

**DERIVING “OUGHT FROM “IS”: HANS JONAS AND THE REVIVAL OF A
TELEOLOGICAL ETHICAL THEORY**

A Dissertation
Submitted
to the Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

By
Joseph M. Farrell
August 2010

Examining Committee Members:

Lewis Gordon, Advisory Chair, Philosophy
Joseph Margolis, Philosophy
Jane Gordon, Political Science
Joseph Schwartz, External Member, Political Science

©
Copyright
2010
by
Joseph M. Farrell

ABSTRACT

Hans Jonas ranks among a small but expanding group of recent ethicists who have argued that a robust ethical theory must account for human ontological considerations. He is among those who make claims that such considerations issue from biological foundations. In The Phenomenon of Life, he reclaims elements of the Aristotelian biological ontology of the soul while adjusting this ontology to the theory of evolution. The first problem with Aristotelian biological ontology, one suffering from essentialism, is the confrontation with the biological flux of species, presented in the Darwinian theory of natural selection. The dissertation explains that Jonas was correct in his return to Aristotle, insofar as there are elements of human beings that are natural and universal. The task is to follow Jonas by constructing a robust philosophical anthropology. Jonas's philosophical anthropology understands human beings as nature's most magnificent and advanced examples of what he calls "needful freedom." Jonas's argument includes a refutation of reductive materialism and epiphenomenalism, one that leaves the possibilities of the human soul/consciousness and freedom in at least as good a position as offered by Kant. His argument is also an attempt to rescue ontology, human nature, and ethics from the relativism of Heideggerian thought. He does this by replacing Heidegger's concept of "thrown projection" with an idea of "projection" based on biological ontology. With this ontological foundation in place, Jonas's "ethics of the future" sees human beings as the caretakers not only of themselves but of the totality of nature and not simply for anthropocentric reasons. Jonas's philosophical anthropology was incomplete insofar as it lacked an accounting of sexual reproduction, a key element for Jonas's ethical theory where political responsibility is modeled after parenthood. After offering a critique of Jonas's incomplete philosophical anthropology and the gap it leaves for his ethical theory, this dissertation shows that the value of his contribution remains intact.

ACKNOWLEDGMENTS

I would like to acknowledge the advice, assistance, and overall collegial good will of my fellow philosophers, mentors, and teachers over the years of my education. Some of you have been dynamic and provocative, others kind and nurturing, but all of you are of the mind of Socrates, ultimately, that a life spent in the pursuit of the truth is a life well lived. I thank you for the inspiration that you have given me and the perspiration that you have caused me. I would like to thank Dr. William Desmond, Dr. Timothy Stapleton, Dr. Drew Leder, Dr. Malcolm Clark and Dr. Dale Snow, who taught me at Loyola College in Maryland, who lit the philosophical fire in me, and who taught me that in order to be a great philosopher, you must be a great teacher, first. I would like to acknowledge Dr. Charley Hardwick and Dr. Phillip Scribner at The American University, who taught me about academic rigor. I would like to acknowledge Dr. Thomas Lynch who has taught me about rigor in general. Lastly, I would like to give special acknowledgment to Dr. Lewis Gordon of Temple University, who had confidence in me and this project when I lacked enough of that in myself.

DEDICATION

I dedicate my dissertation to my sons Anthony Santiago Farrell (Tony), Neil Michael Farrell and Jack William Farrell, the lights of my life and my reason for being; to my wife Flor DeMaria Farrell, who stood by me in the cave and pushed me up the steps; and to my parents who helped me break my chains, built me a staircase, gave me legs for the climb, and who made me who I am today: ME.

TABLE OF CONTENTS

| | |
|---|-----|
| ABSTRACT..... | iii |
| ACKNOWLEDGMENTS | iv |
| DEDICATION..... | v |
| | |
| CHAPTER 1. INTRODUCTION | 1 |
| | |
| CHAPTER 2: HANS JONAS'S RECOVERY OF ARISTOTLE | 13 |
| The Importance of Aristotle?..... | 13 |
| On the Supposed Downfall of Aristotle and Teleology..... | 16 |
| DNA to the Rescue of Aristotle and Jonas..... | 31 |
| | |
| CHAPTER 3: HANS JONAS'S PHILOSOPHICAL ANTHROPOLOGY..... | 37 |
| Jonas's Ontological Distinction: Metabolism..... | 37 |
| Mediation and the Great Divide | 57 |
| Vision, Theory, and Practice: What it Means to Be a Human Being | 69 |
| The Image of Man: Who We Are and Who We Should Be..... | 80 |
| Jonas and the Problem of <i>Automatomorphism</i> | 89 |
| | |
| CHAPTER 4: HANS JONAS'S REVIVAL OF ETHICAL THEORY..... | 101 |
| Ethical Theories and Moral Theories..... | 101 |
| Hume's Guillotine..... | 105 |
| Kant's Deontological Moral Theory: Aimless Duty..... | 108 |
| The Utilitarian Problem of Consistency: Too Many Targets Spoil the Archer.... | 116 |
| One Reprieve from the Guillotine: Wittgenstein's Legacy..... | 123 |
| A Second Reprieve: Heidegger's Fundamental Ontology..... | 128 |
| Hans Jonas's Charge of Nihilism against Heidegger..... | 133 |
| | |
| CHAPTER 5: HANS JONAS'S ETHICAL AND MORAL THEORY..... | 141 |
| | |
| CHAPTER 6: DEFENDING JONAS'S ONTOLOGY AND ETHICAL THEORY..... | 168 |
| Among the Vanguard..... | 168 |
| The Charge of Essentialism..... | 170 |
| The Charge of Using Teleological Explanations in Biology..... | 177 |
| The Charge of Anthropomorphism..... | 187 |
| The Charge of Violating Hume's Guillotine..... | 193 |
| The Sum of Criticisms External to Jonas's Work..... | 194 |

| | |
|--|-----|
| The Charge of Anthropocentrism..... | 196 |
| The Missing Account of Sexual Reproduction | 204 |
| CONCLUSION..... | 213 |
| BIBLIOGRAPHY..... | 220 |

CHAPTER 1 INTRODUCTION

The dissertation that follows investigates the connection between Hans Jonas's *The Phenomenon of Life* and *The Imperative of Responsibility* and is a defense of Hans Jonas's work in ontology, philosophical anthropology, and ethics. My purpose in undertaking this project is, most generally, revealing an example of the truth of the old adage that one should never throw away the baby with the bath water. Hans Jonas realized this with regard to Aristotle even in the face of Darwin's theory of evolution by natural selection. Toward this end and first, I wish to explore and explain the value and relevance of Hans Jonas's recovery of elements of Aristotelian ontology, philosophy of biology, and psychology and how this project has been on the mind of some eminent biologists even in the face of evolutionary biology. Second, I wish to explain the innovative way that Hans Jonas used Aristotelian concepts in conjunction with evolutionary biology to give a more adequate account of philosophical anthropology as against all reductionist versions of materialism. Third, I wish to explain and contextualize Jonas's ethical and moral theories as a direct challenge to "Hume's Guillotine," a direct challenge to all solely principle-based moral theories, a direct challenge to the relativism of Heideggerian existentialism, and argue that Jonas's challenges are needed if an adequate theory of valuation is to be revealed and developed.

