanced nature of the 'new' human being in Wolfe's text points to creating an emphasis on war and aggression as a natural human reaction in response to fear or the unknown. The development of prosthetic's initial appeal was in the desire of creating a better human, an new identity of man's triumph over nature and the synthetic, leading to the promise of a human singularity. But the questioning of human nature and tendency keeps man from achieving a transcendental state because due to the fact that man can still be defined as an organism which reverts to violence in the face of fear or competition. The essence of what makes a human a human is explored in *Limbo* via the merger of man and machine. Where before man was defined by his physical appearance or perhaps their intellect, now they could potentially be defined by what they do to their physical forms. Humanity's soul has been simplified by characterizing those of Immob as secretly violent beings.

With both Immo countries fighting for control over a precious metal, they do so in secret. This secretive Cold War eventually erupts in a massacre which directly opposes the initial idea of Immo as a whole. The act of immobilization is ironically contradicted as those who amputated their limbs replaced them with weapons, effectively defining themselves as objects of violence. The prosthetics in *Limbo* become not only an identifying factor of this new movement which now define the apex of being human, but they are the catalyst for reminding the characters of the text that in all their advancements in science and engineering, humans are still a species rooted in survival. Thus, this leads to the conclusion that humans have an identifying nature or aspect about them which may define them. It is the soul, or the popular moniker in identifying the abstract idea of the 'essence' of a human, which influences human nature and action in a world defined by scientific advancement and a potential evolution in mankind.

Chapter 3

The Soul and the Man-Machine Singularity in Bernard Wolfe's *Limbo*

After individually analyzing the concept of the soul and how it has been studied by different disciplines, as well as examining Bernard Wolfe's *Limbo* within the context of posthuman studies, it is now time to bring the two fields together and examine the soul's presence within this text. The interdisciplinary fields that have influenced Wolfe's novel and the topic of the soul are almost polar opposites. While the soul is an important concept in the fields of theology and philosophy, *Limbo* is connected to science, mathematics and technology. Theology and philosophy emphasize and promote an examination of the most basic of life's beliefs that guide people, their existence and consciousness. Technology and science, on the other hand, are born of humanity's desire to bring technological solutions to the varying difficulties and problems life may harbor. These fields also engage us in reasoning as to *why* a particular event or action has occurred and attempt to recreate it for the purpose of full understanding.

When contrasting two fields of study such as the study of the soul and the study of the posthuman, each of which heavily draw from their respective interdisciplinary studies, it is not difficult to assume that these fields of study differ vastly from each other. The contrast between the intangible soul and the technology-based notion of the posthuman features aspects that differ greatly when it comes to literary analysis. The soul, in all its intangibilities and interpretations, is a widely discussed notion. The posthuman seeks to redefine humanity into a new entity with the help of technological innovation. Specifically, in Wolfe's *Limbo*, this redefining of the human happens through a cultural and physical altering of the human mind and body that elevates thought and enhances the body with prosthetic limbs. These artificial limbs alter people's abilities, greatly improving their physical capabilities. They also alter the cultural atmosphere of the people affected by this posthuman movement, effectively creating a hierarchy of social classes, further dividing the people between those privileged enough to attain prosthetics and those who cannot. In Bernard Wolfe's world of synthetic enhancement, the body and its abilities are optimized for better versatility in movement and strength, while the social class of those who are augmented is enhanced as well. It is within this world of human augmentation and the future of humanity where we must seek to find the possibility of the existence of the soul in *Limbo*.

In contrast to our own life experience, the implementation of the idea of the soul within this prosthetic-driven, class-based system can be seen as an odd lens through which to analyze this text. As I have stated in previous chapters, the soul may be regarded as the ethereal manifestation of religious faith.

It may also be the sum of all human or animal consciousness or be defined and differentiated with the terms ‘spirit’ or ‘psyche,’ effectively defining the soul as a metaphysical entity that exists outside the bounds of the physical human form. In *Limbo*, rather than promoting self-enlightenment and spiritual improvement through internal reflection, meditation or faith-based prayer, power and higher socio-economic standing are gained through synthetic enhancement. In this final chapter, I will analyze Bernard Wolfe’s *Limbo* in the hope of finding textual evidence of the existence of the ‘soul.’ As I present examples from the text, I will attempt to relate the overarching theme of humanity to the posthuman.

