

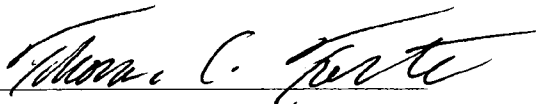
A Case for Interdisciplinary Studies in Literary Analysis: The Scientific Influences in the Writing of
Jack London

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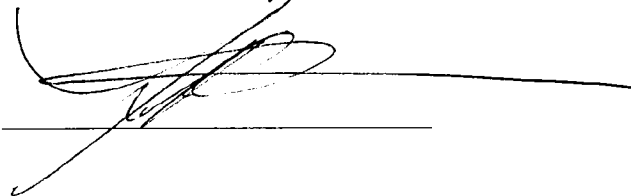
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First Reader



Second Reader



For always offering me advice and encouragement, for teaching me the beauty and wonder of the written word from a young age, for showing me how important it is to persist through life's challenges, and for always believing in me, even when I have trouble believing in myself, I dedicate this thesis to my father, Lew Worthington.

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Introduction

In the academy, all subject matter is broken up into what modern academics refer to as “disciplines.” Things that are related in some way or another are grouped together, and then isolated from one another. The presence of these groupings is generally widely accepted as not only useful in studying them, but as an inevitability. Somehow it seems to most that these divisions were naturally drawn between the sciences, humanities, fine arts, etc. Yet, that is not the way it has always been. As recently as the nineteenth century, the academy recognized fields of higher learning as one and the same (Rousseau). A person who excelled in physics was expected to be equally learned in philosophy, literature, and art. Although there were certainly areas of expertise, disciplines as we now know them did not exist. The result was a place where learning was fluid and comprehensive, rather than exclusionary and microscopic.

Around the middle of the nineteenth century, those who excelled in very tightly focused areas began to approach academia as a field in which students should have focused areas of study, rather than learning pieces from a broad spectrum of study. The sciences were set apart from the arts (Rousseau). After all, it seemed unnecessary to teach a student who was a master of numbers and formulas to learn about Baroque and Romanesque architecture styles in Europe. The divisions were large at first, but soon experts in their fields began to further disassemble the academy and give each area a title. These subjects were no longer named as areas that could be studied, but instead named as areas that should be studied exclusively. Thus, the disciplines were born.

It is ironic to think that only a century or so after this shift from a comprehensive academy into one built on disciplines, which seemed to grow only more specific by the

day, those would emerge who would try to break down these invisible barriers and bring now seemingly unrelated subjects together. The mid-1900s especially saw a large movement toward interdisciplinary studies in universities across the country (Rousseau). There were still many who still believed that higher learning should be approached as a whole, rather than in pieces. To them, the benefits of a broad scope of education were inescapable and should not be ignored for the sake of specificity and (in the opinion of some) marketing and money. From this movement, two disciplines that stood on polar opposites of the academy were merged: science and literature.

Around the 1940s in America, the field of literature and science emerged from these interdisciplinary studies (Spell and Westcott). The emergence of the relationships between the two stemmed, ultimately, from the desire to find the differences in the intellectual history between them. Meanwhile, some people in studying the histories also decided to try and uncover the similarities. For a few decades, the campaign gathered more and more supporters across the country. By the 1950s, the Modern Language Association developed a division on Science and Literature. By the next decade, annual seminars were being held to discuss the field. No longer were these areas seen as science and literature, related disciplines. They were now science and literature: the single area of study (Rousseau). While literature and science was based mostly in theory, it emerged in practice in varying ways over the next few decades.

By the 1970s the large portion of interdisciplinary studies as a general approach to advanced (post-secondary) education had tapered out. However, many schools still offer specific interdisciplinary fields. They come as a result for new and varying professional fields which require expertise in varying areas rather than just one. Evolving lifestyles

and new technologies or problems also give way to interdisciplinary fields. The ubiquity of technology alone has given way to a plethora of different interdisciplinary fields, ranging from science and technology programs all the way to technological approaches to art and the study of art. However, since so many of these interdisciplinary programs are driven by demand in the professional fields (which are predominantly technological), science and literature has since gotten pushed aside, and is no longer the hot topic it was 40 years ago. Today, science and literature are still widely viewed as seemingly unrelated, and their connections are rarely examined beyond the genre of science fiction novels. However, if a strong field is developed that examines the influences and intersections between these two, the benefits will be beneficial to not only those studying it, but beyond.

For those who study these connections and partake of an interdisciplinary program, one of the most immediate benefits is seen in their performance academically. With different disciplines playing off of and enhancing, rather than hindering, each other, students can begin to stretch their mind in new ways they likely would have never done in a discipline program. One of the most rewarding experiences comes when a student is sitting in a science classroom and learns about a concept referenced in a novel recently discussed in a literature class. Or perhaps being one of the few students to already understand the underlying scientific concepts seen in a work of literature. Having been exposed to multiple areas of subject matter, the influences and connections become much easier to recognize for students, which entirely enhances their academic experience. Without an interdisciplinary approach, these associations may go entirely unnoticed by both students and instructors, and the benefits would be left unclaimed.

Another advantage of interdisciplinary studies is that it brings students into a program that they may otherwise have never considered. Take, for example, a student who enters college seeking a chemistry degree. This student would certainly be very scientifically inclined, learning things that follow the strict rules of hard sciences, but rarely giving much thought to creative, abstract thinking. If this student attends a school that subscribes to strict disciplined divisions, then his approach to learning would stay the same and his creative potential would go untapped. However, if that same student is fortunate enough to be a part of an interdisciplinary program, then there would most certainly be literature courses designed to pique his interest. Even something as simple as a class on science fiction novels would be familiar enough territory that he may feel comfortable venturing into the Humanities. With curricula developed with the intention of enticing students from (what is perceived as) the opposite subject, these students will feel comfortable, if not compelled to dabble in new areas of study. Enrollment in literature courses will no longer be limited to English majors and biology classes will not be simply pre-medicine students.

Many times students do not avoid foreign subject matter because of a lack of interest, but rather because it is outside of the comfort zone. Once they get some exposure to other areas of study, these apprehensions tend to dissolve. After realizing that alien territory is really not that intimidating, they will be encouraged to try more new classes, all the while broadening their horizons, stretching their minds, and enriching their entire academic experience.

Sometimes, what starts as a one-class experiment in a new subject area can then turn into something much bigger. Maybe being exposed to a new side of academia is all it

takes for a student to realize they have more than just a mild fascination in another area of study. There are instances where those highly motivated students realize that their interests can actually segue into a second area of specialization. In fact, it is a trend that is becoming increasingly more common at the post-secondary level, particularly amongst the students whose academic goals extend beyond the Bachelor's degree. Many medical schools are beginning to express a desire for students who not only do well in their science classes, but major in an area outside of science, such as religion, economics, or yes, even English. This reflects the notion that academically diverse students are advantageous, even from the school's perspective. Accepting those students who vary from the traditional biology track through their undergraduate career contributes to the school's diversity. Certainly, if there were no noticeable advantages to being academically diverse, then this trend would not be seen at so many medical schools and other post-graduate institutions.

Future employers can also reap the benefits of having multifaceted students on their payroll. Typically, there are certain characteristics that are attributed to students of a particular academic major. One such stereotype is that of science and engineering students: they are terrible writers. Syntax, grammar, idea development, etc. are all lacking in many written pieces by these students, even if they are prodigies in their field. What would happen, though, if one of these engineers were to take several literature courses? It is no secret that students who spend more time reading often make better writers. After several semesters of reading and being exposed to proper written word, their writing would undoubtedly improve. These academic stereotypes would dissolve with an interdisciplinary program. No longer would employers need to keep multiple workers on

staff to do the work that one versatile person can do. The same chemist who designs and runs the experiment can then write and revise his own journal articles. Newspaper journalists will no longer need to consult "experts" on technology because they will be able to follow all of the jargon on their own. The possibilities from an employer's standpoint are endless. It is clear that those who develop and cultivate an expertise in more than one subject area are assets to not only the school, but also their future employers out in the real world.

One phrase often heard in both the academic and business worlds is "outside the box thinking." This idea of looking at things from a different angle and trying to approach problems from a new perspective is not itself new or different. One could even argue that no real developments have been made in society without outside the box thinking. All it takes is an examination of the influential men and women in history to realize that this statement is grounded in fact. Revolutionary thinkers were responsible for taking the world outside of the center of the universe and making it round. We are no longer living in a time where attaching leeches on a person is the only medical solution to nearly any ailment not solved by elixirs concocted from the nearest plants and bugs. None of these advances would have been possible if people were not encouraged to expand their thinking to ideas beyond what was seen as typical at the time. Interdisciplinary curricula encourage this kind of thinking. Rather than reinforcing the ideas of disciplines and teaching students that information needs to be kept in its respective box, it allows the information to spill over into the other boxes. Literary characters are allowed to mingle with the latest scientific advances and then get put into a context of technology. The result is a beautiful amalgamation of ideas that, when properly nurtured, will blossom

into the biggest breakthroughs and advances of our future.

In our current society, both in and out of the academic community, it has become apparent that measures must be taken to move back toward an interdisciplinary approach. Clearly there are benefits, but it is so much more than that. Without allowing literature to be viewed in the context of the whole picture, considering all contemporary influences, the author's true intentions and messages are skewed or missed entirely. As critics of literature, we owe it to ourselves as well as those we educate to expand our scope. Literature does not exist in a bubble, isolated from all other disciplines; it is time we stop treating it like it does. For this reason, literature must be taught via an interdisciplinary approach in order to be fully appreciated and understood.

There have been groups of authors in the past who have disregarded their subject boundaries almost as soon as others tried to impose them. One such group of writers is the Naturalists. These authors, many of which were writing around the turn of the twentieth century, allowed science to play a predominate part in how they perceived humans and portrayed them in their writing. In fact, naturalism is defined by "a type of literature that attempts to apply scientific principles of objectivity and detachment to its study of human beings" ("Naturalism in America"). Some of the themes seen in naturalistic writing are survival, the forces of environment affecting human (individual) lives, nature itself acting on human lives, and the conflict of man against nature. Rather than looking at humans as beings that simply exist in nature, naturalists often treated human as just another creature in nature. The idea of free will was one that was simply an illusion since the universe, it seems, is in control of everything and humans are at the mercy of its indifference. Instinct was no longer limited to savage creatures and the beasts

of the wild; humans were just as susceptible to instinct and genetics as any other animal. The conflicts seen in naturalistic writing often result from the characters in question trying to find a sense of purpose in life, in spite of the ostensible futility of so many of their actions in a world where the laws of nature governed their every action, just as it would a beast of burden.

The scientific advances that had been made up to the turn of the century, and were continuing to be made, influenced heavily the writing on the naturalists. These authors were very well read in the natural sciences and had a thorough understanding of the truths laid before them by their scientific contemporaries. In the times when many scholars were trying to separate themselves and profess their individualism from others through the formation of disciplines, the naturalists were continuing to examine life across the boundaries of their scholarly fields in an effort to better understand the human condition.

One writer commonly associated with the naturalistic school of literature is Jack London. While London is a well-known author, his reputation is generally one of a more popular, un-academic writer of fiction; he does not often carry a great deal of clout in the academic community. He was, however, a prime example of a multi-faceted author who had varying interests and refused to be confined by subject borders. His novels frequently take place in the wilderness, and wildlife is sometimes not just a part of the story, but it becomes the story. Many children read his novels at the secondary or even primary level. On the surface they seem like nice stories about wolves and dogs with generally happy endings. But could it be there is more to London's writing lurking beneath the surface?

For the purpose of this assignment, several of Jack London's most famous novels, *Call of the Wild*, *Sea Wolf*, and *White Fang* will be critically analyzed through the lens of

those scientific influences which strongly influenced London, and subsequently his writing. This analysis will clearly demonstrate how it is absolutely necessary to have a complete understanding of the author's world, not just pieces of it, when conducting an analysis of this nature. A lack of understanding will not just result in missing out on parts of the story, but instead produce an entirely incorrect interpretation of the story as a whole. After a thorough analysis of these three novels, the case for interdisciplinary studies will no longer remain an argument of what "should" be done, but rather what "must" be done in the literary community.

The Life of Jack London

Jack, born John Griffith London, was the first child of Flora Wellman. He was born in San Francisco, California in 1876. His mother was mentally unstable throughout Jack's infancy, so he was instead raised by an ex-slave, Virginia Prentiss, who remained an influential maternal figure throughout his life (Stasz). Later the same year Jack was born, his mother married John London and the family settled in Oakland. They were a working class family, though London later exaggerated the financially dire situation in which he grew up ("Jack London Biography"). As he grew older, he dabbled in many various jobs for money, including a stint on a sealing ship and running for mayor as a member of the socialist party. He was already known in Oakland for his street corner lectures on socialism, having joined the Socialist Labor Party (SLP) in 1896 and being immediately taken by its teachings, though his political career never became successful (Stasz). London was exceptionally well read, especially considering he was forced to drop out of University of California - Berkeley for financial reasons and was predominantly an autodidact. He began writing short stories and articles, though any of it was rarely published in his early years.

At the age of 21, London went to the Klondike in the midst of the Yukon Gold Rush. While in the Canadian tundra, London developed scurvy. Father William Judge had a station set up where London, among many others, was able to seek food, shelter, and medical care. It was during his stay at Father Judge's facility that he was inspired to write "To Build a Fire" ("Jack London – A Brief Biography"), which is considered by many scholars to be his best short story. Upon returning to Oakland in 1898, London began working fervently to get his writing published. He came close to giving up on writing

entirely after many failed attempts, until *The Black Cat* paid him \$40 for his story "A Thousand Deaths" ("Jack London Biography"). With money in his pocket and a boost in self-esteem as a writer, London continued writing, with most of his early works being published in popular magazines. Eventually he began writing long fiction, *The Call of the Wild* being one of his first successful novels (though it was originally intended to be a short story). Professionally, London was a wildly popular writer in his own time, eventually publishing over twenty novels and dozens of short stories (Stasz). He even managed to see some of his novels transformed into movies; his novel *The Sea Wolf* was made into the first full-length American film ("Jack London – A Brief Biography"). As a writer, London was fortunate enough to see his resounding success first hand and profit from it, though kidney disease led to his death at the early age of 40 ("Jack London Biography").

As a man, London was complex in his beliefs and full of contradictions. Though he was a supporter of women's suffrage, he was dominant toward his two wives and his two daughters (Stasz). He was also a subscriber to Social Darwinism, a common social belief at the time, and yet seemed disparaging of the culturally destructive nature of white men. Many of these conflicting views are seen in his writing, which he often used as a means of promoting his beliefs.

There were many social and historical events that intensely influenced London's beliefs. During London's life, he was constantly surrounded with racial stereotypes. Every non-Caucasian race was given its subpar characteristics. These labels managed to filter into London's writing, which has led to many accusations of racism by scholars and lay people alike in the century following his death (Stasz). Many Californians during his

time were especially concerned with the increasing population of Chinese immigrants, and even titled an essay after the name by which it was so often referred: "The Yellow Peril." However, many scholars continue to defend London on the accusation of racism for various reasons, arguing that he was at odds with his own beliefs on issues of race and those of society around him. He wrote many letters discussing his admiration for the Japanese people and their culture, which some see as a predominant example of his appreciation for, rather than disgust for, other societies and ethnicities.

One of the social beliefs for which London is most well-known is socialism. Besides being a member of the SLP and running on the socialist ticket as mayor (Vitale), London often wrote stories that reflected his desire for a socialistic utopia and touting the advantages of a socialist society. There were several events that helped to persuade London toward socialism from an early age, and even helped to convince him that socialism would eventually become the dominant political structure. In an essay titled, "How I Became a Socialist," London talks about how his initial subscription to the ideals of socialism are resultant of his early years on the lower rungs of society and then subsequent years associating with others in a similar situation. It did not take long until the long, arduous hours working for virtually no profit to him stole London's optimism. He began to see things through new eyes and the SLP offered him the message of hope for which he was searching. The concept of the workers taking control appealed to him, especially at a young, impressionable age.