Hans Jonas was a philosopher of German Jewish heritage, born in Monchengladbach, Germany, in 1903. He studied under Edmund Husserl, Martin Heidegger, and Rudolf Bultmann and earned his doctorate, *summa cum laude*, from the University of Marburg in 1928 after writing an existential interpretation of the Gnostic

religion drawing on the thought of Heidegger. A few years later in 1933 when Adolf Hitler came to power, Jonas fled Germany for Jerusalem, where he taught for a number of years. He served in the British Army during World War II and in the Israeli military before working as a professor in Canada and then at the New School for Social Research where he taught from 1956 until his retirement in 1977. Among the greatest difficulties for Jonas over the course of his life were leaving Germany and his family behind in 1933. He was never to see either of his parents again and later discovered that his mother had fallen victim to the Nazis in the Auschwitz concentration camp after offering up her emigration visa for Jerusalem to her son Georg, who was prisoner at the Dachau camp in 1938.¹ Coupling these experiences with those of a soldier both during World War II and after, one can see through the development of his thought that in spite of all the human folly of Germany, a good many of its citizens, and above all his mentor Martin Heidegger, being taken in by Nazism, which eventually led to his mother's murder at Auschwitz, something of the human striving not only for survival but for ethical reasoning remained in humanity itself. In his letters to his wife Lore, sent during World War II, one sees Jonas's ideas about hunger and the striving for the continuance of life itself in the constant state of contingency by which all life hangs in the balance, already in formation. Over the course of the twenty subsequent years, Jonas would write essays later published together as *The Phenomenon of Life*. He then branched out from a focus on ontology and philosophical anthropology to his work on bio-ethics and medical ethics. His seminal text on ethics and morality appeared in his *The Imperative of*

¹ As related by Hans Jonas in chapter 5 of his *Memoirs* (Jonas, 2008)

Responsibility.

In addition to a short book on Jonas's work (Levy, 2002) a significant amount has been written regarding Jonas's relationship to Judaism (Tirosh-Samuelson, 2008; Fleischacker, 2008; Weise, 2007) and to Heidegger (Fleischacker, 2008; Wolin, 2001). By contrast, little thought has been given to his neo-Aristotelian ontology, philosophical anthropology, or to the validity of these in relation to his ethical and moral theory.

The philosophical reflections of Hans Jonas were fundamentally shaped by the ways in which his personal experiences interacted with and informed his efforts to develop a response to the tensions growing out of the thought of René Descartes. In this way by writing *The Phenomenon of Life*, it seems that Jonas was responding first and foremost to René Descartes' dualistic metaphysics of "thinking things" and "extended things" that had cast the philosophical enterprise into a tailspin. Earlier efforts to respond to Descartes' dualism ended in a polar split between two competing versions of monism, idealism on the one hand and materialism on the other. Idealism attempts to account for the relationship of energy and matter moving through space in terms of minds that have ideas, or simply in terms of ideas. Materialism attempts to account for living beings with minds that have ideas in terms of the relationship of energy and matter moving through space. But each disregards the other in various radical ways and thereby fails to explain the human being satisfactorily. This is because both idealism and materialism are incomplete insofar as they each try to account for the integral duality of reality itself, which Aristotle's ontology had described as form inextricably tied to matter. Each in focusing solely on "thinking things" or on "extended things," ignored the other to the

detriment of the quality of their explanations of human being. Jonas thought that one must integrate the duality present in nature itself, of matter and form, into a complete monism that builds on Aristotle's explanation of the purposeful nature of all life that fits within the boundaries of modern scientific insights and particularly the theory of evolution by natural selection.

Toward this end, chapter 2 of the dissertation is concerned with what elements of Aristotelian ontology, biology, and psychology Jonas thought ought to be preserved even in the light of the theory of evolution and a defense of the correctness of his argument. Life seems to move purposefully and not simply mechanically. Jonas answers this question with immanent teleology or what Colin Pittendrigh has coined as the term "teleonomy." The resulting monism that Jonas developed is the phenomenon or internal experience of what it is like to be alive, a phenomenon that simply cannot be accounted for adequately by many prevalent versions of materialism. Jonas claimed that modern science in general sought to explain everything, including life itself, in terms of dead matter moving through space. Proponents of reductive materialism (and more recently eliminative materialism) have attempted to explain the mind and its various mental states as nothing more than matter moving through space. The mind is nothing separate from the body and therefore it can have no independent causal efficacy. If reductive materialism is true, then the mental phenomena that we experience, like consciousness, the emotions, any degree of freedom, could be explained through laws of efficient causation among arrangements of matter. In like manner, if epiphenomenalism is right, then the subjective experiences we have are illusory side effects of causal efficacy among

atoms. No teleological explanation of human capacities or experiences would need to be given if reductive materialism and epiphenomenalism are true. All of nature, including human nature, would be nothing more than a collection of nicely organized matter moving through space according to laws of efficient causation and thermodynamics. Full explanation of all worldly events, including mental events, could be achieved through efficient causes among material causes. This would imply that all actions taken by human beings are reactions to external stimuli and that no actions originate from consciousness itself independently. The mind would act as an extremely complex self-correcting servo-mechanism, the tenet of a strict behaviorism.

Certainly Jonas believed the scientific truth that things, including living things, consist of the relationship of energy and matter moving through space. In addition, however, he insisted that through the movements of history and evolution, living beings, organisms, become more. Life is emergent from matter. Jonas argued that above and beyond matter moving through space, living beings composed of matter moving through space in particular arrangements achieve something more: subjectivity or spirituality and degrees of freedom. This explanation of subjectivity or spirituality, common to all living creatures in different expressions, he called “needful freedom.”

In chapter 3 I will explain and defend Jonas’s philosophical anthropology, the human side of life, where our human capacities, constitute our experience of “needful freedom.” Organisms are special arrangements of matter with internal interests and the freedom to satisfy themselves: “needful freedom.” It is with the notion of teleology and purposeful action in living creatures and especially the account of human beings that

Jonas develops his philosophical anthropology. While insisting that his philosophical anthropology be developed in accord with the discoveries of modern science and especially the Darwinian theory of evolution, it was Jonas's belief, in concert with thinkers like Karl Jaspers and Ernst Cassirer, that these alone could not capture the meaning of human life. Jonas's philosophical anthropology, although affirming the concept of evolution, is a teleological ontology. All life, including human life, is purposeful by its very existence as various collections of capacities and processes with the purpose of preserving the particular living creature and as I will demonstrate, the species itself. If something like spirituality, subjectivity, or consciousness can be defended against reduction then, not only must spirit be more than just an illusion, it must itself be causally efficacious. The importance of freedom to Jonas's argument lies not simply in proving reductive versions of materialism inadequate to explain human nature but in tailoring explanation to fit the vicissitudes of the daily experience of human life, the experience of the individual at the point of making decisions. At the crux of making decisions there is the lonely individual, certainly influenced in a myriad of ways from forces outside, but making decisions. Jonas posits an argument whereby the possibility of freedom exists even within the mechanistic universe.

While conceding mechanisms of biology but concurrently ascribing purpose linked to conscious human activity, Jonas develops an explanation of what distinguishes life: metabolism. However, the human experience of "needful freedom" consists of not only the capacity to metabolize (as is consistent through all forms of life) but also to perceive, to experience pleasure, pain, and emotion, to move under one's own power, and

to make images. Jonas's reflections on the human capacity for making images along with knowing truth and developing an “image of man,” ultimately, were the source of his ethics of responsibility informing, in particular, his account of the power human beings possess and the responsibility we thereby also accrue. Human willing is not purely isolated willing toward the ends projected by the individual and whomever he or she can persuade. It is in this way that through his life’s work Hans Jonas also responded to a third party, another whom he believed to have posed an especially significant challenge to the purposefulness of human existence, his teacher, Martin Heidegger. Without the details of all organisms, his response to Heidegger’s supposed nihilism is that human beings express this “needful freedom,” this internalization, through metabolism, perception, emotion, locomotion, and making images (Vogel, 1995). According to Jonas, as an accident even in its inception, life serves no purpose. It does, however, have purpose. The purpose of all life is to survive and to thrive in the myriad of ways accumulated by living creatures over evolutionary history. All of the capacities accumulated in any individual living creature are a gamble and the stakes of the gamble are success at survival for the individual and the genes/structure/form that the individual carries to pass to another generation. Through chance, nature itself imparts to living creatures, as part of the struggle to survive, the purpose of struggling and surviving. Like all other life forms, human beings have purpose in preserving their own lives, though sometimes it comes at the expense of other human beings.