As has been described in chapter two, Wolfe’s posthuman world of *Limbo* revolves around Dr. Martine, the protagonist, and his interaction with the culture and people of Immob. Immob is a term used as both a noun to identify the people who willingly choose to become amputated and augments, as well as an adjective to describe its people as ‘immobilized.’ The structure of Immob is based on a hierarchy of four stages of being, each stage being defined and indicated by the number of limbs that have been amputated. The more limbs have been removed, the more devoted to the cause of Immob the amputee is. The cause promoted by Immob doctrine is dictated by “voluntary amputeeism” in the name of peace via literal disarmament. Dr. Martine’s first encounter with the Immob culture gave him the impression that the act of voluntarily removing a limb is the cornerstone of this movement, stating that “voluntary amputeeism was somehow the essence of Immob.” (Wolfe, 109) Through the practice of voluntary amputation, the followers of Immob live and commit to the principle of peace via immobilization of the physical body, not just of the demobilization of war. This perspective can be seen in the text’s pro-Immob rhetoric: “demobilization doesn’t mean a thing without immobilization. There’s no pacifism without passivity.” (Wolfe, 123) But before delving too deep into the posthuman culture of Immob, it is important to note the text’s events leading up to the almost universal acceptance of this social movement. The events prior to the development of Immob culture revolve around man’s creation of, subservience to and violence against the EMSIAC, a “god-like” computer. This backstory helps in introducing this analysis to the themes of man’s creation of and subsequent subjugation by machines, the text’s intricacies on the promotion of pacifism, the individual’s responsibilities to society and the posthuman revolution, as well as the text’s attempt to recognize the ‘essence’ or ‘soul’ of humanity.

In Wolfe’s post-nuclear world, the United States has been ravaged by nuclear war and the effects of its fallout within parts of the Midwest and Mideastern states, effectively dividing the continental U.S. into sections: the capitalist-run Inland Strip to the west and the communist-like East Union to the east. The outcomes of a war which crippled the U.S. brought about the culture of Immob, formed in an attempt to pacify armies and its political leaders from further acts of violence and destruction.

After the destruction caused by nuclear war, Immob was established under the guidelines set forth by Dr. Martine’s personal journal written during his time as a military neurosurgeon. Meant to be a work of satire, the journal was acquired by Helder, a fellow neurosurgeon who assisted Martine during the aforementioned war, also known as the EMSIAC War. This war was a confrontation fought between man and machine, an apparent ‘god machine’ that had control of the entire world’s infrastructure, including electricity, information systems as well as national defense systems. As this ‘god machine,’ created to serve man, gained self-awareness and intelligence, it eventually opposed its creators. In this war, the dominance of man versus machine was tested as the EMSIAC fought a war of survival, a war in which the machine was viewed as an entity subservient to the creator, even though the machine had proven to be better, smarter and a more adaptable entity.

As Martine described in his journal, man had developed a machine in such a way that it was better in almost every conceivable aspect. In an attempt to make life easier for humanity, man had created an enhanced entity, one which had taken the place of the intangible god. "It was bound to happen, of course. Once men stopped manufacturing gods, they began to manufacture machines. Whence EMSIAC, the god-in-the-machine, the god-machine..." (Wolfe, 204) The intangible god has been transformed into the tangible machine, a bi-product of human evolution and ingenuity with the capabilities to exceed the restrictive capabilities humans typically are hindered by.

After Martine had deserted his post during the war, Helder went on to become the Premier of the western portion of the U.S., known in the text as the Inland Strip. Helder came to power after promoting Martine's journal as a text by which to live peacefully, taking Martine's sarcastic writings and interpreting them as literal behavioral doctrine. The entirety of human cultural evolution in the continental United States had been effectively and unintentionally altered by Martine's musings. His journal entries, written during a time of war, chronicled his life as a field surgeon as he attended to the sick, wounded and dying. In his writings, he discussed factors which contributed to and facilitated war, as well as humanity's responsibility in creating objects of war, objects which included the EMSIAC, personal armaments as well as the text's early utterances of the enhanced prosthetic limbs. The events of *Limbo's* prologue are important in the discussion of the soul's existence because it first establishes the general atmosphere that has brought about Immob culture and it establishes the text's most prominent human emotion: aggression. In establishing this human emotion it facilitates the analysis of the question: what is the essence of humanity? Is it the soul? Is it the emotions that drive humanity's actions?