Following the Paris Commune of 1871, many who had previously subscribed to socialist teachings were inspired. The workers of Paris managed to pioneer a revolution without the aid of organized government or people with wealth. Those same people who

started the revolution continued it, aided one another, and defended the commune until its demise only two months after its declaration (“1871: Paris Commune”). But in those two months, the workers of Paris made a statement: the government does not control the people. The workers are the ones who are responsible for the functionality of a society and are more than capable of taking power if they are mistreated. This message would reverberate for decades, inspiring some of the most notable political takeovers since the insurrection. This message also spoke to London, who saw socialism as a way to regain control in a society where he had, from his perspective, been taken advantage of by the wealthy and powerful.

As he grew older, he still claimed to be a proponent for socialism, though his success in life (and consequential wealth) likely took away from the appeal of the idea of a worker revolution (Vitale). Some of his novels, such as *The Iron Heel*, reflected what London hoped, and possibly genuinely thought, would be representative of the future of the United States. He viewed the increasing success of the American Socialist Party in campaigns as a precursor to a socialist government. One famous political figure in London's time was Eugene V. Debs, who ran as the ASP candidate for president five times. Though he never brought in nearly enough votes to be considered a real player in the elections, he steadily increased in popularity. In fact, though London never lived to see his final campaign, Debs eventually brought in over one million votes in 1920... while a convict at the Atlanta Prison. His campaigns were never expected to be successful, but were used to tout the socialist agenda to the American public (“Eugene V. Debs”).

On the other side of the world, Russia was beginning to experience a political upheaval of its own. January 22, 1905, "Bloody Sunday," is considered the genesis of the

Russian Revolution. After the people's faith in Czar Nicholas II ebbed, hundreds of demonstrators gathered in St. Petersburg and were shot and murdered, despite being unarmed. This led to revolts and violent protests throughout the entire Russian empire. Czar Nicholas did not respond tactfully to these outbreaks, ordering the capture and execution of thousands, and in doing so only provided the workers and citizens with more motivation to continue their revolt ("Russian Revolution"). Though the Russian Revolution would not fully come to fruition until 1917, a year after London's death, the events taking place serve to spur on the socialists in America, including London. This, coupled with the events taking place in his own country, served as ample proof to London that socialism was indeed gradually taking over political power around the world.

Besides the political events taking place during his life, London also experienced the Yukon (or Klondike) Gold Rush. Gold was discovered on Rabbit Creek in the Klondike district of Yukon, Canada on August 16, 1896. It is still the largest gold rush ever recorded in the world; the Klondike was a stronghold for gold miners from the initial discovery in 1896 until the early 1920s. To date, gold mined in the Klondike district is valued at \$4.4 billion by today's prices ("Klondike Gold Rush"). It was during his excursion to the Yukon ("Jack London Biography") that London experienced many of the events and encounters with the harsh tundra conditions that would serve as the backdrop for his two most famous novels, *The Call of the Wild* and *White Fang*, as well as other works. Experiencing nature in such an unadulterated form, hundreds of miles devoid of civilization, helped to instill in London a love of nature. Even in his later years, he bought a large ranch so he could spend his time away from the busy, populated cities.

Some may argue that Jack London was so successful because he was so much a

product of his environment. No political or social event, it seemed, could take place without being either a minor or pivotal blip on London's radar. It seemed that anything important or interesting to him managed to creep onto the pages of his novels and short stories. Fortunately, London's interests were not bound by 20th century disciplines, thus nor were the influences that played a part in what he wrote, how he wrote it, and the points he made by writing it.

Scientific Influences

In order to find the scientific influences in Jack London's writing, one must first have a firm grasp on the scientific theories and principles themselves. After all, to try and uncover scientific allusions without extensive scientific knowledge is almost as futile as looking for a person in the crowd after receiving a vague description of what somebody else thinks he looks like. Even though in-depth study into these areas of science would prove exceedingly helpful in interpreting London, for the scope of this project (as well as any similar analysis of a work of literature), a brief, albeit detailed, explanation will suffice.

First off: the biologists. For many, these are the influences that are easiest to spot in London's writing, especially since so many of his famous writings take place in the Yukon, an area that was more or less unoccupied before the gold rush began in 1896, and nature in its purest form exudes from the pages as he writes of man against nature, wolf packs, and the harsh, indifferent conditions that were so characteristic of that area. It is primarily in these writings where the strongest biological influences can be noticed without too much in depth examination or even advanced understanding of the biological principles which did the influencing.

Charles Robert Darwin's most famous work, *On The Origin of the Species by Means of Natural Selection*, was published first in 1859, with the sixth and final edition (shortened to *The Origin of Species*) being published only 15 years later in 1872. This would have been more than enough time for its primary theories to filter through the scientific community and into the public domain; London most certainly would have crossed paths with it, both in its original context as well as in its socially adapted form,

known commonly as "Social Darwinism." Although many of Darwin's theories were met with tremendous amounts of political, social, and (especially) religious scrutiny, they were immediately powerful and influential across the academy, both in and out of the scientific fields. Despite their apparent incompatibility with religion, (after all, how could evolution, which takes thousands to millions of years, even exist in a world that was thought to only be several thousand years old?) Darwin's theories made sense to scientists for the most part in light of the evidence they had so far discovered. In fact, it was because he knew that his theories would be so controversial that they became so persuasive. He did not even attempt to publish his findings until he felt that he had sufficient evidence for his theories, lest they be immediately rejected by everybody, scientist or otherwise (*Darwin Online*).

Before Darwin came along, the primary theory on how creatures changed (or evolved) came from a theory by Jean-Baptiste Lamarck, whose most famous illustration was the giraffe's neck. The explanation of his theory was as follows: Modern day giraffes descended from ancestors with significantly shorter necks. Over time, they began stretching out their necks to reach higher branches with leaves. Their offspring would then inherit the stretched out necks, only to repeat this process themselves, and the cycle repeated itself until the giraffes that occupy the earth now were born ("Early Concepts"). Of course, scientists now know that this is absurd. Even though other scientists objected to Lamarck's theories and proposed partial explanations which contradicted it, Darwin was the first prominent scientist to offer a scientific theory which completely nullified Lamarck's.

Darwin's theories were based on his famous voyage on the HMS Beagle to the

Galapagos. While on his trip, he noticed many peculiarities in the wildlife, especially in the finches. Even though they were all the same type of bird, they had drastically different beaks. Darwin also noticed that they each had very different diets; it was only a matter of time before he realized that the two were connected, and the beaks were a specialized tool for gathering food, not just a random physical difference. From this, as well as many other observations, he developed the Theory of Natural Selection. In *The Origin of Species*, Darwin covered many different aspects of species development and survival; fortunately, understanding all of them on a complex level is not necessary for the scope of this examination. The specific theories which can be seen influencing Jack London's writing are those associated with variation of species, "survival of the fittest," and instinct.

It seems very basic to have only just been noted significant in the mid-nineteenth century, but species have variations. Whether a species, be it plant or animal, is domestically bred or a product of the wild, there are always variations from individual organism to organism. If it were not for these variances, then dog breeders would have no characteristics to either breed for or against. These differences may be something as trivial as the length of the tail or slant of the nose, or as significant as its propensity toward hip dysplasia. By breeding dogs which poses traits deemed desirable and avoiding those which exhibit traits that ought to be avoided, breeders are able to produce dogs that are, hopefully, exemplary of their breed. Even without an understanding of genetics, most lay people were able to make these observations, even if they did not understand the mechanism behind it. This much was not ground breaking, but was still essential to the understanding of his bigger picture.

The variations seen among domestic plants and animals were, of course, not limited to just the domestic; organisms in nature also possessed variances within the same species. Of these variances, Darwin had this to say:

Owing to [the] struggle for life, any variation, however slight and from whatever cause proceeding, if it be in any degree profitable to an individual of any species, in its infinitely complex relations to other organic beings and to external nature, will tend to the preservation of that individual, and will generally be inherited by its offspring. The offspring, also, will thus have a better chance of surviving, for, of the many individuals of any species which are periodically born, but a small number can survive.

I have called this principle, by which each slight variation, if useful, is preserved, by the term of Natural Selection, in order to mark its relation to man's power of selection. We have seen that man by selection can certainly produce great results, and can adapt organic beings to his own uses, through the accumulation of slight but useful variations, given to him by the hand of Nature. But Natural Selection, as we shall hereafter see, is a power incessantly ready for action, and is as immeasurably superior to man's feeble efforts, as the works of Nature are to those of Art. (*On the Origin of Species*)

And thus, the Theory of Natural Selection was given life. In other words, the variations seen in nature were not random, but rather a metaphoric leg up at survival. Any variation which arose randomly in an individual that helped its survival would also help ensure its ability to produce offspring. These offspring would also possess this same trait, giving it the same additional chance at survival. Eventually, the small variation which helped the

first organism to survive would become commonplace as those with the trait reproduced more and more, and those without it began to die out as they competed for the same resources and mates against those with it. These variances occur randomly and do not necessarily ensure profitability should circumstances change, but aid the organism under the circumstances present at that time.

An oft-touted example uses the moths in London around the time of the Industrial Revolution as an example. Before the Industrial Revolution, many of the trees in London had pale trunks. The moths that could be found were usually white with black specks. Occasionally black moths with white specks could be found, but they were in the minority as they would stand out whenever they landed on one of the pale-trunked trees. Once the Industrial Revolution started, however, things began to change for the moths. With all of the factories, the trees began to turn dark with the ash and soot that filled the air. Suddenly, the white moths were the ones that stood out and the black ones blended in, making it easier for the predators, such as birds, to find and eat the white ones. After a short time, the black moths were commonplace while the white moths became rare. It is not that any one individual organism was changing, but rather the trend seen among the London population of moths shifted to reflect that trait which was most beneficial given the circumstances of that time. This same pattern is seen throughout nature in plants and animals, which is nature's way of ensuring the survival of the most capable individuals, or survival of the fittest.

This type of natural selection did not stop with physical characteristics, however. Instead, it applied also to patterns of behavior. Darwin argued that those animals which behaved in a manner which ensured its survival over its competitors, while acting

habitually rather than making a conscious decision (an ability animals were not thought to have), would pass on the same behavior patterns to its offspring. These patterns of behavior that helped to clinch an organism's survival in nature were its instincts. The creatures which acted on those instincts which were beneficial in its particular environment would be most capable of reproducing, and so it followed that this behavioral pattern would replicate in subsequent generations in the same way that physical characteristics did. These were the primary observations made by Darwin which can be seen most frequently throughout many of London's works.

While Darwin's theories made sense (at least to those who could accept them, in spite of their conflict with religious teachings), the actual mechanism for passing on traits was not fully understood until a monk named Gregor Mendel performed his famous pea experiments and published his findings. Unfortunately for Mendel, even though he first published in 1866, his theories were not widely accepted until around 1900 after the microscope had allowed scientists to better visualize the cellular components responsible for division and reproduction. By cross-pollinating pea plants with various characteristics and observing the corresponding traits of the offspring across generations, he managed to develop three important principles of genetics:

- "1. that the inheritance of each trait is determined by 'units' or 'factors' that are passed on to descendents unchanged
2. that an individual inherits one such unit from each parent for each trait
3. that a trait may not show up in an individual but can still be passed on to the next generation." (Mendel qtd. in O'Neil)

Even though it is not likely that London delved deeply into genetics in his studies, there

are instances which seem to insinuate that he had at least a basic enough understanding of genetics that he knew how the physical and behavioral traits discussed in Darwin's books were passed on from one generation to the next, rather than sticking by Lamarck's theories of learned or developed behaviors being passed on to an individuals' offspring.

Jack London was not the only person to be influenced by Darwin's findings. Ivan Pavlov was in a theological seminary when he read Darwin and promptly changed career pursuits, realizing he was far more interested in the scientific rather than the religious ("Ivan Pavlov – Biographical"). The experiment for which Pavlov is most famous is one that, though starting as a study in digestion (his specialty), ended up becoming a foundation for behavioral psychology nearly a decade later. Pavlov's experiment dealt with the connection between salivation and digestion. Using dogs as his test subjects, he wanted to see if there was any way to induce salivation without actually giving the dogs food. At the point he began his experiment, salivation was only noticed once the dogs had been given food and had started eating. Pavlov started ringing a bell before feeding the dogs, and repeated this process for a short time. It was not long before he noticed the dogs' salivating began when they heard the bell, rather than when they started eating. He called this reaction a "conditioned reflex," and was something that was learned over a period of time where a stimulus indicated the same result (e.g. the bell, the stimulus, indicated that the result, the food, would appear) again and again. This "conditioning" could also be unlearned if the same stimulus no longer yields the same result too many times. Since these observations were not published until 1904 ("Ivan Pavlov – Biographical"), they were not seen in London's earlier works, but can be seen occasionally in some of his later novels and short stories.

The one major scientific influence that comes from a softer science, sociology, is Marxism. London was heavily involved in the Socialist Party, so it comes as no surprise that his political beliefs shaped his views of the world, and in turn his writing. Karl Marx is often seen as one of the primary philosophers whose thinking led to the development of socialism. Many of the most influential works Marx wrote were published in the mid-1800s (“Marx – Biography”), shortly before London was born. By the time London was at the ripe age for political interests and ambitions, socialism had crossed into the United States and was going strong in his community.

There are two major components of Marxism that seemed to take hold in London’s writing the most. The first, and most apparent, allusion to Marx’s theories is the representation of his “alienation of labor.” According to Marx, if a person is disconnected from the results of their work, and no longer sees the impact that it has, he becomes alienated from his work itself (“Estranged Labor”). People must maintain a close relationship with their work, to a point where it is intrinsically a part of who they are. Part of the human experience is the transformation from the actual self to the potential self (i.e. fulfilling one’s full potential in life), and this transformation is only possible through what Marx called “labor power” (“Estranged Labor”), the second of the concepts seen in London’s work. This labor power only existed when people saw in themselves the ability to change things, to have an impact on the world and on the nature of things, and was not possible in a situation where there was an alienation of labor. However, if people were to see and experience the fruits of their labor, then they would begin to transition into their potential selves; the result would be Marx’s equivalent to spiritual enlightenment.

These scientific concepts were most prominent in the time of Jack London, and

were undoubtedly strong influencing factors in his outlook on life and, subsequently, his writing. In order to truly grasp the meaning of his novels, they must be analyzed and read through the lens of these concepts.

Call of the Wild: The Necessity of Instincts

Written in 1903, *The Call of the Wild* remains one of Jack London's most famous works, pulling on his experiences in the Klondike for inspiration. It is the story of a dog named Buck, a St. Bernard and Scottish Shepherd Dog mix, and his transformation from pampered pet to master of the wild. As with any writer, London's personal beliefs and interests helped mold and shape both his characters as well as the events which transpired. His socialist background managed to seep its way into the story, despite its setting being just about as far away from civilization as possible, with relatively subtle references to Marx's ideals playing a significant role in Buck's metamorphosis and transcendence to a high plane of existence. Of course, since the story takes place predominantly in the wild, it is no surprise that so much of the influential forces that guided London's telling of the story were biologists. Shades of Pavlov and Mendel are seen throughout the narrative, with the most prominent scientific guidance coming from Darwin. London's grasp of the theories of evolution that Darwin had recently published, as well as the suggestions of a world in which behavior was motivated purely by the instincts necessary to survive and not moral code, are at the root of the changes seen in Buck. Without a strong comprehension of these theories, a reader of *The Call of the Wild* will not only miss out on many of the driving forces behind the changes seen in Buck, it will impede their ability to wholly understand the point London was making about society and those that exist in it, both animal and human.