Given his understanding of organisms as purposeful beings, Hans Jonas realized that the then current (late 1960s and early 1970s) philosophical trend of taking seriously

the theory of evolution, in conjunction with reductive versions of materialism, placed him in the realm of the “philosophical rearguard” (Wolters, 2001). But his own convictions and strong arguments for a teleological understanding of life (particularly human life) comforted him in the belief that some day he might turn around to see the “philosophical vanguard” approaching from the rear and that he would have been leading the charge to which others had finally caught up (Wolters, 2001). He may well have been right as we see newer understandings of “subjectivity” (Nagel, 1974) and naturalistic explanations of human freedom (Dennett, 1995 and 2003) emerge even from the “Anglo-American” philosophical tradition.

The goals of the fourth chapter are, first, to explain the problems with regard to value theory in general, that emanate from “Hume’s Guillotine,” the widely held idea that there is an unbridgeable gap between statements of fact and statements of value. Secondly, I wish to clarify that modern moral theory, briefly represented by Kant’s deontological moral theory and Mill’s utilitarian moral theory are dead ends that leave us without a set of goals by which we can use the principles involved. Lastly I wish to show that a number of prominent philosophers, including Hans Jonas, have made headway in arguing against “Hume’s Guillotine and that in addition to a moral theory based on principles, an ethical theory which attempts to develop an understanding of the “good life” from biology itself is warranted and needed if value theory is to be robust and valuable.

In chapter five, I explain the ethical and moral theories of Hans Jonas showing both the strengths of these intertwined theories and some areas of relative

incompleteness. Jonas explained to us why he believed that an ethical theory is essential in giving guidance to a corresponding moral theory, and defended this position from the perspective of being a member of a species that reproduces sexually, in spite of the fact that species evolved. Political responsibility issues from the type of “needful freedom” that constitutes the human organism: metabolism, perception, emotion, locomotion, and making images (which would necessarily include the capacity to think ethically), as well as being a social and sexually reproductive organism. As image making and self reflective of purposes, human beings are alone among organisms in not only recognizing purposes but also in being responsible for their achievement. Jonas explained this, but not thoroughly enough. The seed of the full explanation lies, again in *The Phenomenon of Life*. Jonas criticized the one-sided view of evolutionary biology which understands the somatic organism as “disposable” (Kirkwood, 1999) in the name of the germ cells being passed on and variation occurring. Jonas explains the position about organisms, taken by many evolutionary biologists, as that of a germ history being a blind force that employs somatic organisms to do its bidding and wage its battles in the process of continuing the line. The criticism is that the germ line cannot be passed on and evolution cannot proceed on the human species or “form” (or any species for that matter), without particular members of the species surviving and thriving in the environment. Concurrently, those individuals are nothing definable without their genetic blueprint, the form of what it means to be a human being. Importance does not lie in one or the other but in the inextricable relation of the two to each other, in process. Lastly, responsibility falls to the individual human being to revere himself or herself and his or her national and

international neighbors. Jonas makes a sound case in *The Imperative of Responsibility* for a reevaluation of the ethical life, in the realm of political decision making, an ethical life which will implore as well as command politicians to gamble more carefully with the fate of humanity and the world based on a “heuristics of fear.” This work on ethical theory has its origin in his earlier work on ontology: *The Phenomenon of Life*. The “imperative of responsibility” is an ontologically based imperative toward the preservation of the human species and the environment as a process of interaction. It is an understanding of life itself, not just human life, as something worth preserving simply because it exists and in most every way strives after this preservation, both on the level of the individual in the process of survival in its environment and the survival of the species through novelty in reproductive capacity.

The Imperative of Responsibility explains a version of communitarianism based in Aristotelian virtues, where politicians have an ethical duty to preserve nature, and humanity as part of nature, as a result of having the power to command or destroy both. No matter what the source of power, possession of such power entails responsibility. That human beings are beings with command of enormous power over nature and ourselves as part of nature, we ought to employ that power with care given the fact that so much of what we are as organisms is in place to ensure our survival. Jonas, having argued in *The Phenomenon of Life* that there is purpose in nature in general and that purposes pervade all organisms in their being and their parts (as “subjectivity” or “spirituality” and the “needful freedom” to press on in existence), then made the case (as opposed to most moral philosophy written in modern times) that conclusions about values

can be derived from the ontological status of living creatures. While he returned to an Aristotelian form of argument deriving the ethical “ought” from “being” itself, he attempted to do so while taking into account the truth of evolution and the loss of invariant natural kinds. He explained that whatever else might be true about the nature of matter, natural selection has imbued some collections of matter, organisms, with an internal nature (subjectivity or spirituality) which drives the organism toward self-preservation (whether as plants, animals, or human beings). The drive of living beings is an ethical drive promoting purposes and ends to be served not simply a set of moral rules with no ontological understanding of how or why to apply them. In this way Hans Jonas was looking beyond the Kantian tradition of deontological and utilitarian moral theories in favor of an Aristotelian ethical theory. In an age when so much value theory is moral theory which puts emphasis on rules of operation in terms of particular actions, Hans Jonas wrote an ethical theory, though an incomplete one, which explains rules along with how and why they should be applied, again putting himself in the “philosophical rearguard” knowing the “philosophical vanguard” would catch up (Wolters, 2001). With the work of some of his contemporaries in ethics, it seems that he was not alone (MacIntyre, 1981; Taylor, 1989 and 1992).

In the sixth and last chapter, I will evaluate and defend criticisms that have been leveled against the ontology, the philosophical anthropology, and the ethical and moral theories Jonas left behind. This defense is not necessarily to defend every word Jonas ever wrote as he left many questions unanswered, especially with regard to what exactly is entailed by his “ethic of responsibility.” The value of Jonas’s thought lies especially in

resurrecting questions long since thought by many philosophers to be anachronistic, to rethink positions taken by Aristotle, and to keep the baby while changing the bath water.

In terms of saving the baby what Jonas left unexamined, perhaps because he believed that it was self-evident based on his imperative of political decision making in the light of world preservation, is something like an “imperative of responsibility” of politicians to individual citizens, one of individuals to one another, and one for the individual toward himself/herself: the imperative of health. I will end with a conclusion explaining the value of Jonas’s thought for the concept of health and the practice of medicine.

CHAPTER 2 JONAS'S RECOVERY OF ARISTOTLE

The Importance of Aristotle?

Hans Jonas understood himself to be among the philosophical rearguard insofar as he was employing Aristotelian teleological concepts of biology which seemed to have been overthrown over the course of the century previous to his writing. And yet, though he clearly understood the truth of Darwin's theory of evolution by natural selection, he could not accept all of its seeming entailments insofar as they contradict so clearly, the experience of being alive. He believed that these bypassed Aristotelian explanations which seemingly put him among the philosophical rearguard would actually, put him among the vanguard eventually (Wolters, 2001). For instance, simply because the theory of evolution can explain the development of life without a creator of that life does not necessarily imply that teleological conceptions of purpose emanating from living creatures need to be, much less should be, reviled. From life emanates purposeful action even if such action serves no purpose. The lived body and its genetic structure project a set of possibilities that indicate proper function and goal directed capacities. Secondly, just because the human genome (and every other genome for that matter) is something which is in a state of flux does not imply that there are no elements to that genome without which humanity does not exist. Lastly, all collections of matter are not equivalent and those that live are ontologically and substantially different, given the experience of the embodiment of certain capacities. The conclusion to these premises is that while materialism is the true ontology, the truth of life cannot be reduced to mere mechanical interaction of parts nor to all action being simple reaction; efficient causal explanation is

incomplete for living things and therefore life must involve formal and final causal explanations because that is how the subject and most keenly the human subject, experiences being alive.