In *Limbo's* prologue, aggression and war are the themes of the events which take place prior to the development of Immob. Soon after, Immob is created to promote pacifism and nonviolent actions by altering the physical human body. This alteration of the physical human form is meant to be an action taken for the pacification of the naturally violent human, but instead, and as we see near the end of the text, this only allows for a new form of violent action to ensue. The theme of human aggression, and one of the aspects which contribute to the argument over whether there is an intangible entity within the posthuman, is the emotion of aggression. The concept and emotion of aggression also helps to define a set of pivotal characters, including the protagonist, Martine. While the prologue of *Limbo* is steeped firmly in the events defined by war, after the people's acceptance of the Immob culture, conflict and aggression become internalized within the body and mind. The internalization of this emotion does not reappear until the end of the text in *Limbo's* new take on the Olympics (which was summarized in the previous chapter). The event which triggers the re-emergence of aggression proves to be the outward expression of internalized emotion. The acceptance of machines synthesized to the body in an attempt to promote pacifism, instead results in the internalization, and subsequent expression, of aggression and violent tendencies that lead the world into near-nuclear annihilation in the past. N. Katherine Hayles uses this scenario of the violent outward expression of the repressed emotion of aggression to define the body's role and its effect on war. "the apparatus of war has imploded inward to join with flesh and bone. As a result of this cybernetic splice, war radiates from body zones outward." (Hayles, 121) The splice has effectively created the posthuman, which seeks to repress the natural human emotion of aggression and instead gives man the physical capability to not only promote peace in a new and drastic way, but also allows for this new entity to fight wars in an entirely new way with the help of prosthetics. Thus war has been internalized to exist within the body, and exists within acts such as amputation and self-mutilation.

But this alteration of the body does not necessarily guarantee an alteration of the mind or soul. Similar in concept to H.B. Alexander's summary of the 'Partitive Soul,' Descartes, in his *Discourse on Method* establishes and partitions humanity into two parts: the mind and the body, which provided the foundations for philosophic thought on the development of automata during the Enlightenment. In *Limbo*, the body is indeed separated in this way, as the body is the physical form which is transformed into the machine, while the mind is the entity that accepts the selfimposed immobilization that comes with the voluntary amputation. The acceptance of this culture alters both the body and mind, but the distinctions lie in the construct of control. In Richard Amtower's 1998 Master's thesis *Posthuman: Identity at the Close of the Mechanical Age*, the author analyzes the beginnings of the 'cyborg,' which can be seen as far back as the Enlightenment, and subsequently summarizes Descartes' description of the man-mind duality, while alluding to the intangibility of the spirit and its place in posthuman studies: "the pure mind controls the machinery of the body in a fusion of the spiritual to the mechanical." (Amtower, 22) This dynamic between the immaterial and the material is similar in concept to the soul's potential relation to the posthuman. While the cyborg, or 'cybernetic organism,' is a construct of synthetic and organic elements, the soul/man or mind/man relation is a melding of the immaterial with the material, the incorporeal with the corporeal. In *Limbo* we find attempts to classify the body as a machine prior to the synthesis and attempts to link an intangible aspect back on to the human after the melding of man with the machine. As the organic components of the body are lost, a human construct such as the soul or essence attached to a previous notion of 'humanity.'