The title of the tale alone is central to the appreciation of the deeper meaning found in the telling of Buck's conversion. *The Call of the Wild* seems to imply that there is a deeper, instinctual pull that the wild holds for Buck. Ultimately, Buck never really

makes a conscious effort to assimilate into the savage world of the Canadian wilderness; instead, his latent instincts, which had been silenced by generations of domestication by humans to keep his kind as companion animals, began to slowly take over his actions and his mind until he finally heard the call and answered, leaving civilization for good and becoming purely wild. While London surely meant for this idea of living creatures feeling “called” to an uncivilized life to be metaphorical, Buck experienced a literal call away from culture and “sophistication.” As he was nearing the end of his metamorphosis, he heard a wolf call out in the distance. Though he responded to this call by wandering away from his master, John Thornton, he still returned to the camp. It was only after Thornton was killed, and Buck no longer had a human master to whom he must answer, that he was able to respond to a second call from a wolf pack, ultimately joining them and becoming a true part of the wilderness. Never does the narrator, who is omniscient and often gives the reader insight into Buck’s thoughts and desires, indicate that Buck makes the decision to transition into a wild beast. This only bolsters the idea set forth by the title that Buck, just like all creatures, responds unconsciously to a call from the wild to re-assimilate and give in to the instincts that have existed, though dormant, deep inside all along.

While London made it clear, through the title as well as the events that unfolded, that the driving force behind Buck’s behavior was his instinct; Buck’s reactions to those behaviors were a result of London’s Marxist and socialist background and beliefs. Even though Buck is a dog, London creates with him many human characteristics and emotions, such as the capacity for love. He also uses the opportunity to impose on Buck the precise experience that Max wrote about in terms of labor. When Buck lived on Judge

Miller's place, he lived the lazy life of a companion dog, with simple and elective tasks set before him, though he did not ever experience firsthand the benefits of his participation in them.

He plunged into the swimming tank or went hunting with the Judge's sons; he escorted Mollie and Alice, the Judge's daughters, on long twilight or early morning rambles; on wintry nights he lay at the Judge's feet before the roaring library fire; he carried the Judge's grandsons on his back, or rolled them in the grass, and guarded their footsteps through wild adventures down to the fountain in the stable yard, and even beyond, where the paddocks were, and the berry patches. (8)

The primary function Buck served for Judge Miller and his family was companionship, either during a hunt or in front of the fireplace. As a protector, Buck was more of an amenity than a necessity, especially considering the Judge's apparent wealth and place in society. When examining the passage above, the only time he was charged with guarding anybody was when he went with the Judge's grandsons "through [their] wild adventures to the fountains in the stable yard... and the berry patches." This excursion would hardly be considered one of high risk, and Buck knew it. Even if he did have an impact on the world around him, it was not one which stood out in his eyes; regardless, the work he exerted was negligible.

But for all the luxuries his life with the Judge afforded him, Buck knew nothing of true happiness. He is described as having "a fine pride in himself, was even a trifle egotistical," (9) but he is never described as happy. His life at Judge Miller's place was one of luxury and contentment, but it was all he had known since he was born. Without

true work, and seeing the changes that work brings about, he could not fully appreciate his life. Though he never realizes it at the time, it is evident through the rest of the story that he was not truly happy in this life. Never does Buck long for his life back at Judge Miller's place. Even when he has experienced the worst the Klondike has to offer, he merely reflects back on his life there, but he does not miss it. Buck does not miss his former, civilized life, because he has already experienced a taste of the fulfillment that work, and realizing his full potential through this work, can bring him.

When he lived with Judge Miller, everything was handed to him: food, shelter, affection, and love; he never had to work for anything. It is for this reason that Buck was perplexed when he was first put into the traces of a sled, and saw the experienced dogs not just willing to work, but excited to work. Since the traces reminded him of the harnesses put on horses to work, he immediately realized that this would be his duty as well, and "his dignity was sorely hurt by thus being made a draught animal" (20). Having never been forced to work before, Buck was insulted that he would be expected to do such a thing, but he went along with it since he knew to defy his new masters would get him whipped. He also noticed that the other dogs did not resist, or even begrudge their masters for being forced to work. In fact, it seemed to Buck that they took pride in pulling the sled.

One dog who best exemplified this pride was Dave. It was "that pride which holds dogs in the toil to the last gasp, which lures them to die joyfully in the harness, and breaks their hearts if they are cut out of the harness" (37), and for Dave, he did just that. On the trail, he began to suffer and deteriorate physically, crying out in pain frequently while pulling the sled. When his driver resolved to let him rest, "Dave resented being

taken out, grunting and growling while the traces were unfastened, and whimpering broken-heartedly when he saw Sol-leks in the position he had held and served so long. For the pride of trace and trail was his, and, sick unto death, he could not bear that another dog should do his work.” (53) Ultimately, he was allowed to stay in the traces until he fell and was no longer able to move, at which point the driver ended his suffering with a shotgun. Dave’s final days were a poignant reminder to Buck just how important the work was to Dave. Similarly, London is reaffirming this idea to his readers, that doing work is not a punishment, but rather a path to contentment.

As the narrative continues, and Buck’s transformation progresses, it becomes increasingly apparent that Buck is growing steadily closer to true happiness, Marx’s “potential self.” He even, at one point, acknowledges that “for the toil had become a delight to him,” (41), and no longer did he feel a sense of shame for being forced to work. Rather than having everything given to him without question, he was working for everything he received, and the work he was doing served a greater purpose. He was pleased with his work, and felt a sense of self-satisfaction from it. It is in the midst of this work, when he has been completely enveloped by his passion and driven only by instincts, that he achieves the greatest pleasure. London describes it perfectly when he says, “There is an ecstasy that marks the summit of life, and beyond which life cannot rise. And such is the paradox of living, this ecstasy comes when one is most alive, and it comes as a complete forgetfulness that one is alive.” (42)

Through all of this, London has illustrated the ideals Marx wrote about in relation to human labor. It is not through material possessions that we find true happiness, but through the work required to obtain them. One cannot ever find his potential self without

work, and to be separated from the product of that work, or not working at all, is to deprive oneself of an almost spiritual transcendence. This progression from actual to potential self is seen in Buck throughout the story, and reaffirms the theories projected by Marx which London took to heart.

Another influential force in the novel was Pavlov's experiments on conditioning, the most prominent example of which is Buck's reaction to men carrying clubs. Before he was kidnapped and sold into a life of servitude, Buck had never even seen a club, let alone been hit by one. So, when the man in the red sweater first threatened him with it, he didn't even flinch. Even after the first blow, though he was stunned, Buck still snarled and tried to attack both the man holding it as well as the club itself. Eventually, though, he had finally been beaten into submission, and though he continued to snarl, he no longer attempted to attack the man as long as he was holding the club. For the rest of his life, Buck avoids men who carry clubs. When Francois, who was one of his more fair masters during his time as a sled dog, held up a club to threaten Buck back into the traces, Buck avoided him. He knew that a man holding a club was not just able to cause him pain, he was likely to. As soon as Francois threw down his club, Buck promptly trotted back up to him (47). This is a textbook case of Pavlovian conditioning, where Buck is reacting based on a repeated experience. When the situation of a man holding a club so often results in getting hit, as long as he is within swinging range, Buck learns to avoid this situation henceforth. Even after Buck has killed men, the Yeehats who murdered John Thornton, and Buck no longer fears men alone, he still resolves to "be unafraid of them except when they bore in their hands their arrows, spears, and clubs" (104). It was never a conscious decision, a result of contemplation and analysis of circumstances, but instead

a manifestation of instincts and conditioning that aid in Buck's survival. After all, had he not quickly become conditioned to obeying "the law of club," he would have likely ended up beaten to death. In the end, this type of conditioning is all about survival.

While Pavlovian condition is a learned behavior, many of Buck's actions are a direct result of his genetic programming. The discoveries of Mendel, coupled with the observations made by Darwin concerning behaviors that get passed on from generation to generation, gave rise to the idea of instincts. Some behaviors can be learned, but the ability to survive in the wilderness relies heavily on instincts. Buck was born and raised in California, so he had never even seen the snow, nor had he encountered many of the perils and creatures that awaited him in heart of uncivilized Canada. With little teaching from his fellow sled dogs, Buck quickly adapts to his new environment, often reacting without thinking or reason. The longer he is immersed in this unfamiliar territory, the less he thinks about his actions; his instincts begin to awaken and take over.

When he first arrives, Buck has never even seen snow, so he is utterly unaware how he should manage to survive in the bitter cold. After being chased out of the tent on his first night by Francois and Perrault, he wanders around, desperately trying to find somewhere warm to sleep. It is only when he stumbles onto another sled dog buried in a snow nest that he is able to make a bed for himself in the snow. Coming from such a long line of domesticated companion dogs, Buck is all but entirely out of touch with his survival instincts. The only thing that saved him was his intelligence and ability to learn quickly from the other dogs.

However, as time progressed, the dormant instincts began to awaken. After his first night sleeping in the snow, he awakes to find himself covered on all sides in snow,

and fears a trap. Never in his time at Judge Miller's had he ever been in a trap, but something was telling him to be on his guard in the situation. "It was a token that he was harking back through his own life to the lives of his forebears; for he was a civilized dog, an unduly civilized dog, and of his own experience knew no trap and so could not of himself fear it." (23) London writes of Buck's instincts this way frequently, referencing his ancestors as if the wild dogs in his lineage were there teaching him, warning him, and urging him to act. In fact, he describes the instincts as, "but the memories of his ancestors become habits" (51). This pattern in the narrative alone is a clear indication that London understood the role genetics can play in behavior, as genes would be the only connection the domesticated Buck would have to wild dogs.

This atavistic behavior of Buck's only increases in frequency and intensity as the story progresses. When he kills Spitz, overthrowing him as leader of the pack, he takes his place in the sled team. Francois is amazed at Buck's leadership ability, which surpasses that of even Spitz. It is as if he is a born leader, a concept credited entirely to instincts. Buck's life in California had never required any type of leadership, and certainly not over a pack of dogs, and yet he excels as a leader of the sled team. Surely this behavior is not solely learned, but rather a manifestation of his intuition that is finally beginning to surface and dominate his behavior. This idea is echoed in the narration of the story: "And not only did he learn by experience, but instincts long dead became alive again. The domesticated generations fell from him." (28) Buck is shedding his old self and being reborn anew, allowing his instincts to replace thoughts and reason. His transition into the wild is finally nearing completion. Without these instincts, he would never survive it.

For Buck, the revival of his instincts is more than simply behavior; it is a realization of his past. This awareness comes to him in the form of visions of his ancestors. While sitting by the fire, as he dozed off, he would see a man dressed in skins, uttering strange sounds. "This other man was shorter of leg and longer of arm, with muscles that were stringy and knotty rather than rounded and swelling. The hair of this man was long and matted, and his head slanted back under it from the eyes." (51) Later, when he was with Thornton and left with nothing to do, the visions of this man became more frequent. He would even, on occasion, wander with the man through the wilderness, but it was a wilderness of times past. When the man would sleep in trees, Buck would have memories of sleeping on the ground under him, protecting him from the forest floor. It is through these memories that it is made clear that not only are Buck's own actions instinctual, but also his relationship with man. Because his ancestors had a symbiotic relationship with man, so must he. For this reason, Buck is unable to answer the call of the wild and leave the world of man entirely until Thornton is killed. It is "the memories of his ancestors become habit" that determine his actions, even until the end.

For Buck, these memories were no longer just those of his ancestors, but had become a part of his own existence. It was not just the behaviors that had been awakened, but all of the memories and experiences of generations past. It is indisputable that Buck inherited his instincts genetically from the wild dogs that roamed the earth ages ago, and London makes sure that it could not be interpreted any other way.

Of course, Darwin's theory of evolution influenced more than just London's portrayal of genetically inherited instincts. Nearly all of the behaviors manifested in both Buck as well as the dogs as a whole can be credited to Darwin's discoveries. It did not

even take a day of being in the savage world of the Klondike before Buck realized that there was “no fair play” (20). The code he had left in California, the life of morals, kindness, and respect, was entirely absent. Instead, the code here was “kill or be killed,” and there was a sharp learning curve to this new code. Buck watched firsthand as Curly, a friendly Newfoundland female, was torn apart when she too eagerly approached a husky, who was surrounded by his pack. From that moment on, Buck knew that he would have to constantly be on the lookout for an attack, and there was no room for error.

Fortunately for Buck, he was a fast learner, and his instincts quickly took over. “He was fit, that was all, and unconsciously he accommodated himself to the new mode of life.” (27) London’s use of the word “fit” to describe Buck’s ability to survive is a direct reference to Darwin, who described a creature’s ability to survive with that same word. Some of the other dogs, though, were not so fortunate. The ones who lacked the instincts to survive, or at least could not move beyond their civilized mindset, quickly fell victim to the laws of the wild. When food began to run scarce, the dogs that ate their food quickly and stole from others, (sometimes even stealing from the campers’ food stores) were the ones who survived. It was a turning point for Buck when he stole food for the first time. “It marked his adaptability, his capacity to adjust himself to changing conditions, the lack of which would have meant swift and terrible death. It marked, further, the decay or going to pieces of his moral nature, a vain thing and a handicap in the ruthless struggle for existence.” (27) In other words, while morals were favorable and encouraged in society, they had no place in the wild, for they would ultimately lead to death.

In the wilderness, there were some who merely survived, and then some who

thrived. Buck quickly found himself in the latter group. He knew that in a pack, there could be only one leader. In the wild, the leader always received special treatment from other members of the pack, resulting in a more secure existence with fewer struggles. Of course, there was only one way to become the leader of the pack: defeat the current leader. Naturally, the leader was always the most fit of the group, since any time a stronger and more dominant figure emerged, he would quickly assert his superiority. From an evolutionary standpoint, this makes perfect sense. Since the alpha of a pack often did the majority of the mating, the offspring would come from a strong, fit genetic pool, which would in turn strengthen the group as a whole. In the case of Buck, even though there were no females with which to mate, he still knew that he was the strongest of the group. There was an unmistakable urge welling up inside of him to kill Spitz, the only way to prove his superiority, and take the position of leader dog. Spitz knew Buck was a threat, and tried on multiple occasions to kill Buck first. Ultimately, Buck proved triumphant, and Buck was able to claim his position of lead dog without any objection from the other dogs. He was the incontrovertible alpha.

This strength came through again when he finally broke away from the world of man and met a pack of wolves in the forest. Despite their attacks, first individually and then as a group, Buck stood his ground. He had proved his strength and fitness. After this fantastic display of strength, the pack members slowly, cautiously began to accept him. “He was a killer, a thing that preyed, living on the things that lived, unaided, alone, by virtue of his own strength and prowess, surviving triumphantly in a hostile environment where only the strong survived.” (96) The wolves could see that he possessed quality traits, and even though he was not one of them, they accepted him into the group. Not

only was he strong enough to survive the elements, but also the threat other animals presented. Buck was a shining example of the type of creature Darwin envisioned, possessing all the traits necessary to survive.

Of course, the Theory of Evolution is more than just fitness. Fitness means nothing if those traits never get passed on to the next generation. The laws of nature do not allow for kindness and concern for others. Altruistic behavior is wasted effort, and in an environment when it is so difficult to survive in the first place, any effort exerted ought to be used in a way that benefits oneself. This self-sustaining mindset is illustrated over and over again in the dogs' behavior. First of all, Buck learned quickly that if he did not eat his food as quickly as possible after receiving it, then it was bound to be stolen by another dog. All of the other dogs were just as hungry, and there were no morals in the wild that would stop them from stealing his food. They knew that the only creature with which they ought to be concerned was themselves, even if it was at the detriment of another dog in the pack.

One may argue that the dogs worked as a group to pull the sled, and the experienced dogs even trained the newcomers to do their jobs better. This is a behavior that is often misconstrued as helpfulness, though London did not make that mistake. The relationship between Spitz and Buck illustrates how, even though they worked together, they were never concerned for one another's well-being. When the traces came off, they were enemies who tried to kill each other on multiple occasions. Their working together was not a sign that they wanted to help, but rather an acceptance that they *must* work together to accomplish a common goal. The wilderness is an environment in which group cooperation is often necessary for survival; a lone wolf will not be able to survive for

long, and would certainly not stand a chance at finding a mate to produce offspring. In a group, though, wolves are capable of taking down much larger prey and protecting the young from attack. Buck was fully aware of this necessity, and accepted it, but never forgot that when all was said and done, his needs were the only ones that mattered.