In the face of the burgeoning details of modern science, Darwin's theory of evolution and the research in evolutionary biology, genetics, and microbiology that has followed, the last thing that would seem philosophically, much less scientifically prudent, would be to entertain any element of the Aristotelian biology that permeated the study of life for so long. Yet, in *The Phenomenon of Life*, and in his philosophical anthropology, this is exactly what Hans Jonas undertakes when he uses an understanding of the Aristotelian concept of the soul to develop his concept of "needful freedom." Needful freedom, according to Jonas, is the subjective experience of being alive, a state of intermittent need and a hungering for sustenance but free in various degrees (the least of which is evident in plants and the greatest of which is evident in humans) as to how to sustain life through nutrients. Aristotle had no conception of the adaptation and evolution of species over time. For Aristotle, all species, including human beings, always existed. They exist now (as they did in Aristotle's lifetime), and they will continue to exist barring a cataclysm the likes of which could destroy any of them or all of them as species. Permanence lies in the form of the living creature embodied in matter; the soul becomes actualized in the flesh. Speaking of animals, in *De Generatione Animalium*, Aristotle remarks that,

It is impossible that such a class of things as animals should be of an eternal nature, therefore, that which comes into being is eternal in the only way possible. Now it is impossible for it to be eternal as an individual (though of course the real essence of things is in the individual) – were it such it would be eternal – but it is possible for it as a

species.²³

From this we may be clear that Aristotle understood living creatures to be participating in the eternal rationality of the universe by reproducing like members of their species, this being the case for plants, animals, and human beings. Living creatures, as members of a species are the temporal and temporary embodiment of an eternal idea. The form and the potential for the actualization of purpose are passed from generation to generation through reproduction, the passage of the form of the species, the soul, to a new generation. The soul in Aristotle's biology is equivalent to what modern biologists call DNA or the genetic structure of the organism. With this understanding of living creatures as members of species with certain capacities according to a type of soul, Aristotle derived an understanding of what life can and should be for an individual as a member of a species. Teleological explanation is crucial to Aristotle insofar as the soul of an organism having certain capacities purposefully drives the organism toward its purpose, to achieve Godly rational perfection. This occurs through the achievement of excellence as the embodiment of a certain type of soul and the transmission of that variety of soul to a new generation of organisms. The species to which the organism belongs, determines its ideal actualization. Aristotle was then able to derive his ethical theory, an explanation of what human beings can and should be, based on the human membership in a biological species. Jonas's general understanding of living creatures as examples of "needful freedom" has its foundation in the Aristotelian concept of the soul as "the first grade of

2 Platt, A., 731b, 33-39.

3 For recent commentary on this dimension of Aristotle's thought, see the work of Jonathan Barnes (Barnes, 1982), Terence Irwin (Irwin, 1988), and Sarah Broadie (Broadie, 1991), to name a few.

actualization of a natural organized body.”⁴

On the Supposed Downfall of Aristotle and Teleology

According to Jonas, the move away from a teleological conception of nature, a teleological conception of living creatures in nature, and of human beings specifically, occurs in roughly three stages in intellectual history: the prevalence of the Judeo-Christian conception of God, the mind-body dualism of René Descartes, and Charles Darwin’s theory of evolution by natural selection. It begins in western philosophy with the move away from the Greek conception of the world and nature as rational and possessing a soul. In referencing this tradition among the Greeks, Jonas describes Plato’s understanding of nature where the “God of the *Timaeus* created the world as the perfect ‘animal’ or visible god, ensouled and intelligent.”⁵ The God of *Timaeus*, considering the beauty and magnificence of eternal Being, infused the material world of Becoming, with a soul that was rational. This understanding of nature venerates the created universe as godly and rational, based on God’s ethically good acts of shaping the cosmos and imbuing each heavenly body and all living creatures with a soul. Aristotle also venerated the eternal motions of the planets as godly becoming, not caused by God in the efficient sense of causation but caused by God as their striving for purpose. With the advent of the Judeo-Christian tradition and its understanding of the cosmos, any veneration of the world and of nature, at all akin to worship, is forbidden. God, from such a perspective, creates the material world from nothing. The universe that we know is matter created and

4 Smith (2001), page 555.

5 Jonas (2001), page 70.

set in motion by God's will. It is efficiently caused by God and given a form or shape but it has no final cause of its own as the Greeks thought. It is matter in motion without purpose other than God's original purpose in making it. God's intervention in the creation of the material universe is for human beings. We are the focus of God's creation in the Judeo-Christian Tradition. The problem here, according to Jonas, is that

Nature, created out of nothing, has no mind of her own, but mutely performs God's will by which alone she exists. Thus the idea of a mindless or "blind" nature, which yet behaves lawfully – that is, which keeps an intelligible order without being intelligent – had become metaphysically possible.⁶

The historical intellectual movement from the ancient Greek conception of the material world, including the planets, as embodied rational souls, to a mechanism designed by the Judeo-Christian God, is the first removal of teleology from nature itself as a whole. In the Judeo-Christian view, the world is a collection of inert matter which God creates from nothing to do his bidding. One could draw an analogy to a mechanical engineer who designs an engine and a frame around it and who then builds a car to transport people from place to place more quickly. The car is neither alive nor has it purpose other than to serve as a means to an end as a vehicle for human beings. The world created by the Judeo-Christian God has no other purpose than to serve as the place of life for human beings and the living creatures that serve their other ends. The world is nothing more than the place where humans live by the will of God. The instantiation and prevalence of the Jewish creation story with an omnipotent God who creates everything from nothing is the first separation of intrinsic teleology from entities which were once considered

⁶ Ibid, page 71.

animated by soul and purposeful living beings. The heavenly bodies were no longer God's greatest creations as it is related in *Timaeus*, nor are they the greatest example of rational motion striving for Godly rationality as in Aristotle's cosmology. The Judeo-Christian tradition puts humans at the head of creation's table as the only creatures with souls. In Jonas's understanding, this very idealistic conception of the universe and of human nature actually completes the first chapter in the history of western thought of materialism: the mechanical cosmos.

The second removal of teleology, according to Jonas, is performed essentially by Descartes with his dualism of *res cogitans* and *res extensa*: mind and body. It is in the work of Descartes that the "essential division between God and world is thus mirrored in the essential division between mind and nature."⁷ Trying to give credence to modern science based on reasoning about experience, Descartes comes to grips with a God centered universe, compatible with Catholicism, where God allows for the human capacity for modern scientific understanding. God is an intrinsic feature or idea within each individual human consciousness, the thinking thing (*res cogitans*), amid a world comprised of extended things (*res extensa*). Descartes explains the nature of the world in which we live as spatial existence. Matter is something that takes up space and is determined by the laws of efficient causality. This includes all animal life and even the human body because Descartes understood that "animal bodies were machines constructed to function as they do, and though there is neither intelligence nor purposiveness in their functioning itself, this being automatic, their construction *toward*

⁷ Ibid.

such functioning seemed to call for precisely those qualities.”⁸ In Descartes’ understanding of the universe, God makes a material universe, replete with living creatures, operating on the principles of efficient causality. Trying to imagine why God would construct such a universe is beyond our capacity to answer, according to Descartes, but we can understand that these creations must have had a purpose for God. But, and this is the important feature of Descartes’ argument for Jonas, no sense of final causality is necessary to understand this material universe, the parts of which take up space, as it is nothing more than the mechanism of the world, as constructed by God, an enormous set of wind-up toys. The only entities distinct from that which is extended are the things which think: human minds. So, Descartes extends this impending sense of mechanism in the world to all things which are comprised of matter itself: spatial existence. The only element in nature which is purposeful is the human mind itself which is substantially distinct insofar as it is immutable, indestructible, and rational, like God himself. But as David Levy points out, it was the “distinction between an organism and a machine that Descartes failed to see; from this failure flows his inability, or unwillingness, to recognize the unifying distinctiveness of living being, of animate as opposed to inanimate nature.”⁹ Thus is written in the history of western thought, according to Jonas, what we may call the second chapter in the triumph of materialism: mechanical organisms.