This notion of giving the posthuman, or cyborg, an element of humanity is present in *Limbo*'s staging of the amputee. Beyond the class hierarchy and the social stigma of not participating in Immob, those who are amputated ("amps") take pride in retaining an important aspect that differentiates them from merely being labeled a 'machine.' This aspect, according to Martine's deduction of the culture, is, like the aforementioned examples, an intangible notion that signifies some semblance of humanity. In the case of Wolfe's interpretation of Immob, the aspect which makes us human in this world of synthetic enhancement is 'choice:'

When man becomes fully human he will be a pacifist, that's A.B.C. But no man will ever get the feeling that he's fully human until he knows that the world is wide open with possibility before him and he's allowed a *choice*...it's choice that makes us human because it means we've dodged all the 'Its' that make the animal a robot, we're selfdetermine d. The first great choice Immob gives a man, obviously, is the choice about cutting his arms and legs off. Before [these] men became amps only on the battlefield and in bombings, in some accident or other, it was something *done* to them, they weren't consulted. So *voluntary* ampism is a big step forward toward humanness. (Wolfe, 163)

By making the concept of 'choice' an essential aspect in defining humanity, amps retain a facet of humanity in an action which may be deemed drastic or even inhuman. If a humanist philosophy maintains that every individual person is an important entity, then humanist philosophy may be extended to state that the physical body of that entity is important in the being as well. Thus, the concept of choice is what allows these humans to make an educated, controlled decision that will alter a major facet of their being.

This approach to choice also translates into the aforementioned facet of social hierarchy caused by Immob. By amputating one to four limbs, people in *Limbo* make a conscious choice in defining what person they want to be.

Subsequently, the more devoted to the cause of peace these people are, the more ‘important’ they are in the eyes of the general population and in the eyes of those who don’t yet have the right to be a part of Immob (women, children, people of non-Caucasian descent). The choice to become a part of Immob is considered a privilege as well as a birth right. Ironically, the choice of Immob is limited to a select few, while the general population is viewed with disdain or indifference:

There were amps everywhere on the boulevards, all of them young, most of them in their twenties. Very few men with all their limbs intact were under forty, and those who were seemed to be wearing the scarlet letter of some enormous turpitude; they invariably had a hunched, hunted, defensive look about them which suggested that they were in ill repute and knew it, felt the disdain which bellowed at them from all eyes as they skulked along. (Wolfe, 117)

The social outlook on non-amps is an intriguing concept in the atmosphere of *Limbo*: while defining the human it also seeks to define a hierarchy in humanity. Similar to defining man’s essence via choices, there is a choice in creating a hierarchy in Immob culture. The choice lies in the number of limbs amputated as well as the choice in whether or not to accept prosthetics postamputation (this stance is known as ‘Pro-pros,’ or ‘pro-prosthetic’). The entirety of Immob culture revolves around the prevention of war and the removal of elements which promote it: in this case, the arms are taken, as a literal “disarmament.” However, it may be a futile act to amputate a limb when the point of disarmament is to promote peace, as opposed to promoting a new manner in which to conceive war. Thus, the aforementioned essence of humanity includes not only intangible elements such as the soul, mind or spirit, it also includes the body in defining what makes a human a human. To be truly counted as an important member of this society, one has to meet the conditions for becoming Immob, and become Immob if one is to have any influence in this society. As Martine best summarizes this dynamic: “a man with his own legs has no footing here” (Wolfe, 118)

We have three intangible factors in *Limbo* that can be considered to be the essence of humanity: choice, aggression and the soul. While choice and aggression certainly have a place in contributing to the analysis of the ‘essence’ of humanity in the technological age of the posthuman, the soul is ultimately what many religions and philosophical systems deem to be the core of man. In the context of Wolfe’s *Limbo*, the posthuman, and the soul, humanity can be defined in a multitude of ways. Man may be defined via their prominent emotions or they may be defined by the specific elements relating to their free will. Nonetheless, in whichever way the concept of the soul may be interpreted, man’s relation to it contributes to the discussion of the essence of humanity.