Another example of a mutually beneficial relationship was that of Buck and his human masters. Besides the instincts that drove him to maintain a bond to man, he needed them to survive. His assimilation into the wild was a gradual one, and without man to feed him and protect him, he would not have survived long. Similarly, the various men in Buck's life needed him, along with the other dogs, to get them through the snow-covered land. It was this mutual dependence that drove each to protect and provide for the other. In fact, the only master Buck ever had who truly saved his life was John Thornton. While Buck let all the others pass out of his life, he stayed loyal to Thornton, even resisting the call of the wild, until Thornton's death. London did attribute some of Buck's loyalty to the love he felt for Thornton, but Buck was given many human characteristics and emotions to aid in his accessibility as a character for readers. At his core, though, his actions were always motivated by what was in his best interests and how to keep himself alive above all others, which is an undeniably Darwinian attribute.

Throughout *The Call of the Wild*, there are many contrasts drawn between the civilized world of Judge Miller and the savage existence in the Klondike, reminiscent of Darwin's vision of a world in which only the fittest survive. Buck's civilized life was the pinnacle of morality and civilized codes, accentuated by the fact that his master was a judge. His entire life revolved around right and wrong, the definition of which was decided on what was morally good or bad. He was the ruler over all the other animals at

Judge Miller's place, but it was his birthright. As a monarch, he was born into the position and it was never challenged. However, when his transformation is complete, his life could not be any further from moral good. After slaughtering the Yeehats who killed Thornton, Buck felt no remorse. An action that was once unthinkable he now executed without hesitation. Additionally, he was again the leader of the animals around him, but this time he had earned it. It was through merit and strength alone that he took his place as ruler; birthright had nothing to do with it.

London demonstrates some of the variances between these two drastically different worlds through Buck's experiences, all the while creating a commentary about the civilized world and how vastly different it is from the one nature intended. For one, in the wild, the laws of civilized society are entirely absent, replaced instead by the laws of club and fang. While similar to one another in the sense that they must be obeyed, else consequences be suffered, they are based on polar opposite principles. Civilization encourages kindness and helpfulness toward other human beings. Conversely, kindness in the wild will only get one killed, as demonstrated so brutally with the death of Curly. There was no room for niceties among fellow creatures because everybody was in competition for the same, limited resources. Fairness was thus replaced by savagery. Buck's transition only came about when he was able to cast off his moral self and embrace the ruthless instincts inside of him. London explains that this is not just a side-effect, but a necessary occurrence: "Civilized, he could have died for a moral consideration, say the defence of Judge Miller's riding-whip; but the completeness of his decivilization was now evidenced by his ability to flee from the defence of a moral consideration and so save his hide" (27). Without shirking his morality, he was unable to

keep himself alive.

The determinants of power are also radically different between sophisticated society and the callous world of nature. In Judge Miller's world, money is not just indicative of power, but it is the catalyst by which power is gained. A man of great power, he is the picture of wealth and prosperity. Once one ventures into the wild, however, the balance of power shifts entirely. The strongest are the ones who make the rules, as evidenced by the man with the club who is able to rule over Buck with sheer physical dominance. Those things which were symbols of wealth and power in civilization also hold no value in the wilderness. The trio of Hal, Charles, and Mercedes, who came into the Klondike with no experience and misguided expectations, is an example of what happens to those who try to utilize the things of value from society in nature. Besides over packing the sled and miscalculating the food needed for the dogs, they were also too arrogant to even consider advice from the other men on the trail. Where they came from, they were "better" than these other men, and they had no reason to listen to them. This supercilious attitude ultimately led to their demise, a warning to those who think that money and social ranking will aid at all in their survival in the wilderness.

On the surface, it may seem that *The Call of the Wild* is just a story of a dog in the wilderness. But for London, it was a conduit by which he was able to illustrate some of the things he had learned during his experiences in the Klondike, coupled with his own outlook on life. In order for his audience to get to the root of his message, though, they must first understand the concepts behind what he was trying to say, or else it is lost. The transformation made by Buck is the focus of the story, and this single transformation is representative of several different concepts.

First is Marx's theory of labor power, and using labor to reach an elevated sense of self, the potential self. Without at least a basic understand of Marx's theories, a reader will overlook this point entirely. It may seem, on the surface, that Buck's happiness is acquired because he is becoming one with nature or getting in touch with his ancestral roots. This was not the point London was trying to make. As an avid socialist, London would certainly have been the close relationship Buck had to his work, work which was now giving him a sense of purpose and influence in life, that was meant to be the reason for his newfound happiness.

The coupling of Pavlovian conditioning with Mendel's genetic inheritance and instincts are the driving forces behind Buck's behavioral changes. Without taking these scientific concepts into consideration, it would be easy to write off Buck's behavior as intelligence. To do so, though, would be to ignore all the explicit references made to Buck's genetic makeup and ancestral lineage. Even though Buck is just a dog, London also gives him many human characteristics. This seems to suggest that London views humans capable of the same atavistic transition. As shown by the juxtaposition of Hal, Charles, and Mercedes to John Thornton, there are humans who are more fit for survival than others. They also possess genetic programming which drives behaviors, the purpose of which is ultimately survival. There are situations which may bring about an arousal of these instincts, even in humans. In these situations, the laws of nature will supersede the laws of society, and morals will fall to the wayside, just as they did for Buck.

This acceptance of moral decay is the primary reason why an understanding of the scientific influences is necessary to thoroughly comprehend the message London was sending in his novel. During his time in the wild, Buck behaved in a way which was

deplorable by civilized, moral standards. Not only did he steal food any chance he could, he also killed any time his safety was threatened as well as to usurp the leader of the pack. From a cultured perspective, Buck had transformed into a savage, selfish beast. However, London does not criticize him for his choices. Instead, he exalts him, painting his amoral actions in a positive light. From a Darwinian perspective, Buck's ability to look out for himself and survive in the savage wilderness was not a folly, it was necessary and commendable. This is the only perspective from which one can see Buck for the true, successful, admirable protagonist he is.

Sea Wolf: Where Instincts and Civilization Collide

Only one year following the publication of *The Call of the Wild*, London published the vastly different novel *Sea Wolf*. Like *The Call of the Wild*, he based many of the novel's events on his personal experiences, only this time they were based on his experiences on the *Sophia Sutherland* (CN). The story follows the journey of Humphrey Van Weyden, a sophisticated literature critic of a civilized society, who is picked up by Wolf Larson, captain of the *Ghost*, after his ship wrecks and sinks in the fog off the shores of San Francisco. There are many common themes seen between *Sea Wolf* and London's first novel, with the protagonists of each experiencing many of the same life-altering realities and brutalities. Again, London's socialist beliefs manage to infiltrate his writing, as do his understandings of biological principles set down by Mendel and Darwin. Through the transformation of Van Weyden from a soft, effeminate, and civilized gentleman to self-sufficient and capable man, London provides a commentary on the behaviors and attitudes that are to be valued in his fellow men.

There is no doubt that London valued hard work. Even the briefest examination of his life, his political and social values, or his writing is a clear reflection of that; *Sea Wolf* is no exception. Influenced again by Marx's theories on labor power being the only path by which man can achieve true happiness and fulfillment, transforming into his potential self, London created a protagonist who had lived his life entirely devoid of work. Once Humphrey Van Weyden is picked up by Captain Wolf Larson on the *Ghost*, he wastes no time in bringing that characteristic to the attention of his audience, and not in a subtle manner, either. Within the first conversation between Van Weyden and Larson, he is questioned about how he makes a living. When it comes out that he has never worked for

his money, but rather lived off his father's money, Wolf criticizes him harshly for it. "You stand on dead men's legs. You've never had any of your own. You couldn't walk alone between two sunrises and hustle the meat for your belly for three meals," (ch. 3) Wolf tells him. It seems that Larson considers it unthinkable, blasphemous almost, to live a life without work. Rather than using his own two legs to stand on, figuratively speaking, he has been standing on his father's legs his whole life, leaving him too weak to do it on his own. In fact, Van Weyden's description of himself is one indicative of frailty, noting that "[his] muscles were small and soft, like a woman's, or so the doctors had said time and again in the course of their attempts to persuade me to go in for physical-culture fads." (ch. 4) His body seems to be a physical representation of his internal development, lacking in anything masculine or reminiscent of strength and power. According to Marx, his lifetime of idleness had taken its toll on his spirit as well as his body, depriving him of the gratification which can only be achieved through labor power.

For Larson, a man's usefulness on his ship was determined implicitly by his ability to work as part of the ship's crew, which in turn aided Larson himself; if a man was unable to work, he was dispensable. He explained to Van Weyden that, "[his] body was made for use," (ch. 15) continuing to say that he did not have a purpose in life, but "utility." In other words, a body was simply a tool to be used. Thus, he immediately utilized Van Weyden as part of this crew. It was very difficult for Van Weyden to adjust to the life of a working man, his admiration for those who worked growing daily. "I did not dream that work was so terrible a thing," (ch. 6) he reflected one night. But since he knew that his value to Larson was contingent upon his ability to aid him, he continued on with the work. As time went on, however, and the physical exhaustion became less inhibiting

to him, he noticed a change in himself on an emotional level:

And I make free to say, as the days went by, that I found I was taking a certain secret pride in myself. Fantastic as the situation was,—a land-lubber second in command,—I was, nevertheless, carrying it off well; and during that brief time I was proud of myself, and I grew to love the heave and roll of the *Ghost* under my feet as she wallowed north and west through the tropic sea to the islet where we filled our water-casks. (ch. 16)

No longer did he simply suffer the work put before him, but he embraced it and took pride in it. As he describes the pride that had taken root deep inside, it is as if he is experiencing it for the first time.

The longer and harder he worked, the happier Van Wyden became. His female counterpart, Maud Brewster, came from an equally indolent background. Since she was only aboard the *Ghost* for a relatively short period of time, Larson did not have the opportunity to break her in the same way he did Van Wyden. It was not until she escaped the *Ghost* with Van Wyden on a small boat, and was subsequently stranded on a deserted island, which they named Endeavor Island, that she was ever obligated to work. They set their minds to survival, though, and wasted little time in erecting living quarters to protect themselves from the elements. After a long day of arduous manual labor, they had managed to construct crude housing structures. Rather than collapsing from exhaustion, though, Miss Brewster seemed to be invigorated by the experience: “And yet Maud declared that she had never felt better or stronger in her life. I knew this was true of myself,” (ch. 31) Van Wyden reflected. His pride only escalated upon his successful restoration of the *Ghost*, which had landed on the beach with all its masts destroyed,

musings to himself, “‘I did it! I did it! With my own hands I did it!’ I wanted to cry aloud.” This moment, when he not only proved that he *could* work, but experienced the unadulterated joy that came with producing something from that labor, was the pinnacle of his happiness.

Van Wyden’s transformation, and in many ways that of Miss Brewster as well, was an experience lifted from the pages of Marx and transcribed by London. For this reason, it is almost as if London is using Wolf Larson as a mouthpiece for his own beliefs and values. Larson is not the only one in the story who puts so much value on physical labor; this sentiment is echoed through the words and actions of the others aboard the *Ghost* as well. Just one, in particular, was Johansen. When Van Weyden questioned him about his mother, he notes that she is nearly 70, though still working. “We work from the time we are born until we die, in my country. That’s why we live so long. I will live to a hundred.” (ch. 14) The point London is making, almost belaboring in fact, is that hard work is essential to a happy and successful life. Without it, one has no sense of purpose or utility in life, and will never experience true happiness and satisfaction.

Being unaccustomed to work was not the only fault Wolf Larson saw with Van Wyden when he first came aboard the *Ghost*. Having never been put in any real peril before, his survival instincts were completely absent, forcing him to rely on his life experience and knowledge to survive. Since the world of the seaman was as far removed from his civilized life in the city as possible, he did not stand much of a chance when in mortal danger. Of course, just as Mendel had discovered, Van Wyden still had the genetic programming to survive in the form of instincts; it was only a matter of tapping into those instincts, which would prove to be a difficult task for him. When he first entered the

realm of sailors, and crossed paths with a threat, his “mind did not work quickly, everything was so new and strange. [He] grasped that [he] was in danger, but that was all.” (ch. 3) Somewhere, deep inside him, his instincts were yearning to escape. They could tell that his life was in jeopardy, but they had been so long neglected, that the how or where of the threat were incomprehensible.

However, fortunately for Van Wyden, it did not take much time in a perilous, savage environment before his intuition began to dominate his actions. Deep down, he knew he needed to rely on them to survive, and that knowledge was enough to suppress even his morals, which had been the foundation and motivation for everything he did up until his experience at sea. Once morals gave way to instincts, however, the actions that followed were reminiscent of an animalistic ferocity found only in nature, the development of which was shocking to the other men who had only seen him as the soft, effeminate creature upon which Wolf Larson had just recently taken an uncharacteristic pity. “He even ventured to raise his fist to me, but I was becoming animal-like myself, and I snarled in his face so terribly that it must have frightened him back.” (ch. 9) Even in the early stages of his instincts’ awakening, he was already transitioning from civilized man to animal-like. It seems that in a savage environment, the only way man is able to survive is to behave like a savage beast himself.

Not only did his changes in behavior startle the others aboard the ship; they startled Van Wyden. When he was growing up, his nickname was “Sissy,” (yet another reference to his feminine nature), and he came by it honestly. Rather than being offended by this epithet, it was almost as if he embraced it, using it as an excuse for his behavior. He had grown so accustomed to his behavior reflecting his moniker, he scarcely

recognized himself when he started reacting viciously in the face of danger. He thought, "...that "Sissy" Van Weyden should be capable of doing this thing was a revelation to Humphrey Van Weyden, who knew not whether to be exultant or ashamed." (ch. 9) Since he never paused to think of his actions beforehand, the immorality of such conduct only dawned on him after the fact when he was given time to reflect; when he did so, he was torn between being proud for being able to handle himself in such a way that he survived and feeling guilt for going against his prior moral code of conduct. Fortunately, his instincts managed to speak loudly enough that, in spite of the internal conflict they had with his civility, he was always able to escape impending doom. Wolf Larson said it best when he talked to Van Wyden of how, "the instinct of life, which is to live, and which, when death looms near and large, masters the instinct, so called, of immortality." (ch. 11)

Even once Van Wyden begins to recognize his instincts, he chooses not to acknowledge them as such a thing at first. In fact, it is not until very late in his journey, just before he escaped with Miss Brewster from the *Ghost*, that he uses the word "instinct" to describe his own actions. Until that point, he would only use them to describe behaviors by either Larson, the other seamen, or animals. Whenever he reacted in such a way that his actions were devoid of thought and consideration, when his fight-or-flight mechanism kicked in, he would always refer to it as "seeing red." When it dawned on him that such things were transpiring in him, he did not take it well, thinking to himself, "I was frightened when I became conscious that I was seeing red." (11) Humphrey Van Wyden, civilized gentleman, was finally crossing the threshold into brutality, if only just for survival, and he was hesitant to accept it.