The third and final defeat for teleology comes with Darwin’s theory of evolution by natural selection. Descartes left behind a dualistic ontology of extended things as

⁸ Ibid, page 41.

⁹ Levy (2002), pages 60-61.

opposed to thinking things. Everything in nature, including nature itself, could be understood mechanistically except for the human mind. The problem that this leaves behind is of course the mind-body problem, or, put succinctly, how could an immaterial substance affect change on a body which is extended? But according to Jonas,

The *continuity* of descent now established between man and the animal world made it impossible any longer to regard his mind, and mental phenomena as such, as the ingression of an ontologically foreign principle at just this point of the total flow. ...Evolutionism undid Descartes' work more effectively than any metaphysical critique had managed to do.¹⁰

The theory of evolution, that species develop and change over time, allowed for the possibility of a naturalistic and mechanical explanation for humanity in general and for the human mind in particular, although that complete mechanistic understanding is still incomplete in terms of such phenomena as consciousness, emotions, freedom, etc. Thus the human mind could be explained in theory, if not yet in details, as the historical product of the struggle for existence, inheritance of genetic characteristics, variation of characteristics (under environmental stresses, mutation, and sexual pairing where it is the case), and natural selection. The purposeful construction of the human mind by God, under Descartes' frame of reference, is a superfluous explanation if in fact the human mind can be explained by probability of success in an environment under natural selection. Teleological explanations in general are superfluous explanations if in fact everything in nature can be explained mechanistically. As Jonas said, the theory of evolution by natural selection "completes the liquidation of immutable essences, and thus signifies the final victory of nominalism over realism, which had had its last bulwark in

¹⁰ Jonas (2001), page 57.

the idea of natural species.”¹¹ Yet, Hans Jonas proposes exactly that, a return to teleological explanations not only of human beings and their minds but also of all living things, a return to a version of realism from nominalism. Even if rigidly defined immutable species do not exist as eternal essences, a teleological account of living creatures may still be warranted based on what is common to all life in spite of all the variations. Life, especially self-conscious human life, is not the same as the biological structures of which it is composed, or the physical matter of which those structures are composed. This implies the irreducibility of living things and their experiences of life actually lived to their material components or put more succinctly, the irreducibility of consciousness to biology and the irreducibility of biology to physics.

The question is raised whether, in spite of the enormous chasm that exists between Aristotle’s view of species and the modern Darwinian evolutionary view of species, we can learn anything from Aristotle or if any of his insights can still help us to understand the objects of biological study: living creatures. Aristotle’s view of species was that living creatures were grouped according to like characteristics, like capacities, and the ability to reproduce. Aristotle explained that species are intrinsic separations among types of living creatures, the form/soul of every species was homogeneous, and that species did not change over time. Darwin, however, seems in some passages, to have understood species as more of a heuristic device. In *On the Origin of Species*, Darwin stated that he looked

At the term species, as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other, and that it does not essentially differ from the

¹¹ Ibid, page 45.

term variety, which is given to less distinct and more fluctuating forms. The term variety, again, in comparison with mere individual differences, is also applied arbitrarily, and for mere convenience sake. ¹²

So in nature, species may well not exist at all and any arbitrary or ingenious grouping of living creatures might do for different purposes. If this is true, then taxonomy is for the human purpose of convenience in naming but it is not the naming of real essences.¹³ Yet the continued contention over the issue of what species are, if in fact they are anything, yields meaning for the validity of Jonas's thought as a Neo-Aristotelian thinker and for his argument about the nature of humanity. In terms of the contention, all species concepts share a common thread in spite of the varieties of systematization, the understanding that an essential system is there to be found for the classification of living creatures. In terms of the nature of humanity, the contention exemplifies the purposeful struggle to classify in general and more importantly to classify ourselves toward contributing to and edifying what Jonas calls the "image of man." As I will show below, the key to Hans Jonas's philosophical anthropology is the unique capacity of human beings to conceptualize the internal experience of being human, whereby the "private objectivity of the self is thus in constant rapport with the public image of man and through its own exteriorization contributes to the remaking of the latter – the anonymous

¹² Darwin, page 46.

¹³ At this point we may note that at least two questions are being begged at once. The first of these questions is when scientists are investigating species as a concept, is there a distinction to be made along the lines of Husserl's noesis/noema with regard to the projects that scientists are undertaking? Put differently, is there an essence to which each species concept is ultimately referring? Secondly, in terms of Heidegger's project of fundamental ontology, if there is not a referent for which each species concept is a sense, does the very search for the species concept yield meaning with regard to being human? These questions come to mind as Jonas was influenced so extensively by the thought of both Husserl and Heidegger.

share of each self in the history of all.”¹⁴

The recent history of the quest for the answer with regard to species is the same, whether it is a species concept based on reproductive compatibility like the Biological Species Concept of Ernst Mayr (Mayr, 1970), a species concept based on lineage and genetic similarity like the “Phylogenetic Systematics” of Willi Hennig (Hennig, 1979), or the complete overturning of the concept of species whereby “species are not classes with members, but individuals with parts (Ghiselin 1974; Hull 1976; 1978).”¹⁵ In the first two general cases, Mayr and Hennig, there is the quest for the foundational real essence of evolutionary change, the unchangeable essence that describes the flux of species and their relative stability at any particular time (the former immutable essence). In the third class of cases, that of both Ghiselin and Hull, we have the negation of the species concept as a naming of a class. Instead, species are considered as individuals with parts.

Therefore, I am like the part of an integrated body known as the human – *Homo Sapiens Sapiens*. My son’s pet Siamese Fighting-Fish, “Bob,” is a part of the integrated body known as *Betta Splendens*. These two bodies are common, as are all other bodies (extinct or yet to come) to “one family tree, and therefore only one case of a complete and exhaustive ancestor-descendant relation – life itself.”¹⁶ In this case, there is an immutable species that exists in the classical sense and this is comprised by all living creatures. The essence of all living things is their being alive. Ghiselin and Hull cannot escape a version of essentialism due to the fact that the only

14 Jonas (2001), page 186.

15 Grene and Depew, page 300.

16 Ibid, page 301.

Property allowed, it seems, is the ancestor-descendant relation. But isn't that a property? Species, like (other) individuals, are supposed to be baptized, not characterized. They just have the names they have, regardless of their characters, because they have been given them. Yet each one is characterized by the property of having a set place in a family tree. That one property is not only permitted; for the individualists, it is in fact the essential property. So what we have is an essentialism much narrower and more dogmatic than anything to be found in Aristotle....¹⁷