A perspective to take in answering this question may involve the materialist approach characterized by Julien Offray De La Mettrie, who used this approach toward the study of medicine in his 1748 text, *L’Homme Machine*. La Mettrie believed that medical sciences as well as metaphysics were linked prior to the age of Enlightenment, but that the field of medical sciences should be considered grounded in comparative biology and observation. In order to fix an organism, the surgeon ought to be able to differentiate it from a healthy organism and use this information as a basis for correction. Using this scientific approach in the correction of body malfunctions, La Mettrie uses comparative biology to treat the body as if it were a machine. La Mettrie also delves briefly into the ‘nature’ of man and the idea of knowing the soul through the organs of the body:

Man is such a complicated machine that it is impossible to form a clear idea of it beforehand, and hence impossible to define it. For this reason, all the investigations which the greatest philosophers have conducted *a priori*, that is to say, by attempting in a way to use the wings of the spirit have been fruitless. Thus, it is only *a posteriori* or by seeking to discover the soul through the organs of the body, so to speak, that we can reach the highest probability concerning man's own nature, even though one can not discover with certainty what that nature is. (De La Mettrie, 203)

In this excerpt, La Mettrie compares the complexities of the organic human body to the complexities of the synthetic machine, stating that the human body is far too complicated and intricate to allow scientists to "make assumptions about its operation '*a priori*,' or before any other knowledge." (Amtower, 23) According to La Mettrie, once a person understands the complexities of the body and its operations through observation, only then can one elicit plausible conclusions in "discover[ing] the soul." It is feasible to apply this view of the soul and nature of the individual within the machine of the body to the context of *Limbo*'s posthuman revolution.

Within every person of *Immob* lies the soul of the individual. Underneath the tangled, complex wires of the man-machine synthesis lies the intangible element which could be said to define the individual. La Mettrie's metaphor of the man as a machine suggests a comparison between the synthesized posthuman of Wolfe's text, and non-enhanced people discussed in *L'Homme Machine*. While the natural human body is a complex set of organic systems, metaphorical viewing the body as a set of components and interconnected systems more closely defines the perspective of *Limbo*'s enhanced people. The difference between La Mettrie's metaphorical viewing of the human and *Limbo*'s posthuman lies in the implementation of actual machines in place of thinking about organic systems as machines. This also replaces the body as a metaphorical machine with the body as a literal machine.

In contrast to La Mettrie's perspective of viewing the body as a machine, E.T.A. Hoffman's 1814 short story *Die Automate* describes its character's perspectives of the automata, or a machine made in the image of the human being:

All figures of this sort... which can scarcely be said to counterfeit humanity as to travesty it – mere images of living death or inanimate life – are most distasteful to me... When I see the staring lifeless, glassy eyes of all the potentates, celebrated heroes, thieves, murderers, and so on, fixed upon me, I feel disposed to cry with Macbeth 'Thou hast no speculation in those eyes/ which thou dost glare with. (Hoffman, 81)

This excerpt from Hoffman shows the character's reaction to machines built in the form of human beings, although, while similar in appearance, Hoffman notes that there is an attribute "missing" from this entity. An attribute which cannot be synthetically created, something that is missing from the "lifeless, glassy eyes." Hoffman's inclusion of a quote from Macbeth further describes this "lifeless"-ness by focusing on the "speculation" within the eyes. This description, as Amtower speculates, "conjures up the cliché that 'the eyes are the window to the soul.'" (Amtower, 36) Hoffman's story conjures this cliché as well as conjures a comparison between the machine and the human being. This comparison also attempts to, like the speculation of the soul with the people of *Immob* in *Limbo*, attach and/or find a human element within the machine. Thus, implying that the machine may be seen as an entity that typically lacks elements of humanity, this may include the concept of the soul, consciousness or emotion.

John Cohen's 1967 text *Human Robots in Myth and Science* takes a similar, metaphorical approach when it comes to the human in relation to both the machine and the soul. Cohen's view of the body and the soul is similar to Descartes' separation of mind and body. Each element, the physical and the immaterial, is affected in some way by its opposite. Cohen goes so far as to extend the notion that the human body exists as a machine in the relationship between the body and the soul, while the soul is governed by human-restrictions. "The human body is a machine which winds itself up, the living image of perpetual motion. Food nourishes the movements which fever excites. Without food, the soul pines away, goes mad and dies from exhaustion." (Cohen, 205) In Cohen's interpretation of the human and soul relation, the body is given attributes normally belonging to a machine, while the soul is given human attributes. While I have already stated that the soul is an ethereal concept not bound by human needs or restrictions, Cohen gives the soul restrictive human attributes to sustain its well-being, which include the elements of hunger, exhaustion and even death. The soul is meant to be an entity which exists both prior to the birth of the physical human form and lives beyond the body's death, but in the case of Cohen's assertion, the soul is a necessary driving force that keeps the human machine alive. This desire to feed the soul necessitates a comparison to the characters in Wolfe's text.