Of course, it is not through any fault of his own that he was behaving in this

manner. After all, whenever anybody was cornered (either figuratively or literally), they behaved in sometimes uncharacteristic ways to struggle for survival. It is these instincts, the ones Darwin recognized in practice and Mendel in theory, that were at the root of survival in a savage place, be it the wild or a sealing vessel captained by a man such as Wolf Larson. Even Mugridge, who was not in the least concerned with morality and already quite brutal himself, found it in him to exceed his own expectations of himself when threatened with death. When Larson approached him to exact vengeance, Mugridge fled and, "...seemed to be in rabid fear of the water, and he exhibited a nimbleness and speed we did not dream he possessed." (ch. 21) Even Miss Brewster, who was not just a picture of sophistication and virtue, but a woman besides, was capable of astonishingly fierce behavior when the situation called for it. When she saw Larson attack Van Wyden, clearly with the intent to kill him, she attacked Larson. Van Wyden observed that she was, "...fighting with me and for me as the mate of a caveman would have fought, all the primitive in her aroused, forgetful of her culture, hard under the softening civilization of the only life she had ever known." (ch. 36) The instincts necessary to survive, which London frequently attributes to the primitive and ancestral man, even exist in a woman who has never bared witness to cruelty before in her life. Clearly, London realized their presence is a product of something genetic rather than something that could be learned from experience.

The survival instincts are not the only innate abilities that awoke within Van Wyden during his adventure. Frequently, he is described as possessing feminine qualities or behaviors. He also admits to having been around women his whole life, though mostly his mother and sisters, but never taking notice of any of them as something of interest. In

fact, he even met Maud Brewster once at a social function and did not think twice about her. But, once his brutish side began to show its true colors aboard the *Ghost*, it seemed to unlock emotions and desires he had never before experienced; he was finally capable of loving a woman. He thinks to himself, once the revelation hits him, “There was imperative need to adjust myself, to consider the significance of the changed aspect of things. It had come, at last, love had come, when I least expected it and under the most forbidding conditions.” (ch. 23) In fact, it was these forbidding conditions which facilitated his emotions and feelings for Miss Brewster. Without them, it is unlikely that he would have ever found it in himself to feel for a woman, since to do so requires one to be in touch with his deeper desires, and Van Wyden’s “bookish” behavior, as he liked to call it, was thwarting any attempts for these urges to surface. “I shall never forget, in that moment, how instantly conscious I became of my manhood. The primitive deeps of my nature stirred. I felt myself masculine, the protector of the weak, the fighting male. And, best of all, I felt myself the protector of my loved one.” (ch. 30) Again, the “primitive” is referenced as the source for these emotions, and this time he even became aware of his masculinity, probably for the first time in his life. All of emotions and behaviors which he attributes to his instincts are also those which demonstrate animal-like, savage, primordial behaviors. Ultimately, it is only through their awakening that “Sissy” Van Wyden, bookish and feminine in appearance and nature, is able to transform into Humphrey Van Wyden, survivor and protector of his “mate-woman.”

If there is any skepticism about Jack London’s familiarity and understanding with Darwin’s theories, it is quelled in *Sea Wolf*. Wolf Larson, though unschooled, shows great interest throughout the novel in all things intellectual. Among the authors Van Wyden

recounted finding in Larson's cabin was Darwin. Upon its discovery, he proceeded to have in-depth discussions with Larson about its contents, a topic which was frequently referenced in their subsequent conversation. Rather than subtly hinting at Darwin's theories about a world where one must kill or be killed, London instead addresses the issue directly, using Larson as a mouthpiece.

It is only fitting that Larson would be the character who embraces Darwin's theories, as he is an exemplary specimen for one that would not just survive, but thrive in a Darwinian world. According to Darwin, those creatures that possess the traits most favorable to the living conditions will ultimately outlast those who are ill equipped, referring either to physical capabilities or behaviors; Wolf Larson had them both. A man of considerable strength and stature, he was unquestionably the strongest on his ship. In fact, he rarely encountered another creature that was able to overtake him by sheer strength alone. Immediately after being rescued from the sea by Larson, Van Wyden was already able to see this, reluctantly accepting the inevitable. "And thus it was that I passed into a state of involuntary servitude to Wolf Larsen. He was stronger than I, that was all." (ch. 3) For no reason other than his strength, Larson was able to dominate Van Wyden, forcing him into submission.

Though his strength was of remarkable importance, it was not the only characteristic that aided Larson in his dominance and survival. He was so savage and so closely in tune with his bestial instincts that he was able to react and survive any attack which befell him. When several members of his crew attempted a mutiny, it was these instincts coupled with his strength that kept him alive. Not only was he able to pull himself up from the ocean and back onto the ship, but also managed to break away from

an attack in the dark by at least seven men in the fore-castle, from which there was only a single ladder as an exit. It was a struggle for their lives, as all the men participating knew that if Larson were to escape their days were numbered, and yet Larson was able to endure, struggling up the ladder while the men fell off one by one. His might and will to survive overmatched that of all the other men combined, which served to prove his superiority over the whole of the crew.

Besides being a shining example of Darwinian fitness, Larson also reflected frequently on the importance of being dominant in order to maintain both dominance and importance. For example, he once told Van Wyden, “The big eat the little that they may continue to move, the strong eat the weak that they may retain their strength.” (ch. 5) In other words, to overtake the weak was simply the nature of existence. Being such a dominant person himself, Larson felt himself justified in trampling down the weak and using them for his own benefit; it was their purpose in life to aid in his development and survival. He echoed this thought again later, saying “It is their inborn heritage to strive to devour, and to strive not to be devoured.” (ch. 8)

Even the value of life itself was limited to its ability to minister to the needs of those stronger. In this sense, Larson takes Darwin’s teachings and looks at them in the strictest, most biological approach possible:

Why, if there is anything in supply and demand, life is the cheapest thing in the world. There is only so much water, so much earth, so much air; but the life that is demanding to be born is limitless. Nature is a spendthrift. Look at the fish and their millions of eggs. For that matter, look at you and me. In our loins are the possibilities of millions of lives. Could we but find time and opportunity and

utilize the last bit and every bit of the unborn life that is in us, we could become the fathers of nations and populate continents. Life? Bah! It has no value. Of cheap things it is the cheapest. Everywhere it goes begging. Nature spills it out with a lavish hand. Where there is room for one life, she sows a thousand lives, and it's life eats life till the strongest and most piggish life is left. (ch. 6)

The potential for life, and the ubiquity of life in the world, was at the root of Larson's disregard for fellow man. In his eyes, man is just another animal and should not garner special treatment; he holds no more significance than a fish. The critical part of this philosophy, though, and that which most closely reflects Darwin's theory, is when he recognized that, "Where there is room for one life, she sows a thousand lives, and it's life eats life till the strongest and most piggish life is left." The reason there are so many individuals in a species, including humans, is because they are meant to overtake one another until only the strongest survive. Thus, Larson saw the worth of other men, their "utility" as he called it, based on how it could benefit those stronger. In his case, *he* was the strongest of the group; the utility of the others was simply to strengthen him. Once they no longer served a purpose in his eyes, they were dispensable.

This idea that the life of others is dispensable emphasizes another aspect of Darwin's theories. Not only should the strong and most capable be the ones to survive, but individuals ought to care about preserving their own gene pool, their own life, above all others. Larson recognized that, although he did not see any utility in the other men on the ship, they would certainly fancy themselves of the utmost importance. "Of course life is valueless, except to itself. And I can tell you that my life is pretty valuable just now—to myself. It is beyond price, which you will acknowledge is a terrific overrating, but

which I cannot help, for it is the life that is in me that makes the rating.” (ch. 7) It is an innate part of life to value oneself, despite its apparent lack of value in the grand scheme of things. Even Larson realizes that his life means more to him than it would (or should) to anybody else. The desire to live comes from deep inside, and it is so acutely ingrained in each individual that it supplants any value which others may try to impose on him. Being aware of this paradox, as well as its acceptance, is an example of how utterly Larson understands Darwin’s theories.

In addition to each person or creature struggling to survive in their own rite, there was also a complete lack of altruism both in Larson’s philosophy as well as the actions of those aboard the *Ghost*. After all, they saw no need to risk endangering themselves for the sole purpose of helping another. In fact, Larson addressed the concept of altruism explicitly with Van Wyden, saying, “With immortality before me, altruism would be a paying business proposition. I might elevate my soul to all kinds of altitudes. But with nothing eternal before me but death... it would be immoral for me to perform any act that was a sacrifice.” (ch. 8) As a man who only believed in what he could see and experience, sacrificing himself for others was not just a bad decision, it was “immoral.” To Larson, the only benefit in helping another would be to garner favor in the afterlife for his soul, if such a thing existed (though he did not believe it did). While Wolf Larson subscribes to Darwin’s theories in the most extreme form, the behaviors he touted were exemplified by others who were not so radical. One instance of such behavior occurred when Leach was attacking Mugridge, with the apparent intent on beating him to death. Rather than helping their shipmate, everybody looked on, bearing witness to the brutality, “and no one interfered.” (ch. 12) It was of no personal gain to help Mugridge, and to do so would only

put their wellbeing at stake. With nothing to gain and everything to lose, they chose to stand idly by while Leach unleashed his fury on Mugridge.

There was one instance which seems to be an anomaly in Larson's strictly self-advancing behavior, but is in actuality still Darwinian at its roots. When the *Ghost* was overtaken by Wolf Larson's brother, called Death Larson, Death bribed all the crew members to come work for him. Naturally, they accepted, and destroyed the *Ghost* on their way out. Wolf Larson, being the competitive, dominant individual that he was, the expected reaction would have been anger, rage, and vengeance. His response, however, was quite the opposite. When his paths again crossed with those of Van Wyden, he told him, "It was Death's turn, and it's all in the family anyway." (ch. 32) The fact that he was marooned by his own brother was a consolation to him, rather than an aggravation.

Darwin does address the issue of kinship in regards to continuation of the gene pool. Since siblings share the same genes, for the most part, help among siblings is still an evolutionarily favorable action, second to those which would preserve one's own genes. Wolf Larson, when he realized that he was going to lose his crew, accepted it without much objection or putting up a fight, presumably because they were going to his brother. If he could not have them, then at least they were going to somebody from his genetic stock. The only selfless act Larson ever commits, and it is for the benefit of his brother. London could not have developed a character more befitting of preaching Darwin as a basis for living.

London's utilization of Darwin did not stop at the development of Wolf Larson as a character. He again chose to create contrasting worlds to show that variances, and similarities, between the civilized world, governed by laws and morals, and a savage

nature, controlled by the instincts and behaviors on which Darwin developed his theories. This time, though, instead of using nature as the back-drop for savage brutality, it was the *Ghost* that provided the setting, contrasted to the world whence Van Wyden came. The two worlds were so vastly different that Van Wyden even felt compelled to warn Miss Brewster, “You must remember, Miss Brewster, that you are a new inhabitant of this little world, and that you do not yet understand the laws which operate within it. You bring with you certain fine conceptions of humanity, manhood, conduct, and such things; but here you will find them misconceptions. I have found it so.” (ch. 22) All the characteristics of their fellow man, to which they had been accustomed since birth, were absent on the ship. In fact, Larson once mentioned to Van Wyden, “That this is the first time I have heard the word ‘ethics’ in the mouth of a man. You and I are the only men on this ship who know its meaning.” (ch. 8) It was not a case of the seamen choosing not to abide by the morals of civilization; they did not understand them or even know they existed.

Though both civilization and the ship abided by rules, either written or implied, the foundation and construct of those rules were completely opposite one another. In civilization, men did not steal from one another because it was against the law. However, on the *Ghost*, if one man stole another’s possession, then it was the former owner’s fault for allowing it to happen. When Mugridge stole the money in Van Wyden’s clothes, Van Wyden appealed to Larson for retribution. Instead of help in getting his money back, he was met with, “When you get a dollar, hang on to it. A man who leaves his money lying around, the way you did, deserves to lose it.” (ch. 5) In an environment where every man is looking out for himself, and only himself, they will do anything if it is for their benefit,

even at the expense of another. Rather than helping Van Wyden, Larson supports Mugridge's actions, actions that were motivated by the same "life eats life" perspective that was the basis for both Darwin and Larson's outlook on life.

For London, creating environments to represent both civility and ferocity, in turn, was not enough. This time, rather than simply showcasing the different behaviors, he used his lead characters, Humphrey Van Wyden and Wolf Larson, to personify civilization and the wilderness, respectively. In doing so, he managed to allow insight into the motivations behind each set of behavioral patterns, imposing his own perspective onto his audience. Not only did he paint Van Wyden in a very unfavorable light, but Larson was shown to be the most consistent, predictable, and justified character in all that he did. It is only when one considers London's exposure to Darwin, and the type of world Darwin envisioned were nature allowed to take over, that such a strategy makes sense.

Humphrey Van Wyden was born and raised a gentleman, and from birth he was instilled with a sense of morality. These morals were the foundation for everything Van Wyden ever did, and he never did anything without considering its moral ramifications. He was as ethical a man as man could be. In fact, even amidst the ruckus and brutish behavior of the *Ghost*, he still takes notes and feels a sense of shame when the words "My God" escape his lips. "The oath left my lips in my excitement—the first, I do believe, in my life, unless 'trouble it,' an expletive of my youth, be accounted an oath." (ch. 28) His concern with such juvenile "oaths," even as a man in his thirties, is indicative of just how morally pure he really is.

When it came to dealing with Larson, his moral convictions really came through. Despite all of the dastardly things Larson had done while in Van Wyden's company,

sometimes for apparently no reason at all except for sport, Van Wyden was still incapable of retaliating against him. When the *Ghost* came ashore on Endeavor Island with naught but Larson aboard, Van Wyden protected himself with a gun to investigate. When he finally came face to face with Larson, he cocked the gun and pointed it right at him, but Larson did not flinch. He knew that Van Wyden would not shoot him, in spite of everything, because he was not posing an immediate threat to Van Wyden. Even though Larson was capable of bringing great harm to both Van Wyden and Miss Brewster, he was still a fellow man, and that alone was enough to prevent Van Wyden from killing him; Larson knew it, too. When Larson told him why he was so confident that Van Wyden would not shoot him, Van Wyden admitted that he was right. “He was right. The code of my group was stronger than I. The fact that he had hands, feet, and a body shaped somewhat like mine, constituted a claim which I could not ignore.” (ch. 33) All of Larson’s transgressions were of little importance to Van Wyden when considering the value he placed on fellow human life. The “code of [his] group,” the morals that were taught in civilized society, prevented him from hurting another man solely because he was a man.

The other motivating factor for Van Wyden, as well as most of civilization, was his emotions. His desire to care for others came, in part, from his emotional attachment for them. The more he cared for a person, the more he would trouble himself with the safety and wellbeing of that person. For example, when Leach was attacking Mugridge aboard the ship, he was among those crew members who stood by and watched the events transpire without bothering to get involved and stop the attack. He had grown to hate Mugridge, so although he was a fellow man in danger, he did not feel compelled to stop

his attacker. Miss Brewster, on the other hand, he would do anything if it helped her or aided in her happiness. Almost immediately after meeting her (for the second time), he fell in love, and was then consumed with doing anything in how power to make her happy. Almost as soon as they landed on Endeavor Island, Van Wyden took to constructing a small shelter for her, even before worrying about his safety and wellbeing. Thus it is in society where the degree of favorable treatment of a person is determined by how much another cares for him. There is no rationale for preferential treatment that can be determined by external forces, because the motivating factors lie internally and are subject to the emotional whims of those who would show favor.

If Van Wyden is to be seen as a personification of civilization, then it can be assumed that London did not look upon such a lifestyle with much favor. Van Wyden is frequently depicted in an unflattering, sometimes even insulting, manner. First is the nickname he adopted from a young age of “Sissy.” Of course, he does not seem to be too concerned with its implications, and in fact appears to embrace this identity. Throughout his musings, he frequently refers to his old way of life and personality as “bookish,” admitting that physical activity and romantic pursuits were of no interest to him. Finally, his physical description is a reflection of weakness and inferiority, especially as a man. For a man to describe his body structure as “small and soft, like a woman’s,” (ch. 4) was nothing short of pitiable. His characteristics are frequently described as feminine, as if London is equating a civilized gentleman as being on par with women both physically and behaviorally. London clearly does not hold those governed by morals and the laws of society in very high regard, and representing that lifestyle with a protagonist who is such a disappointing specimen of a human being accentuates that belief.