The beauty of this conclusion with regard to the unity of organisms, that both Ghiselin and Hull have developed, is what Hans Jonas attempted to describe in *The Phenomenon of Life*, published in English in 1966, a full eight years before Ghiselin and ten years before Hull. Jonas would clearly not agree that there is only one species comprised of living creatures in spite of defending the ontological difference of living beings. He understood species in a way much closer to that of Hennig, as examples of historical lineage of relative stability where “this stability represents only the temporary equilibrium among the forces which generally determine the structure as successful.”¹⁸ What Jonas also understood is that for every individual as a member of a species, function does in fact precede form. What I, as an individual human being, inherit from my parents through their genetic histories is an historical collection of functions which precede the form of the individual: me. This is true in every instance of life except for the original progenitor(s) of life itself and also, perhaps, instances of individuals with characteristics that are truly innovative. As Jonas states,

even assuming the first beginning, the forming of organic macromolecules, to have been mere accident, not the fulfillment of a preceding tendency (to me, a most unlikely assumption) – from there on, certainly, tendency becomes ever more apparent: and I mean not only a tendency for progressive evolution (which can rest as long as it pleases) but above all the tendency to be, ceaselessly at work in each of its creations. ¹⁹

17 Ibid.

18 Jonas (2001), page 50, note 6.

19 Jonas (1984 -A), page 74.

Jonas's position is that at each instantiation of an individual life, the capacities inherited by the organism are there as a result of vitality and reproductive success of the progenitors. The vitality and reproductive success of the progeny is still in question until potential is realized but the function and purpose of maintaining the organism and the genes are in place. There is chance involved in each new instance of life but according to Jonas, nature itself is a constant, if inconsistent, projecting of life and renewing of itself through individual organisms struggling to survive. Darwin's "struggle for existence" is aptly named. What is important is that he was attempting to explain the ontological facets of life that differentiate living from non-living matter, an explanation that Ghiselin's and Hull's species concept demands.²⁰ Maybe more importantly, for Jonas and his differentiations of living creatures according to capacities and functions, Marjorie Grene has stated that

First, the non-eternity of natural kinds does not entail (as even Darwin sometimes thought it did) their non-existence. Nor, secondly, does the concept of kind as norm for its instances entail essentialism in the sense that all characters of a kind necessarily belong to it in an all-or-none, bean-bag way.²¹

Grene admits, in allegiance with Jonas's thinking that "[e]volutionary epistemology is a slippery slide, but this little bit of it: a defense of a minimal belief in natural kinds, I think we can and must allow."²² Natural essences need not exist interminably in order to be

20 Further examination of these reflections is needed with regard to the project of taxonomy and whether all versions of taxonomy are in some ways essentialist, as it seems. This examination goes extensively beyond the confines of this research on Hans Jonas. The key, if I am correct is that modern evolutionary biology, in certain of its reflections, may be searching for and finding essences in places Aristotle simply could not have imagined and is missing them in places that Aristotle found.

21 Grene (1978), page 133.

22 Ibid, page 129.

real as it would seem the completion of the human genome project would indicate – there are real genetic structures, mapped out neatly, that explain the humanity of human beings, in spite of the slow accumulation of changes whereby we may evolve into something other than human.

The theory of evolution by natural selection seemingly changes Aristotelian taxonomy which had been thought of as the process of naming real, permanent fixtures in nature, into an approximation for nominal efficiency. But as I have argued, beneath this denial of Aristotelian essential species there is the quest for, if not the discovery of, purpose and essence, a quest that Darwin was not altogether avoiding himself, at least in terms of his word choices. As Leon Kass has pointed out, Darwin's

“Origin of Species” is replete with teleological terms and passages, both explicit and implicit, not only about the functioning of individual animals but about the overall course of evolution. Terms such as “useful,” “important,” “purpose,” “adapted,” “fit,” “the good of each being,” “profitable,” “harmful,” “beneficial,” “injurious,” “advantageous,” “good,” “tendency,” “success,” “welfare,” “improvement,” “perfection,” “low” and “high” in the “scale of nature,” and “absolute perfection” occur frequently, almost on every page. Most of these terms are treated as self-evident and apt; Darwin apparently felt no need to define or discuss most of them nor to defend their use. One might say they flowed naturally into his account.²³

Kass then waxes poetically about why Darwin might have left in such obviously teleological terminology. He considers the possibility that Darwin may have intentionally tried to make his theory more palatable to a scientific community not ready to accept the full implications of his naturalism. Perhaps he kept the teleological language to win followers. Kass even considers it possible that it was simply inattention to detail and the implications of his own ideas. But last, Kass considers whether the

23 Kass (1978), page 108.

language that Darwin used was simply the emergence of description that was simply indescribable in other terms. Perhaps Darwin was only agnostic with regards to teleology insofar as he believed that “we may look forward with some confidence to a secure future of inappreciable length. And as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress toward perfection.”²⁴ From the Darwinian perspective, perfection could only mean so fit to survive as to be inextinguishable either as an individual or as a species.

In the passage above, not only has Darwin spoken of perfection, which would indicate a hierarchy of life and a goal for each living creature (if not its species), he has indicated that there is a “good” for each being (as an individual) in this goal, and he has distinguished corporeal from mental endowments, mental life and something other than simple corporeal endowments. These passages and many like them that Kass pointed out, call into question, even within the tenets of Darwinism, “whether a mechanistic biology can do justice to the phenomena of life.”²⁵ If everything in nature seems to be driven toward novelty and increased complexity, whether moving toward perfection or not, then the key consideration is the origin of life's momentum forward (if not upward as well).

Modern evolutionary theory, according to Jonas, does not do justice to the phenomenon of life at any level insofar as it does not and cannot, with its attempt at a mechanistic account of nature and living creatures within nature, account for the experience of what it means to be alive as a human being, or, by

24 Darwin, page 399.

25 Jonas (2001), page 52.

extrapolations, as any other form of life. This point is made clear in what Jonas calls

A new dualism.... It is not, as might appear at first glance, the dualism of organism and environment – this pair rather forms one interactive system – but the dualism *germ: soma*, in which the soma (the actual organism) is itself part of the “environment,” namely the immediate environment for the germ plasm and the mediator of the effects on the latter's existence of the wider environment. ...Thus the Platonic-Aristotelian immortality of the species is here replaced by the immortality of the germ plasm as a continuous existence in itself; and in a reversal of the classical formula, one would have to say that the developed is for the sake of the undeveloped, the tree for the sake of the seed.²⁶

If certain proponents of the rigid mechanistic account of nature are correct, then the existence of the individual somatic organism, be it bacterium or human, is for the sole purpose of being a conduit for life's continuation of the germ cells; the continuation and perpetuation of life itself generally without regard to the individual carrier of transmission. Tom Kirkwood calls one such theory, used to describe the reasons for aging, the “Disposable Soma Theory.” Therein, Kirkwood describes the vicissitudes of aging as driven by evolutionary diversity and success. Transmitting the genetic material to the next generation requires time and energy, so nature has allowed enough mechanisms in the body for enough self-repair to allow enough organisms to reach a ripe enough age to reproduce enough of their kind to survive and spread diversity, but not more than is generally needed to get to and through the age of successful reproduction.