The body's need to feed the soul, similar to Cohen's example, can be seen in *Limbo*'s arms race exhibited by the people's need for 'columbium.' As was described in the previous chapter, the people in Wolfe's text use columbium, a rare mineral, to power their synthetic enhancements. Without such a mineral, the prosthetics used by Immob would be useless and would only result in a synthetic limb with no worldly function. While these prosthetics do not directly relate to the soul, they are a major contributing factor in defining the essence of Immob and individual people. Without columbium, the synthetic limb ceases to function, and, in a mechanical sense, 'dies.' While it may not be food and the body may not die of exhaustion, the synthetic limb of Immob culture is considered dead without the necessary resources to power it. While Cohen's concept of the soul is linked to the body, the soul and essence of the Immob culture is linked to the prosthetic limb and its need for columbium to survive.

Another linking of the concept of the soul to the physical body can be found on page 145 of *Limbo*. In this section, we read of an unnamed, fictional lecturer who discusses the relationship between the psyche and its control over the body. The lecturer in Wolfe's text defines the body as the vehicle or 'instrument' for movement or action, while the soul or 'psyche' is the aspect which controls it. "Your body is your instrument! Learn to control it and you can walk on hot coals, stick pins through your tongue...The next good Immob step is to make yourself your *own* hypnotist, put your *own* psyche in your body's saddle." (Wolfe, 145) The psyche (or soul, derived from the Greek root psūchê or ψυχή) here is acknowledged to be in control of the body and it is even suggested that all people of Immob should allow for it to control the actions of the body. This proves to promote a type of 'mind over matter' mentality, which eventually allows these augmented individuals to perform feats of strength which the normal body could not hope to. The psyche is promoted as a facet of humanity which controls the body and even gives the body the capability to perform significantly more difficult tasks. The soul acts as the force that directly controls the actions of the body, similar to the 'driver' mentality.

In combining facets of each of the aforementioned defining factors of humanity (choice, aggression and the soul), Wolfe has placed ethereal, intangible elements at the heart of his age of the posthuman. These natural human tendencies and man-made identifiers for the description of human essence or emotion carry much weight in *Limbo*'s plot. Throughout the text, a common phrase is "dodge the steamroller."

Metaphorically speaking, the idea in “dodging the steamroller” revolves around the notion of war and its effect on humanity in both a physical and emotional sense. War and aggression are characterized by the imagery of the steamroller trampling over humanity’s way of life, its physical form and even its spirit. As another example of an intangible human element turned into a machine, the steamroller is the text’s metaphor for war. The people of Immob promote the metaphor of “dodging the steamroller” in order to promote pacification and counter the human mentality for war, as well as the physical human form which is used to cause such wars. By “dodging the steamroller,” the posthuman is exposed to three notions regarding war: aggression and war are made into a mechanical entity (similar to that of the human in its transition to the posthuman), war is an action which must be avoided at all costs, and the human spirit must be preserved as the steamroller attempts to crush both the soul and the body. An example found in the text which relates to the three aforementioned paradigms discusses the effects which people undergo as they’re affected by the steamroller:

“After all, what’s the great evil in war and in the totalitarian systems which make war? It’s not the killing and maiming of people, no matter how much agony that entails. No: it’s the Steamroller Effect. The flattening of human spirit, I mean. What the steamroller does to the human spirit is immeasurably worse than anything shrapnel and atomic blast could possibly do to the human flesh, and infinitely more lasting. Why? Because of the humiliation. Because the loss of an arm or leg or a pair of eyes is a thousand times more unbearable when it’s involuntary-when the decision is made not by the victim but by the steamroller...The smothering of the “I” by the “It.” (Wolfe, 204)

This explanation of the steamroller mentions the three aspects which directly relate to the wellbeing of the human. In a metaphorical sense, war is represented by the steamroller. This machine flattens and crushes whatever may be in its path, similar to war. As war escalates, it eventually negatively affects any person or thing in its path. Thus, war and aggression, two concepts which are a construct of man are transformed into machine. In comparison to man’s transition into a hybrid entity of both synthetic and organic parts, war and aggression become a metaphor personified by a machine. This machine, whose only purpose is to crush whatever is in its path, retains an essence of violence in its transition to the mechanical.