On the other end of the spectrum, and Van Wyden's antithesis, is Wolf Larson, who personifies and represents all things wild, savage, and Darwinian in nature. Even his name, Wolf, was a reference to the wilderness. London frequently used wolves as the prototype for nature in its purest form, and it was no accident that this sea captain should be given such a name. As evidenced by his diatribes on the errs of civilized society and touting of Darwin's perspective on behaviors, Larson's idea of moral behavior had nothing to do with being kind to fellow man and treating people as he would like to be treated. Instead, the only things he considered "moral" were the actions that aided him. From his perspective, it would be a sin to sacrifice himself for another man in lieu of furthering his own prosperity. In fact, Larson did not even resent those who attempted to destroy him, as long as it was to assure their own survival. When Death bribed his crew members, and they were all leaving the *Ghost*, Mugridge destroyed the masts on his way out. Instead of being angry with Mugridge, he was proud of him for doing something proactive in preventing a pursuit, which would have inevitably come had they left Larson's ship intact. Van Wyden once realized that it was not that Larson "was not immoral, but merely unmoral." (ch. 10) He did not subscribe to the beliefs and values of civilized society, acting in such a way as to defy them. Instead, he did not give them a consideration one way or another, disregarding them as incorrect and ill-founded. In a world where only the strongest survives, morals were nothing but a hindrance to survival.

Unlike Van Wyden, Larson was devoid of emotion in respect to his relationship with other people. Because they were simply tools at his disposal, waiting for him to utilize them in a selfish way, they were of no consequence to him should some misfortune befall them. Even those who had been aboard his ship and working for him for some time

were trivial in his eyes. When Van Wyden objected to him sending Harrison on a virtual suicide mission across the tops of the masts and rigging of the ship, Larson replied, “The man’s mine, and I’ll make soup of him and eat it if I want to.” (ch. 6) Any man on his ship was subject to his bidding and his whims, which were always selfish in nature, and nobody was given preferential treatment unless they could prove they were of greater use to Larson than the others. The fate of his crew did not matter, and he never showed any remorse when one was injured or killed. After Kelly was lost at sea during a storm, Van Wyden was appalled, and told Larson that he thought it was a grave loss to let Kelly die just to save a broken boat. Without hesitation, Larson’s only response was, “Kelly didn’t amount to much.” (ch. 17) Because he could not do much for Larson, his life was negligible. Had he been more beneficial to Larson’s wellbeing, it would have likely been a sacrifice that required some consideration, but certainly not owing to any sentimental attachment to him.

Even at the end of his life, when he was trapped, mind as sharp as ever, inside a failing body, he still held true to his own brand of morals. Since he was no longer able to care for himself, he was at the mercy of Van Wyden and Miss Brewster, who were doing their best to keep him comfortable and fed. Knowing that they were the only other creatures capable of keeping him alive, he had no choice but to tolerate their presence. However, he was determined to die on his ship, and meant to take them with him. Several times, while he could still move, he sabotaged the repair efforts from Van Wyden, knowing that the broken *Ghost* was their only practical means of escape. Even once he was paralyzed, and could do nothing except lie in bed, he still tried to quell their escape efforts by setting the mattress above him on fire. For days, these two moral people had

cared for him, and yet he had no feelings for them to prevent him from exacting his last wishes of dying on his ship.

In fact, it came as a punishment to Van Wyden. Larson told him that he was “disappointed in [him]” (ch. 36) when he could not bring himself to kill him, even after destroying the shears that Van Wyden had spent a whole day repairing by hand. Even after all he had seen and experienced since he was first pulled from the sea and put to work on the *Ghost*, he was still bound to his morals. Not killing Larson, then proceeding to care for him, was a sacrifice of his own safety, strength, energy, and supplies, which was, to Larson, the ultimate sin. For such an offense, he was to be punished, and Larson used the last of his failing strength to try and do just that.

Compared to any man, Larson was an intimidating figure, but compared to Van Wyden, he possessed everything masculine, every dominant feature and characteristic that Van Wyden was lacking. Unlike Van Wyden’s weak and feminine nickname of “Sissy,” Larson went by “Wolf,” and lived up to his name in every respect. Physically, he was an archetypal man:

His height was probably five feet ten inches, or ten and a half; but my first impression, or feel of the man, was not of this, but of his strength. And yet, while he was of massive build, with broad shoulders and deep chest, I could not characterize his strength as massive. It was what might be termed a sinewy, knotty strength, of the kind we ascribe to lean and wiry men, but which, in him, because of his heavy build, partook more of the enlarged gorilla order. Not that in appearance he seemed in the least gorilla-like. What I am striving to express is this strength itself, more as a thing apart from his physical semblance. It was a

strength we are wont to associate with things primitive, with wild animals, and the creatures we imagine our tree-dwelling prototypes to have been—a strength savage, ferocious, alive in itself, the essence of life in that it is the potency of motion, the elemental stuff itself out of which the many forms of life have been moulded. (ch. 2)

The way London chose to create Larson is as a modern-day primitive man. Even though he was less than six feet tall, and not “massive” in strength, he still gave off an air of ferocity and dominance. The words used to describe his muscle structure, the “sinewy, knotty strength,” are the same which London used to describe the primitive man of Buck’s visions in *Call of the Wild*. Many times London equates the instincts that are necessary for survival, as well as the barbaric acts that come with them, with the primitive; Larson’s physical characterization is no exception.

As a man, Larson was often not liked by his fellow man. The curious thing, then, is that Humphrey Van Wyden, the embodiment of all things good and moral in civilization, does not hate him. Larson’s philosophies on life and his behavior toward others all fly in the face of everything for which Van Wyden stands, and yet he holds no animosity for Larson. Quite on the contrary, he has a sense of admiration for him. This admiration surfaced immediately after he met Larson and before he was subjected to the cruelty of which he was capable:

Oaths rolled from his lips in a continuous stream. And they were not namby-pamby oaths, or mere expressions of indecency. Each word was a blasphemy, and there were many words... With a turn for literary expression myself, and a penchant for forcible figures and phrases, I appreciated, as no other listener, I dare

say, the peculiar vividness and strength and absolute blasphemy of his metaphors.

(ch. 2)

In the midst of all the terrible words which were escaping Larson's mouth, words that Van Wyden had likely never heard before in his sheltered life as a gentleman, he managed to find something admirable about his affinity for expression. There was no disgust, no offense, and no anger; he only "appreciated" Larson's ability to so clearly and directly express himself.

Van Wyden also notes on many occasions Larson's physical appearance with both admiration and fondness. Not that he should be expected to recognize Larson's overwhelming and dominating strength, but it went much deeper than that. "When I had finished the bed, I caught myself looking at him in a fascinated sort of way. He was certainly a handsome man—beautiful in the masculine sense." (ch. 10) This is not the only instance where he catches himself staring at Larson, seemingly entranced by his physical appearance. "I had never before seen him stripped, and the sight of his body quite took my breath away. It has never been my weakness to exalt the flesh—far from it; but there is enough of the artist in me to appreciate its wonder." (ch. 15) For the second time, Van Wyden felt the need to rationalize his adoration of Larson by attributing it to the "artist" in him. He could not seem to help noticing the qualities of Larson that were primitive, which certainly appealed to the deep-seated instincts in Van Wyden that were only just beginning to surface, but he had to find some way to excuse himself for being fascinated with a man who was such a contrast to everything he valued in life and in other people.

Once he had gotten to know Larson on a deeper level, his esteem for him

developed beyond just the superficial. Due primarily to Larson's self-education and ability to speak directly about matters, Van Wyden took great joy in the conversations they would have about all aspects of life. Even though Larson was constantly challenging his beliefs and values, oftentimes arguing his side so thoroughly that Van Wyden could no longer offer a rebuttal, Van Wyden never passed up an opportunity to debate with him. Quite on the contrary, it was because Larson consistently and directly asserted his beliefs that Van Wyden appreciated the conversation. "The very simplicity of his reasoning was its strength, and his materialism was far more compelling than the subtly complex materialism of Charley Furueth ... but that Wolf Larsen stormed the last strongholds of my faith with a vigour that received respect, while not accorded conviction." (ch. 8) In its own way, Larson's reasoning made sense to Van Wyden, even if he did not subscribe to it. Throughout it all, Van Wyden was repeatedly amazed at "how greatly the man had come to interest [him]." (ch. 10) Even though every conviction, every moral fiber, that possessed Van Wyden was opposed to Larson's beliefs and indoctrinations, he still respected him.

To be clear, it was not Larson's actions alone that fascinated Van Wyden. All the other seamen aboard the *Ghost* acted in a similar, if not less vile, manner. Yet, Van Wyden never came to respect or even like them. Mugridge, for example, whose behaviors were completely in line with Larson's philosophy on life, was a constant cause for disdain for Van Wyden. Even though Larson pardoned Mugridge when he stole Van Wyden's money, almost praising him for doing so in fact, Van Wyden still held resentments toward him. After a short time of dealing with Mugridge's cruelty and selfishness, Van Wyden could take it no longer. "And how my hatred for him grew and grew, during ... to cyclopean

dimensions. For the first time in my life I experienced the desire to murder—‘saw red,’ as some of our picturesque writers phrase it.” (ch. 6) Not only did Mugridge drive him to hate, but that hate festered so much that it developed into a desire to kill another human being.

Everything Van Wyden bore witness to on that ship, all the cruelty and brutishness, was eclipsed by the pure ferocity of Wolf Larson. Yet, it was not Larson that Van Wyden came to hate, but Mugridge. The hate that Van Wyden held for Mugridge is proof that he was aware of the misdeeds happening all around him, and the morality inside of him balked at it. Once he reached a breaking point, he could no longer tolerate those vile actions, and desired nothing more than to rid the world of the one responsible. Since he was clearly vulnerable to immorality, it makes it even more curious that he should not hate Larson, but instead admire him. It is London’s perspective on Darwinian behavior that is behind this curiosity. Even though the savagery of the wild is so contrary to everything taught in civilized society, there is something admirable to it. It is governed by simple, basic principles, and does not play favorites or allow outside variables to influence those principles. This simplicity and clarity, the same simplicity and clarity found in Larson’s philosophies, is what London admired about it. This veneration is reflected in Van Wyden’s feelings for Larson. Even the most moral of man cannot help but appreciate the frankness and consistency of nature.

There are many underlying themes found throughout *Sea Wolf*, though some are not as easy to detect and dissect as others. A thorough comprehension of the context in which London was writing assures that the novel can be interpreted in the way in which he intended. London’s strong Marxist background comes through again with both the

characters of Humphrey Van Wyden and Maud Brewster. Through a Marxist perspective, one can see that London was proving the necessity of hard work to reach complete personal fulfillment. It was not overcoming diversity, as some may assume, since they both managed to escape the *Ghost* without having reached that apex of life. The true joy in life came only after they had been forced to fend for themselves, stand on their own two legs, and work to survive. Since this was such a strong motivating factor for London in his life, one cannot overlook it when deciphering the message he conveyed through this narrative.

Another point London was illustrating was that each individual, no matter their background and breeding, is capable of behaving in a vile, animalistic way. Though the environment in which they live may play a part in causing these behaviors to surface, the existence of these behaviors is undeniable. Survival is necessary to life, and living things will always struggle to survive, no matter how futile that effort may be. Humans are no different than any other animal in this respect. When a man is cornered, and he has no way out, he will fight to the death to get away. This is not a behavior that comes from a rational, thought out process, but rather a purely instinctual reaction that gives rise to the wild inside everybody. Even women, who were thought to be fragile and delicate, possess these abilities because it is in their genetic code to do so. London was firmly of the persuasion that, when survival is at stake, every man and woman will revert back to their primitive behaviors in order to preserve life.

Additionally, a complete understanding of Darwin is necessary in order to understand both main characters in the story. By ignoring that point Darwin was making about life and its struggle for survival above all else, Wolf Larson is one of the most evil,

sociopathic antagonists ever created. But that was not how London intended him to be seen. Instead, he is to be viewed as a tragic hero, constantly thriving for survival, and in the end falling victim to his own body, the body he worked so hard to preserve. The descriptions of Larson echo the appreciation Van Wyden has for him, in spite of his apparent immoral behavior. He is not an evil man. Instead, he is a representation of the savage beast inside every living creature. The purity and lucidity of his outlook on life is to be admired, and it cannot be admired if it is not understood. The only lens through which it becomes comprehensible is that of Darwin.

At the end of it all, *Sea Wolf* is more than just a tale of a man at sea, struggling to survive and find himself. It is also a commentary on life. London warns his readers of the folly in becoming so civilized and moral that they lose touch with their primal instincts. When man is so concerned with morality that he forgets how to live, it will be his undoing. Van Wyden, before his metamorphosis, was but a shadow of a man, mistaken in many ways with a woman; there was nothing dominant or masculine about him. It was not until his ancestral nature broke through to the surface that he was able to sustain his own life and even love a woman, as is nature's intention. Should a man grow too weak, or ignore his instincts, then he will fall victim to the Wolf Larsons of the world, or to nature itself, and nature has no mercy on any creature. Morality, while it may serve its purpose in civilization, is only a burden when one aims to survive.

White Fang: The Interrelations of Nature and Civilization

In 1906, in the wake of his booming popularity from both *The Call of the Wild* and *Sea Wolf*, Jack London published *White Fang*, a novel that seemed reminiscent of the same experiences and themes seen in *The Call of the Wild*. On the surface, it was yet another nature-based story with a dog as the central character. However, there was more to be found for those readers who possessed an understanding of those forces influencing London while he wrote. Despite being so close to the others in chronology, he seemed to have taken his third novel to a deeper level, incorporating multiple concepts and theories, giving *White Fang* an entirely new and unexpected level of sophistication and complexity. White Fang is a wolf-dog who is born in the wild, but adopted into the lives of man. Through many tribulations at the hands of several masters, he ultimately becomes fully integrated into civilization. London shows, through White Fang that— despite the simplicity of instinctive behavior and the will to survive— the driving forces that are ultimately responsible for an individual's overall behavior and personality are far more complicated.

Many times throughout the novel, White Fang is referred to as a superior specimen, both physically and mentally. The offspring of a grey wolf and a wolf-dog hybrid, White Fang inherits the best of both the wolf and dog in his genealogy. London describes his genetic makeup at length, reflecting once again his understanding of Mendel's work with inheritance both in terms of physical and mental attributes. This is how White Fang's appearance was described: "He was the one little grey cub of the litter. He had bred true to the straight wolf-stock—in fact, he had bred true to old One Eye himself, physically, with but a single exception, and that was he had two eyes to his

father's one" (55). While the rest of his littermates had inherited the reddish fur from their mother, White Fang inherited the "true" wolf coloring, making his appearance even more wolf-like, save the "heavier proportions of the dog...without any fat and without an ounce of superfluous flesh" (153) from his hybrid mother.

But it was not only his appearance that he inherited from his parents; his mental state was genetically linked as well, and London was sure to make that clear in his descriptions. "The quarter-strain of dog he had inherited from Kiche [his mother] had left no mark on him physically, though it had played its part in his mental make-up" (123). Even from birth, White Fang already had an advantage above all the other dogs with whom he would cross paths throughout his life. By chance, he had inherited the genes most beneficial to him from each of his parents. The result was a creature whose "body and brain...was a more perfected mechanism. Not that he was to be praised for it. Nature had been more generous to him than to the average animal, that was all" (137). It was not through any efforts on the part of White Fang or his parents that he was superior, but merely a fortuitous distribution of genetic material. Even his littermates, who had the same opportunity for those genes, were not so lucky; each of them died during the famine, unable to survive on their own.

That mental make-up referenced has a two-fold significance: instincts and capacity for learning. White Fang was connected to all his ancestors through the instincts that had helped them survive for centuries. While behaviors and actions alone may not be hereditary, the instincts that triggers actions key to survival are. Since White Fang was three quarters wolf, he was brimming with the survival instincts necessary to make it in the harsh Klondike wilderness. The quarter dog in him, while not a strong contributor to

his physical characteristics, would ultimately prove invaluable to his survival when he first interacts with humans.