As Kirkwood puts it,

Maintenance is good for the organism because it aids survival, but it is also bad because maintenance activities, like everything the body does, require energy to fuel them. In fact, the disposable soma theory exemplifies the idea of trade-off in the 'bioeconomics' of living systems. ²⁷

26 Ibid, pages 52-53.

27 Kirkwood (1999), page 68.

But this contradicts every experience we human beings have of our lives. I do not experience my life as a housing of the mechanism of the transmission of my own genetic material. I experience struggle in the face of adversity to continue life. I enjoy the fulfillment associated with meeting those challenges. I take heart that such fulfillment might be abundant at certain times and scarce at others. I am saddened at the discontent of at least some others like myself and even of other varieties of life and take pleasure in their fulfillment. Last, the “Disposable Soma Theory” takes no account of human striving, through knowledge of the biological sciences, especially medicine, to seek extended life, even at enormous expense in pain, suffering, and economic loss. In fact, if we take the “Disposable Soma Theory” seriously, then much of medicine would be considered wasteful insofar as it attempts to care for and restore to health anyone beyond the age of fecundity. As teleologically oriented as Darwin's language is and for whatever reason it is so, it makes no claims as to the disposability of individual organisms as carriers of genetic material as Kirkwood's Disposable Soma Theory does. More to the point, the “Disposable Soma Theory” can be accused of teleological language itself insofar as soma are being disposed of in the genetic material's striving for replication and “maintenance” of the organism through tradeoff. The difficulties of teleological language might be beyond even a theory which claims to be purely mechanistic.

Life, according to Jonas is more than this mechanical playing out of forces in the name of genetic preservation. The life of the individual is more than the force of evolutionary history pressing my life onward as a vehicle for my germ cells. Speaking in terms of evolution, there must be at least as much importance to the somatic organism as to the

germ cell it transmits and in fact, the phenomenon of life is exactly the lived experience of that former importance. The latter importance of the pressing force of evolutionary history is felt by humans as the sexual urge, as strong or as weak as it may be in the case of the individual. There is pleasure associated with sexual activity and only with a considerable understanding of biomechanics can we then surmise why or how it came about. We as human beings are certainly under the sway of these genetic influences but sexual response is also conditioned by the subjective feeling of its sway and the object of desire external to the sexual being. The germ cell is inseparable from, and therefore somewhat if not significantly dependent upon, the somatic organism and the organism's experience as a reproductive being. Most importantly for human beings, we can reach a happy and fulfilled life (although one might argue not nearly as happy or fulfilled) without reproducing. It is somewhat indicative of sexual expression and reproduction being natural, appropriate, or good for human beings, given the recent medical evidence that women are statistically less likely to contract breast cancer if they reproduce children, particularly at a young age.²⁸ Nonetheless, without the active intention of the willing participants in reproductive activity, the germ cell cannot be transmitted without reproductive action, be it intentional or unintentional reproducing.²⁹ The active subjective experience of being sexual as a human being affects the reproduction of human life in general by either carrying the intentions to reproduce forward or by

28 This is among the findings reported at the seventh European Breast Cancer Conference in 2010.

29 With regard to Jonas's arguments about the degrees of freedom present in human beings, it would seem that only human beings can decide through abstinence, birth control, family planning, and active sterilization, whether or not to reproduce which would indicate that through culture and other manifestations of human existence that allow us to consider quality of life, humans can actually intervene against the spread of the human genome.

impeding reproduction. It is this experience of myself as an individual with hopes, dreams, wishes, desires, thoughts, strivings, etc., that Hans Jonas explored and implored us to understand. I simply do not experience myself as a somatic organism or an integrated system much less a collection of molecules or particles, realizations the likes of which have led Daniel Dennett seemingly to give real standing to what he calls the “intentional stance,” in addition to the “design stance” and the “physical stance.”³⁰ The elements of being human which Jonas believed to be irreducible to mechanisms, and that he wished to extend, in various degrees, to all living creatures, he classifies under the phenomenon of life itself: “needful freedom”, the subjective experience of being alive in a state of intermittent need and a hungering for sustenance and free in various degrees as to how to sustain life through nutrients.

DNA to the Rescue of Aristotle and Jonas

In spite of the failure of Aristotle’s notion of species in the face of Darwinian evolution, Aristotelian biological thinking may in fact still have value for science, the philosophy of science, and ethics. If there is an essence to life as Jonas explains, an ontological difference which makes life something other than simply mechanisms in motion reacting to environment, then this principle of life should be able to yield definitions of the good life for humans and for all species in nature, giving us a bull’s-eye at which to aim, a bull’s-eye thought hopelessly irretrievable without permanence of species. According to Max Delbrück, Nobel Laureate in Physiology or Medicine for

³⁰ These ideas run through many of Daniel Dennett’s works but are explained nicely in his books *The Intentional Stance*, *Darwin’s Dangerous Idea*, and *Freedom Evolves*.

1969:

If that committee in Stockholm, which has the unenviable task each year of pointing out the most creative scientists, had the liberty of giving awards posthumously, I think they should consider Aristotle for the discovery of the principle implied in DNA.... It is my contention that Aristotle's principle of the "unmoved mover" originated with his biological studies, and that it was grafted, from here, first onto physics, then onto astronomy, and finally onto his cosmological theology.

I should like to suggest, furthermore, that the reason for the lack of appreciation, among scientists, of Aristotle's schemes lie in our having been blinded for 300 years by the Newtonian view of the world. So much so, that anybody who held that the mover had to be in contact with the moved and talked about an "unmoved mover" collided with Newton's dictum: Action equals reaction. Any statement in conflict with this axiom of Newtonian dynamics could only appear to be muddled nonsense, a leftover from a benighted, prescientific past. And yet, "unmoved mover" perfectly describes DNA: it acts, creates form and development, and is not changed in the process.³¹

The claim is made here that Aristotle should be awarded the Nobel Prize for discovering DNA, in principle if not specifics, more than two millennia ago. Watson and Crick's achievement notwithstanding, we cannot fault Aristotle for using different and Platonic terminology. When Aristotle wrote of the soul of a living creature, he meant the efficient, formal, and final causes taken together, or put differently, the moving principle, the idea taking shape(s), and the purpose(s) being actualized. Living creatures, as a member of a species, emerge from potentiality to actuality through the form of soul present. Delbrück, and the scientific community at large call this DNA, the architectural design or plan, previous to all environmental factors coming into play, which determines what a living creature will become over time and exposure to its environment. But the genetic structure that defines a living creature in terms of its capacities, what Aristotle called the soul, is something in a state of flux over time according to the theory of evolution. This variation over time is the process through which new varieties and

31 Delbrück (1971), page 55.

variations of life emerge. The fact that species (no matter what the criteria of division) change over time, however, and that the DNA of an individual can be altered or damaged does not change the fact that there is a function and form at work directing matter ever onward over the lifetime of the individual, even if this form is individuated and therefore only highly similar to certain other creatures. Even if there is no absolute homogeneity and permanence to species, each individual is formed by DNA and Aristotle noticed this and called it the soul. Each living being has a genetic code that determines to a high degree what it can or will become. Simply because it is something other than a permanent form or design over time, within a species, does not change the fact that it exists within the individual, as Watson and Crick demonstrated. So speaking of a form or soul may simply be different terminology than genetic structure or DNA. Simply because Aristotle was incorrect about the fact that the form or soul can and does change over time within species, does not mean that he was incorrect about the existence of this design, developed historically through evolution by natural selection, present in living creatures and how important that may be for what constitutes the good life for human beings. There may in fact be good reason why Hans Jonas initiated this return to the thought of Aristotle when so much of scientific thought proceeds otherwise.³² The concept that Hans Jonas used to explain the soul, the form of a living creature, its DNA, the phenomenon of life, regardless of species is “needful freedom”, the striving of all life for continuance in the face of metabolic need and the degrees of freedom as to how to achieve said sustenance.

³² The idiom of not throwing the baby out with the bath water comes to mind here.