The other aspect in the text’s popular saying is found in relation to the act of voluntary amputation. While previously explored, the concept of voluntary amputation is regarded in a far more personal way. As these people are affected by the outcomes of war, or “the steamroller,” humility and the feeling of interpersonal control is lost when something, such as a body part, is lost without the consent of the owner. As Immob culture dictates: “the loss of an arm or leg or a pair of eyes is a thousand times more unbearable when it’s involuntary.” By removing the human element of choice from the act of amputation, a part of the humanity is lost when the mutilation of the body is caused not by the owner, but by something outside of the person’s control. Immob culture attempts to counteract the effects of war by, literally, undercutting it, by denying it in the first place. By amputating limbs of their own accord, they have effectively removed the elements which contribute to and cause aggression as well as removed the limbs they may have lost had war enveloped their lives. This act takes control away from the machine and redirects it back to humanity and the individual person. By doing so, this act does not completely remove the possibility for aggression, but it does place ‘choice’ back into the person’s spectrum of capability, allowing them to define who they are, what they stand for and what they are capable of.

Martine, according to Helder's interpretation of his journal, was elevated to the standard of a messiah by effectively being the first to "dodge the steamroller" and save the "human soul" from the effects of war and lack of control. Helder's interpretation of Martine's satirical journal mentions was meant to promote the concept of peace through disarmament. As war had broken out between people and the EMSIAC (the machine), Helder's interpretation of the events was based on a war he believed was being waged between humanity, machines and the loss of control. By "dodging the steamroller" (abandoning his post during the war), Martine was said to have taken back control of his actions, as opposed to them being dictated by a machine: "Brother Martine for all time dodged the steamroller-in one split second he snatched initiative back from the machine and reinstalled it in the human soul." (Wolfe, 224) By abandoning his post, Martine, by Helder's account, became a sort of prophet for humanity. He was able to retain the ability to choose his future and flee from the effects of war, an act that would evolve into the choice to amputate limbs in the name of peace, thus preserving the soul. This preservation of the soul is taken as an aspect of humanity which is lost when machines dominate the entirety of civilization. As machines become faster, smarter and more capable, humanity is eventually replaced by their own creation. The slaveholders become the slaves. Martine is said to have "reinstalled" initiative back into the human soul. This indicates that the soul is defined by the concepts of self-control and choice, human's own initiative to do what they want, when they want. Removing control from the machine and giving it back to humanity. In taking humanity's soul and "reinstalling" it into the individual, Wolfe chooses an interesting word. "Reinstalling" is a term used in a mechanical sense, meaning to affix or connect something again, normally in an attempt to fix what is broken. Once more, and like the steamroller, Wolfe gives the intangible, all-encompassing concept of the soul a mechanical facet. Reducing the soul into a piece of machinery to be implanted into the human, installing it like a piece of software. Independent from the body, yet governing the conscious, unconscious and ethical values of the individual.

Nevertheless, the soul exists within the posthuman world of *Limbo* due to humanity's necessity to remember it and its values in the age of the posthuman revolution. Referenced by varying characters in the text, but especially Helder, the entirety of the text revolves around humanity's struggle to retain humanity in the onset of the man-machine singularity. The text's identification of non-human elements such as choice and aggression contribute to the promotion of immaterial elements including the soul. In regards to the question of whether or not the soul exists in Bernard Wolfe's *Limbo*, it indeed does and its promotion and role in the text has proven to be a prominent aspect in defining humanity's 'essence' in the wake of its evolutionary merger with the machine. The soul exists in the posthuman, because it exists in the human. The human revolution is seen in the union between man and machine, but it is defined by mankind's remembrance of the soul, the aspect that makes us human.

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