Of course, London acknowledged that instincts were not the sole contributor to White Fang's behaviors. When he was born, White Fang was but a potential being. It was only after he became experienced and exposed to the world that he learned how to behave in ways that extended beyond instincts, adapting to survive in many different situations.

His heredity was a life-stuff that may be likened to clay. It possessed many possibilities, was capable of being moulded into many different forms.

Environment served to model the clay, to give it a particular form. Thus, had White Fang never come in to the fire of man, the Wild would have moulded him into a true wolf. But the [humans] had given him a different environment, and he was moulded into a dog that was rather wolfish, but that was a dog and not a wolf.

(127)

In this passage, London illustrates the second facet of one's inherited genetic makeup. Each creature is born with both instincts and a capacity to learn and adapt to their surroundings, and how they adapt is determined by the environment in which they live.

White Fang is not the only character to exemplify how contextual circumstances dictate an individual's behaviors. Beauty Smith, the ironically-named man who was the second to claim ownership of White Fang, was the polar opposite of White Fang in terms of genetic fortune. "He had come into the world with a twisted body and a brute intelligence. This had constituted the clay of him, and it had not been kindly moulded by the world" (149). Again, the capacity he has for behaviors and actions is represented metaphorically by clay, waiting to be molded. It bears mentioning, however, that London

is forthright about whom or what is responsible for how Beauty Smith developed.

“Beauty Smith had not created himself, and no blame was to be attached to him... In short, Beauty Smith was a monstrosity, and the blame of it lay elsewhere. He was not responsible. The clay of him had been so moulded in the making” (144).

This is the first of many interwoven concepts seen throughout *White Fang*: nature versus nurture. These two terms (often attributed to Francis Galton from his publication *English Men of Science: Their Nature and Nurture*) came to represent simply those two governing factors responsible for an individual’s behaviors: Nature, the instincts, and nurture, the societal forces that mold one’s potential. In the eleven years since Galton’s book had been published, London had clearly integrated this notion into his understanding of the nature of development, allowing it to commingle with the theories of Darwin and Mendel. Rather than representing one as superior to the other, though, he opted to give each its proper place in the lives of his characters.

Another example of how London uses nature and nurture to complement one another is in *White Fang*. Speaking of how he had been molded into a ferocious beast:

They were his environment, these men, and they were moulding the clay of him into a more ferocious thing than had been intended by Nature. Nevertheless, Nature had given him plasticity. Where many another animal would have died or had its spirit broken, he adjusted himself and lived, and at no expense of the spirit... It was another instance of the plasticity of his clay, of his capacity for being moulded by the pressure of environment. (156)

Not only did *White Fang* have his instincts for which to thank his ancestors, but it seems also his adaptability. He was able to be flexible and survive in various environments, all

of which had a hand in shaping the clay of his behavior.

Of course, there are limits to all things, and for all of White Fang's masterful inheritance, he was still subject to the constitution of his clay. The "nurture" phase of one's life, even from London's perspective, was connected to youth and development. He had plasticity, but it was a "plasticity of youth" (186), and no environmental factors could overcome that. Even in his later years, after he has found a master for whom he feels a sense of loyalty and affection, he cannot bring himself to behave like a dog to reciprocate his master's warmth. "He was too old, too firmly moulded, to become adept at expressing himself in new ways. He was too self-possessed, too strongly poised in his own isolation. Too long had he cultivated reticence, aloofness, and moroseness" (189).

Despite the prevalence of "nurture" commentary throughout the novel, *White Fang* still clearly represents the Darwinian ideals of survival. The most basic of these ideals, survival of the fittest, is echoed time and again, especially when the harsh wilderness is the opposing force. The formation of White Fang's father's pack was structured so that "at the rear limped the weak members, the very young and the very old. At the front were the strongest" (37). By keeping the strongest members in front, they were able to guide and lead the rest of the pack while also giving them a position to have first access to either food or mates, whenever either became available. The weak remained at the back where they would undoubtedly be the first picked off by other predators or even other pack members. After all, in the harsh wilderness, "denied their usual food-supply, weakened by hunger, they fell upon and devoured one another. Only the strong survived" (128).

The progeny of one of those leaders of the pack, White Fang was destined to be a

leader. As a pup, “he was...the fiercest of the litter” (57), managing to cling to life and forage together enough food to survive while his siblings perished. As an adult, he pulled from both his genetic predisposition for fitness and the environmental training of his youth to become an alpha in his own right. “His dominant nature asserted itself, and he had first to thrash [the other dogs] into an acknowledgment of his superiority and leadership. This accomplished, he had litter trouble with them. They gave trail to him when he came and went or walked among them, and when he asserted his will they obeyed” (189). By becoming the leader of this group of dogs, not only was he guaranteed a meal—no dog would dare challenge him for food, fearing his wrath if they failed—but he also was able to pursue a mate when the time came. The strongest individual surviving and reproducing not only helped the pack as a whole, since his offspring would inherit his advantageous genes, but it also was a natural culling process, eliminating the weaker genetic strains from the gene pool.

Unfortunately for the animals in question, though, they do not have a capacity to understand the benefit Survival of the Fittest has on the species. Instead, they only know their instinct is to survive at any cost, even when the effort seems futile. In nature, there is not a point at which a creature just accepts defeat and allows itself to die or be killed. When death is threatened, there is nothing more important than fighting to avoid it. Following an attack by a lynx, a porcupine struggled to fend off a killing blow, all the while bleeding profusely onto the snow from the mortal wound. The lynx continued to strike, desperately trying to finish off her prey, “but the porcupine, squealing and grunting, with disrupted anatomy trying feebly to roll up into its ball-protection, flicked out its tail again, and again the big cat squalled with hurt and astonishment” (51).

Ultimately the porcupine died from the initial blow, but the severity of its wound never stopped it from continuing to try to protect itself.

Fighting to survive against a predator is not the only example of struggling to survive. When White Fang's father is challenged by a younger member of the pack for the right to pursue the she-wolf as a mate, he makes short work of eliminating this youthful, albeit inexperienced, competition. "Bleeding and coughing, already stricken, he sprang at the elder and fought while life faded from him, his legs going weak beneath him, the light of day dulling on his eyes, his blows and springs falling shorter and shorter" (40). Even after he knew he was beaten and was on the brink of death, the young wolf still continued to fight. The instinct in him to survive under any circumstances, even if that survival was in the form of mating and continuing his gene pool, was more powerful than even the pain he felt from his wounds.

While the instinct to survive is the driving force behind many behaviors seen in the wild, they are not all as futile as these. In fact, the impulses inherited from his ancestors are often what both saved White Fang and kept him from getting into trouble in the first place. Even as a baby, he managed to avoid danger on multiple occasions solely because of his instincts, which guided and influenced his actions on an unconscious level. In his infancy, he and his siblings were sometimes left alone in their cave while their mother went out in search of food. Even while unattended, they had an instinctual fear of the unknown in the dark corners of the cave. "Always, in the beginning, before his conscious life dawned, he had crawled toward the mouth of the cave. And in this his brothers and sisters were one with him. Never, in that period, did any of them crawl toward the dark corners of the back-wall" (56). By being afraid of things, and somehow

knowing to avoid them, White Fang was able to keep himself out of trouble. The darkness was the ideal place for danger to hide, and by avoiding the darkness he also avoided the dangers it held.

In fact, fear itself was something White Fang first underwent through instinct, rather through experience. Even without knowing why he should be afraid of something, he still felt the trepidation rise up inside of himself. “Yet fear was in him. It had come down to him from a remote ancestry through a thousand thousand lives” (61). The natural, innate fears of his ancestors, passed on to him genetically from generations of wolves who had managed to survive in the wild because of those fears, were aiding White Fang in his own survival before he even knew why he was doing anything. At such a young age, no behaviors are premeditated or justified by logical reasoning. Instead, instincts dictate an action, then those actions help facilitate survival. Those that do not have those instincts will never be able to survive long enough to pass on their genetic material, ultimately leaving only those with such impulses to propagate the species.

Beyond fear, White Fang also experienced other instinctual behaviors that helped him survive the unfeeling wilderness. “Fear was accompanied by another instinct—that of concealment” (62). Without this instinct, White Fang would have inevitably been discovered by a predator and eaten as an easy meal. Before he had ever encountered such dangers, he still acted in such a way that would keep him out of sight and out of harm’s way. The other, and most significant, danger White Fang instinctively feared and avoided was one universal among all living creature: death. “He had no conscious knowledge of death, but like every animal of the Wild, he possessed the instinct of death... about which he knew nothing and about which he feared everything” (69). Even without being

exposed to death, it was the greatest fear he knew. This fear, this innate drive to avoid death at any cost, was a part of all animals in the wilderness. Behind much of his hesitation and reservation in his youth was this fear, for in the unknown lurked the possibility of death. Through it all, with the aid of his instincts, White Fang was able to survive the perils of the wilderness throughout his early life, even before he could think analytically about what he needed to do to survive.

Not only did his innate impulses aid in survival throughout his young life, but they were also responsible for helping White Fang elude threats as he grew and encountered new situations and dangers. At the core of the survival instincts, a result of not just animal drive but also a physiological reaction is the “fight or flight” reaction. When backed into a corner, an animal must either flee or attack in an attempt to survive and escape with his life. There is no conscious decision made when a situation like this arises; it is a reaction, pure and simple. London’s understanding of basic physiology and behaviors were at the core of many descriptive passages throughout the novel, most of which were seen in White Fang:

There was no escape for White Fang. The only way out was between the two tepees, and this the boy guarded. Holding his club prepared to strike, he drew it on his cornered quarry. White fang was furious... White Fang scarcely knew what happened. He did it in a surge of rage. And he did it so quickly that the boy did not know either. All the boy knew was the he had in some unaccountable way been overturned into the snow, and that his club-hand had been ripped wide open by White Fang’s teeth. (119)

When he was put in a situation where his life was potentially in danger, he did not stop to

strategize a way out. Instead, he reacted, but he did so in such a way that he was hardly aware of what he was doing. The result, the bleeding boy lying in the snow, was all he knew. This eruption of teeth and claws was his only way out of the corner, and even though it had tragic consequences, it was successful.

The same type of reaction was seen in other conflicts between White Fang and his rivals, the opposition most frequently being other dogs. His nemesis, Lip-lip, was often antagonizing White Fang, knowing that he had a pack of dogs to aid him if needed, while White Fang was a solitary individual and had no such assistance. The first time Lip-lip attacked was the first time White Fang had been in a fight with a fellow dog, so he had no prior experiences to rely on for help. Fortunately, his instincts were strong. “The surprise and hurt of it brought a yelp out of White Fang; but the next moment, in a rush of anger, he was upon Lip-lip and snapping viciously” (87). After the initial conflict, Lip-lip no longer rushed White Fang, assuming an easy victory. While the other dogs in the camp were the offspring of a long line of domesticated animals, White Fang was three quarters wolf, a pedigree that was particularly helpful in the realm of fighting and survival. “He was more directly connected with the Wild than they; and he knew more of its secrets and stratagems” (104). Even without having learned to fight with his siblings at a young age, as was the case for most young litters, his instincts proved strong enough that White Fang was able to stand up to even the most formidable fighter of the pack.

Of course, instincts are necessary for more than just the survival of a single individual; they also are responsible for the continuation of the gene pool and a species as a whole. When it came to interactions with females, White Fang had no exposure or past experiences on which to base his actions. In his later years, while he was living on a farm,

White Fang developed a rivalry with a female dog named Collie. Despite years of experience fighting dogs, first in the camp of Grey Beaver and later at the hands of Beauty Smith, he did not attack Collie in the same way as he did the others. In fact, he let her torment him relentlessly without any attempts at retaliation. Though he did not consciously make a decision to avoid a physical altercation with her, deep down he knew that she was not one with whom he should fight. London described it best when he said, “So Collie took advantage of her sex to pick upon White Fang and maltreat him. His instinct would not permit him to attack her, while her persistence would not permit him to ignore her” (214). Collie constantly harassed White Fang to keep his attention, even if it was not of an affectionate nature, and his instincts kept him from harming her; she was a potential mate to him, and to kill her would be counterproductive to his evolutionary purpose in life. After some time of her harassment, White Fang began to feel a fondness for Collie, and she reciprocated. When presented with the opportunity to mate with her, he had no choice but to capitalize on it; the instinct in him was too strong. “But there was that in him deeper than all the law he had learned, than the customs that had moulded him, than his love for the master, than the very will to live of himself; and when, in the moment of his indecision, Collie nipped him and scampered off, he turned and followed after” (231). Despite his duties to his master and everything else he had come to learn, this evolutionary obligation exceeded them all; the need to reproduce was stronger and more intrinsically part of his actions than anything else, even after years of experience and learning.

As he grew older and experienced more in his life, White Fang began to learn and adapt in order to survive. With such a complex life with so many living situations,

instinct alone would have never been enough to ensure his survival through it all. One way White Fang learned was through Pavlovian conditioning. From repeated experiences with similar results, he learned to expect a certain consequence from an action. London even includes a reference directly to Pavlov's experiments with the dog. When White Fang's father spotted prey, he reacted just as Pavlov's dog did when it heard the food bell ring. "One Eye watching, felt a sudden moistness in his mouth and a drooling of saliva, involuntary, excited by the living meat that was spreading itself like a repast before him" (51). Just seeing food, even in a raw, living form, caused One Eye to begin salivating in anticipation of his meal. This allusion to Pavlov shows London's awareness of not just conditioning, but also the experiments which led to Pavlov's theories.

One of the first examples of this type of conditioning as it pertains to White Fang took place when he was still a small pup. He began to explore different parts of the cave in which he lived, walking off in various directions without trepidation. Since he did not know any better, he ran right into the walls "and encountered hard obstruction on the end of his tender nose. This hurt. And after several such adventures, he left the walls alone" (58). This was not an instance where White Fang learned to avoid the walls because of a deliberate thought process, but rather a learned behavior derived from repetition of actions. This repetition is what makes the behavior indisputably Pavlovian; it must be experienced multiple times before he stopped trying to explore in the directions of the walls. There was no complex thought process behind it, just a simple resulting behavioral modification after several attempts. He knew, without understanding it, that if he were to run into those walls again, it would hurt. This is the most basic mechanism for learning behaviors seen throughout White Fang's life.

These Pavlovian responses develop on a subconscious level in White Fang, entirely bypassing the rational thought processes he later developed as he aged. After spending time in the wild during a time of famine, White Fang encountered Lip-lip again. White Fang had done well for himself hunting, whereas Lip-lip was emaciated and frail, clearly not a threat to White Fang. Without any aggression toward White Fang at all, his mere presence cause White Fang's hair to bristle on his back. "It was an involuntary bristling on his part, the physical state that in the past had always accompanied the mental state produced in him by Lip-lip's bullying and persecution. As in the past he had bristled and snarled at sight of Lip-lip, so now, and automatically, he bristled and snarled." (131). London is sure to include instances like this to reinforce the idea that these Pavlovian responses are not a result of thinking, but of a learned reaction that does not easily dissipate. These conditioned responses were perhaps some of the strongest behaviors that White Fang acquired, most likely because they were formed on a subconscious level.

The next way London portrayed White Fang's learning was through exposure. This process was much more evolved than the Pavlovian responses, and was seen more frequently later in White Fang's life. One behavior that he developed well through his years was fighting. Between his fights in the wild and the encounters with Lip-lip and the other dogs in camp, he developed an effective technique. Beauty Smith recognized this and capitalized on it by using White Fang as a fighting dog. "He knew more about fighting than did any of the dogs that faced him. He had fought more fights, knew how to meet more tricks and methods, and had more tricks himself, while his own method was scarcely to be improved upon" (157). He had fought and survived so many times that this

constant exposure to varying fighting styles allowed him to acquire these techniques and make them his own. It required thought, observation, and even analysis to determine which fighting skills were best in each situation. Previously, while living in the camp, he sorted through his fighting methods based on their success in different instances. “Out of this pack-persecution he learned two important things: how to take care of himself in a mass-fight against him—and how, on a single dog, to inflict the greatest amount of damage in the briefest space of time” (101). These were neither instinctual behavior nor were they just a result of repeated exposure to a situation. Instead, White Fang made the conscious decision how to approach different dangers in the most efficacious way possible. Even though he was an animal and the product of the wilderness from whence he came, London gave White Fang the ability to possess evolved and complex behaviors. Without them, he never would have been able to survive in so many varying contexts in his life.

White Fang did not just use this complex understanding and consciousness to learn how to fight; he also learned the inherent laws of his environment. While in the wild, the laws of nature prevailed. Through early observations, he learned that all animals are “classified” through their function and place on the food chain:

There were two kinds of life—his own kind and the other kind. His own kind included his mother and himself. The other kind included all live things that moved. But the other kind was divided. One portion was what his own kind killed and ate. This portion was composed of the non-killers and the small killers. The other portion killed and ate his own kind, or was killed and eaten by his own kind. And out of this classification arose the law. The aim of life was meat. Life itself

was meat. Life lived on life. There were eaters and the eaten. The law was: EAT OR BE EATEN. He did not formulate the law in clear, set terms and moralise about it. He did not even think the law; he merely lived the law without thinking about it at all. (77)

London clearly explains here that not only was this a law of nature, but it was so innately part of life in the wild that White Fang “merely lived the law without thinking about it at all.” Fortunately, this law coincided with the instincts that White Fang possessed. He had the instincts to survive, even when death seemed inevitable. The drive to kill and eat was also strong and he would fight off others of his own kind to do so. He did not have to think about the law because it was part of his instinctual makeup to help him succeed in the wilderness.

Another law of nature was that “the males must not fight the females. He did not know anything about this law, for it was no generalisation of the mind, not a something acquired by experience in the world. He knew it as a secret prompting, as an urge of instinct” (127). As with the first law of nature, it was a behavior that was not learned, but ingrained in him. They ran through his subconscious and drove him to behave certain ways without any thought at all.

On the other end of the spectrum are the laws of man, which ran contrary to his instincts but were equally necessary for survival. When he was taken in by Grey Beaver, he was no longer able to run free, take food, and protect only himself at all cost. Yes, these were the rules he had lived by up to this point, but things are different in civilization. It took brute force through beatings for these laws to be learned; not even Pavlovian conditioning would work to instill them in his wild consciousness. After time,

though, “he was learning how to get along with Grey Beaver. Obedience, rigid, undeviating obedience, was what was exacted of him; and in return he escaped beatings and his existence was tolerated” (98). In allowing White Fang to learn the laws of man, to be tamed in a sense, London acknowledge that even the most wild of creatures are capable of learning behaviors when necessary for survival. White Fang was not solely instinct-driven; he was survival-driven. If obedience was what was required of him for survival in Grey Beaver’s camp, then he would reluctantly oblige.

The second law of man he learned was the he could no longer act impulsively and by instinct alone, regardless of the situation. “Life was complex in the Santa Clara Valley after the simplicities of the Northland. And the chief thing demanded by these intricacies of civilisation was control, restraint—a poise of self that was as delicate as the fluttering of gossamer wings and at the same time as rigid as steel” (221). For the first time in his long, varied life, White Fang had to learn to fight his instincts and analyze each situation in order to determine the most appropriate and acceptable response. Just because the hound dog seemed like a threat did not mean he was allowed to fight him. Such a course of action would undoubtedly have resulted in no less than a beating, and he was too loyal to his master to risk upsetting him. In order to live with man, he must abide by his laws, whether he understood them or not.

Learning these laws does not just showcase his ability to be taught new behaviors; it is also indicative of his capacity for making a deliberate choice about his actions. London understood that no matter how powerful the instincts are in a creature, the capacity for learning makes them capable of having control over those instincts. After all, White Fang was the epitome of an instinct-driven creature; he practically exuded the

wilderness as a young pup. If he was able to supersede his baser instincts, man certainly could. This is a commentary on the capabilities of man in terms of overcoming his urges to make socially acceptable decisions regarding his actions.

Unlike London's previous novels, the message was not as forthright in *White Fang*. The interactions between instinct-driven behaviors and those behaviors fostered by civilization were meant to be complex and multi-faceted. He demonstrates this complexity through the inner conflicts White Fang had as he developed. There was a clear contradiction between instinct and growth, which is the product of learning. "Instinct and law demanded of him obedience. But growth demanded disobedience" (62). It is unambiguously stated here that the actions instinct and growth required of him were diametric to each other. There was no way for him to live wholly by instinct or by learning as they would be in perpetual discord with one another. Hence, he had to make decisions to do one or the other, or find a compromise between the two. Whether he had an inclination to one more than the other would vary depending on the situation and point of his life. In his adolescence, he had much growth yet to do, so learning would overtake instincts. "For the time, fear had been routed by growth, while growth had assumed the guise of curiosity" (64). White Fang's growth had to masquerade as curiosity to bypass the instinctual behavior that would otherwise prevent him from going out and searching his surroundings. Survival instincts had taught him that in the unknown lurked danger, and danger could lead to his demise. Unfortunately, he was incapable of growth and learning without venturing into the unknown. Therefore, the only way he could learn was if he put himself in peril. It was a necessary risk, but one that could only transpire when the instinct gave way to learning.

The second complexity in White Fang's behavior was the interaction between the laws that he learned, both of nature and of man, and his still-present instincts. Again, through this relationship London expounds how it is necessary to hold these laws and instincts in a kind of equilibrium in order to survive. They were not mutually exclusive, but did not always dictate the same behavior. In those instances, White Fang had to make a choice, a rational, logical choice, regarding which action would be the most acceptable under the circumstances. There was often a hierarchy amongst the laws and instincts when he was around man. "He obeyed his natural impulses until they ran him counter to some law. When this had been done a few times, he learned the law and after that observed it" (216). The laws of man, which had to be learned, ranked higher than his instincts. If he were to continue living with man, that was what was both required and expected of him. Since the law of man did not come naturally to him and he had to master it, "[h]e knew the law even better than did the dogs that had known no other life, and he observed the law more punctiliously; but still there was about him a suggestion of lurking ferocity, as though the Wild still lingered in him and the wolf in him merely slept" (225).

It was not easy to obey the laws when they ran counter to instinct. Even though London understood that it is possible to cogently act against these impulses, he also understood that it was not effortless. Whenever White Fang had to conform to the laws of man, his inner conflict manifested itself physically. "All tense and trembling with eagerness and desire, he mastered his instinct and stood still" (220). It was, in fact, even painful for him. "One cannot violate the promptings of one's nature without having that nature recoil upon itself. Such a recoil is like that of a hair, made to grow out from the

body, turning naturally upon the direction of its growth and growing into the body—a rankling, festering thing of hurt” (134).

Through it all, despite knowing that he must obey the laws of man if he wanted to stay in their world, this lingering wildness still reemerged when necessary. If his life was in peril, the will to live overtook him, and all laws and civilization fell to the wayside. “The basic life of him dominated him again, and his intelligence fled before the will of his flesh to live” (164). Ultimately, he suffered through the learning process to obey the laws of man when living with man, no matter how much it offended his true nature. The only time he would violate the laws of man was when his life was in jeopardy, and even then the decision was not willful. “He endured the peril of [the threat] until his instinct surged up in him, mastering him with its insatiable yearning for life” (177). The animal in him could not be wholly overcome by civility when his life was at stake, regardless of how fervently he tried to abide by the laws of man.

Through his lifetime of varying experiences with many different masters and types of civilization, White Fang managed to adapt and acquire the knowledge and skills necessary to conform to them all. What it came down to was survival. He lived by his instincts and the laws of the wild while in nature, and learned to adapt and abide by the laws of man when in the world of man. Regardless of the circumstances through which he learned it, whether through Pavlovian conditioning or sentient thought, his behaviors were always the result of his will to survive and thrive. London displays the complexity of behaviors and motivating factors that ultimately shape who one becomes. Without accepting and conforming to the cultural expectations (the law of man), White Fang would not have survived with his human masters. All of them, Grey Beaver and Lip-lip,

Beauty Smith, and Weedon Scott, would have quickly dispatched him if he violated the laws of man in their presence. Even with a thorough understanding of the science behind behaviors, London used *White Fang* to demonstrate how those factors intermingle. Even though *White Fang* was a wolf, those same dynamics exist in man. In fact, one could coin his strategy of representing man as a wolf “therimorphic¹.” He used *White Fang* to illustrate for his audience how their own instincts were ever-present, but did not dictate their behaviors. They were capable of overcoming those primal urges and behaving appropriately for the situation, as long as they have the capacity for learning.

At first glance, it would seem the story of *White Fang* was a simple tale of a wolf-dog becoming tamed and being assimilated into human society. He was beaten into submission by his first two masters, and was eventually taken in by the only master who loved him. But it is not simple at all. In fact, *White Fang*’s saga and behavior are virtually labyrinthine in nature. To see that tangled web of motivating factors in his life, one must have a deep understanding of the scientific elements that influenced London’s writing. This should not be seen as just a story of a wolf becoming “tamed,” but an example of how both instincts (nature) and society (nurture) govern behaviors and shape individuals into who they are. While instincts are strong, driving forces, they can be overcome and resisted when circumstances call for it. *White Fang* never lost touch with his instincts; he just learned to control them. So, too, does London expect man to do.

¹ From the Greek *therion* meaning “wild beast” and *morphe* meaning “form, shape.”

Conclusion

Authors have always used their medium to convey their thoughts and ideas about society, politics, or life in general. They do so by weaving these ideals throughout their story, sometimes subtly and other times blatantly. Jack London, though he was popular in his time, has always been seen as a writing of “popular” fiction. The academic community does not give him enough credence as a talented author of literature. In fact, it is evident here that London has masterfully created stories nuanced with social commentary that these deeper meanings are often overlooked by the casual reader. Or perhaps it is because modern scholars focus so much on their academic discipline that they neglect to take into consideration that other areas of study may be required to fully grasp the point he was making with his novels. The social science influences from Marx and the biological influences from Darwin, Mendel, and Pavlov all strongly influenced his beliefs and understandings of the world around him; those beliefs in turn inspired his writing. Once those motivating factors are taken into consideration, one can understand and fully appreciate what London’s writing has to offer the academic world.

The primary theme found in London’s writing, after analyzing it through the lens of the scientific influences, speaks volumes about his feelings regarding behavior both in society and in the wild. It is evident that while he expects animals, people included, allowing instinct to take over and motivate their actions in the wild, he recognizes that type of behavior has no place in civilization. Those that only react to instincts and nothing more turns into Wolf Larson, and their wildness becomes their undoing. On the other end of the spectrum, though, one must not be wholly civilized since instincts are necessary for survival, even in the confines of civilization. Like White Fang, all must find

a balance between instinct and learned behavior. Finding that equilibrium is not easy, and many will fail trying to find it. However, one must always strive to succeed and master the complexity of behaviors required to exist in civilization if he wants to be accepted.

Secondary to these themes are London's socialist views. The focus of this influence is seen when characters are truly invested in their work. The labor power and alienation of labor concepts are scattered throughout both *Call of the Wild* and *Sea Wolf*, where the ability to see the product of one's work results in true fulfillment. It may seem on the surface that this Marxist perspective is at odds with the Social Darwinism theme seen throughout his writing. However, this is simply representative of the complex characterizations found in the most highly esteemed literature throughout history. It is not a conflict, but rather a representation of reality. Being able to recognize this adds to the interpretation of the novels. London knew that there may be a time and place for one perspective, and another time and place called for a different perspective.

It is clear that Jack London was not only a brilliant author of fiction, he was also a well-rounded individual who took an interest in many different disciplines. This was not uncommon during his time and prior to it. Therefore, it can be assumed that he is just one example out of many whose writing was heavily influenced by outside forces. In fact, it can even be said that literature and science are so tightly interwoven that not only should they not be separated by discipline line, but they cannot be. If one tries to ignore the motivating factors in London's writing, or any other's writing, he will either miss the point the writing is trying to make or misinterpret it. Even though many modern scholars perceive the sciences and literature as polar opposites in academia, nothing could be further from the truth. Just as the authors of great works of literature have a multifaceted

knowledge base, so too must we have. Without this diverse understanding of the world around us, the underlying message of literature goes unheeded. Therefore, when we are trying to analyze and interpret literature, it is indispensable that we get ourselves on the intellectual milieu of the author, which includes understanding those disciplines that may not be traditionally considered relevant.

In the academy, students are constantly expected to read and interpret literature in a way that includes some related disciplines. The historical events, both in the time of the author as well as the reader, can undoubtedly influence the way a novel is viewed. This lens needs to be expanded. Rather than excluding science as unrelated or too far removed, it serves as an example of a subject area that is still germane to the analysis of literature. This broader context will further aid in our understanding of the work, and therefore must be applied across the field. As academics, it is our responsibility to look at the bigger picture and take the necessary steps to enlighten ourselves, and then pass that knowledge on to our students. Efforts must be made by those in all fields, but we can take the necessary steps to start a shift in the right direction toward a wholly integrated interdisciplinary academic environment for students and scholars alike.

It may seem a daunting task to try and undo decades of divisions and walls that have been put up throughout the academic community, but steps are already being taken in other disciplines toward a more holistic approach to academics. For example, the academic journal *Isis* publishes annually the *Current Bibliography of the History of Science and Its Cultural Influences*. This compilation lists hundreds of books, journal articles, and other various publications that explore the way science has influenced culture throughout history. Martin Norgaard of Georgia State University recently

published an article that explores the relationship between improvisation in jazz musicians and language acquisition, pulling from the fields of music, linguistics, and motor learning. In *Historical Studies in the Natural Sciences*, yet another journal dedicated to the history-science connection, Nasser Zakariya reviews a half a dozen works, both journal articles and books, which explore the relationship between these two areas of study. One book in particular, *Evolutionary History: Uniting History and Biology to Understand Life on Earth*, “introduces readers to evolutionary history, a new field that unites history and biology to create a fuller understanding of the past than either can produce on its own” (Russell). This is precisely the type of mentality literary critics need to adopt. It is only through an interdisciplinary approach that one can fully comprehend the meaning and implications found buried in the pages of great works of literature.

The burden of scholarship should not fall entirely on the shoulders of the literary community, though. Rather than seeing this as a mandate to critics to acquire an understanding of various other fields, it should be seen as an invitation to those in other disciplines to cross over into the world of literature. Either as a collaborative effort or individual work, they could then employ their expertise in the realm of literary analysis and criticism. By taking advantage of the knowledge others can bring to the table, scholars can maximize their efforts, expand their horizons, and break down barriers that have been erected over the course of the last century. It is a pattern that has already started in other disciplines and one that must be repeated in the realm of literature.

Reading is so often viewed as an isolated experience. A reader gets wrapped up in the pages of a novel and loses himself in the world created by the words on the page. But there is more to that world than just what happens on the pages. After all, in daily life, the

events of a single person are continuously impacted by seemingly unrelated events going on in the rest of the world. Why should literature be any different? Reading ought to be viewed as an interactive experience, with both the novel and the reader contributing to the meaning of the story. This is achieved by understanding as much as possible about the world in which the author was writing. Social, political, historical, scientific, and even popular events and occurrences shape an author's lens through which they see the world. The only way to possibly understand the novel is to adopt a similar lens through which the in-story world is viewed. Even from a casual reader standpoint, this type of diversity enriches a person's mind and the overall reading experience.

Separate disciplines, while relatively young in the grand scheme of things, have run their course. There is little to gain from a microscopic view of knowledge, and everything to gain from breaking down these barriers and moving back to a more all-inclusive approach to academia. Scholars can benefit, the scholarship itself can benefit, and students can benefit. We must move toward a true interdisciplinary approach across the board. This paradigm shift has already begun in other disciplines, and if we do not act now, literature will be left behind.

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