The Phenomenon of Life is among other things, Hans Jonas's critique of Descartes' understanding of living creatures composed of *res extensa* insofar as the

Main fault, even absurdity, of the doctrine[s] lay in denying organic reality its principal, and most obvious characteristic, namely that it exhibits in each individual instance a striving of its own for existence and fulfillment, or the fact of life's willing itself. In other words, the banishment of the old concept of appetite from the conceptual scheme of the new physics, joined to the rationalistic spiritualism of the new theory of consciousness, deprived the realm of life of its status in the scheme of things. It is a measure of the compelling motives behind this conception, far fetched as it was, that it could hold its ground against the irrepressible voice of our psychophysical experience, every one of whose acts eloquently contradicts the dualistic division.³³

If one can take Descartes' reasoning seriously, the implication for all of *res extensa*, all of the material world and entities in it that take up space, including all living creatures other than human consciousness, is that there is only the illusion of purposeful action. Of course Descartes' "compelling motives" were to save the special place of the human being and human consciousness, through an argument which preserves our human "soul" in the face of a world seemingly otherwise rigidly deterministic. When Descartes' dualism of mind and body is challenged under the weight of arguments over psychophysical compatibility (among others), Jonas cannot help but admit that "materialism is the real ontology of our world since the Renaissance, the real heir to dualism, i.e., to its residual estate, and with it must be our discourse. Only with a 'realist' standpoint can there be a fruitful discourse anyway..."³⁴ His version of realism is an attempt to account for the experience of life's vicissitudes that cannot be explained or explained away by a reductive materialism, epiphenomenalism, or hard deterministic evolutionary biology. He does so by taking both materialism and Heidegger's

33 Jonas (2001), page 61.

34 Ibid, page 20.

fundamental ontology seriously. Jonas criticizes a mindset of these circles of ideas in general.

In the hue and cry over the indignity done to man's metaphysical status in the doctrine of his animal descent, it was overlooked that by the same token some dignity had been restored to the realm of life as a whole. If man was the relative of animals, then animals were the relatives of man and in degrees bearers of that inwardness of which man, the most advanced of their kin, is conscious in himself.³⁵

What is at issue in *The Phenomenon of life* is a phenomenological understanding of what it means to be alive as a human and, in the process, to recognize in various gradations, the same principle of internal motivation and striving at all levels of life. It is in the experience of human life as "needful freedom" that Jonas extrapolates "the germ of what is higher in the lower forms from which the higher evolves."³⁶ Jonas understood that as well as degrading humanity in terms of being of the same stock as all other living creatures, the theory of evolution could also be seen to re-elevate all living creatures and nature itself, back to the level of purposeful existence. He does this by performing an extrapolation of the human experience of striving, in order to show the same striving pervading in nature. He attempted to rescue human beings and all of nature from attempts made by philosophers and scientists to explain everything mechanistically. He firmly believed that a fully mechanistic account of life, which included an account of the internal lived experience of human consciousness or consciousness at any level, could not be accomplished much as Thomas Nagel did in his article "What is it Like to Be a Bat?" (Nagel, 1974).³⁷ Perhaps more important, Jonas firmly believed that the very attempt to

35 Ibid, page 57.

36 Jonas (2001), page xv – in the Foreward by Lawrence Vogel.

37 Nagel makes the case through the fascinating example of the physiological sonar of a bat, that there is

do so was a danger to humanity and life itself insofar as it is a degradation of humanity and nature itself. In like manner, Jonas faced a similar danger in trying to establish value in what he saw as the nihilistic tendencies of the existential phenomenology of his mentor, Martin Heidegger.³⁸

something that it is to be like a bat, that this something is not the same as the mechanical sonar that humans build since we use but do not feel mechanical sonar directly, and this something is real but not realizable except to bats. In the same way there is something that it is like to be a human, the subjective experience of being a human, it is real, and it is more or less the same for us all.

38 Interestingly, Jonas understood the theory of evolution as an important predecessor in the cultural milieu which led to Nietzsche's nihilism, his concept of the "will to power" as an escape from it, and the general nihilistic tendencies which Jonas attributed to existentialism.

CHAPTER 3 HANS JONAS'S PHILOSOPHICAL ANTHROPOLOGY

Jonas's Ontological Distinction: Metabolism

According to Hans Jonas, there is an ontological distinction between collections of matter that are alive and collections of matter that are not alive. Collections of matter that are not alive have neither an idea/form/soul efficiently, formally, and finally causing them to be something different from moment to moment, according to a plan or design, nor a motivation to act in a way as to bring this idea/form/soul to fruition. By arguing in this particular direction, Jonas is reverting to an Aristotelian way of interpreting life as the result of evolutionary history. In his *Physics*, Aristotle explains the four causes that must be understood if one is to understand anything in a complete way. There is the material cause, which is the compositional element(s) of that which is in question. There is the formal cause, which is the shape(s) taken with regard to the idea upheld by that which is in question. There is the efficient cause, which is the moving principle in that which is in question. Finally, there is the "final cause" which is the purpose of that which is in question; "that for the sake of which something exists," as Aristotle puts it.

According to Aristotle, what makes a living creature different is the soul which comprises the efficient, formal, and final causes of the living creature.³⁹ A principle can be brought to matter from without but it requires the intervention of the artist. The artist brings the

39 Aristotle, in referring to the efficient cause of a child, says that "the father is the cause of the child". This is certainly true insofar as, from Aristotle's perspective, it was the father's seed that transmits the form to the human child. More recently, of course, we know that both mother and father transmit the "form" or genetic material to the human child. The important thing to note is not Aristotle's sexism but that the genetic material continues to be an efficient cause morphologically allowing actualization of potential to take place over the development of the child into adulthood. In a sense then parents begin the process, the genetic material continues the process with the help of parental/environmental nurturing.

initial and progressing changes, the shape(s), and the purpose to a pile of clay, as said artist sculpts a bust. A pile of clay cannot sculpt itself much less have much of anything to do with the artist's project. The principle of becoming exists outside the clay. A living creature, however, is driven toward its own survival. Aristotle was incorrect about the nature of species being fixed as is made clear by the theory of evolution. Species do change over time (which as we have seen, calls into question the very notion of species as concepts in any sense other than a nominal or practical sense). New species or varieties come into existence when novelty arises due to enough stresses from the environment, mutations from that environment, novelty of sexual pairing (if in fact the species in question does so), or some combination of the three. This does not change the fact that Aristotle was correct about certain things, namely that living things have a design that determines to a significant extent what each individual will become. As Aristotle stated,

Since, 'nature', has two senses, the form and the matter, we must investigate its objects as we would the essence of snubness. That is, such things are neither independent of matter nor can they be defined in terms of matter only. ...But if... art imitates nature, and it is part of the same discipline to know the form and the matter up to a point (e.g. the doctor has a knowledge of health and also of bile and phlegm, in which health is realized, and the builder both of the form of the house and of the matter, namely that it is bricks and beams and so forth): if this is so, it would be part of physics also to know nature in both senses.⁴⁰

In spite of the flaws of Aristotelian biology, there are things about Aristotle's way of thinking, which according to Jonas are indispensable in terms of their meaning and which allow Jonas the linchpin in the argument about life's distinction. Jonas reverts to a more Aristotelian biology because there is something common to all living creatures other than the fact that living things are composed of matter, and this matter obeys certain laws.

40 Hardie and Gaye (2001), page 239.

Even if species change over time, there is something that guides, to a significant extent, the course of any life. It is the modern concept of DNA and most recently the completion of the mapping of the human genome that explains this about human beings. In fact, if there is a definable human genome, then there has to be “something that it is like to be a human being” as would be the case for all species of living creatures, even if it is only relatively stable. The blueprint which exists in any and every living creature is that which projects its course of becoming what it will, in a particular way. Certainly a human child needs years of substantial nurturing to grow and develop but the principle guiding this growth and development, is an internal design and the working out of a plan: genetics.

What Jonas asked the philosophical and scientific communities to consider is a monism that can recognize the distinction between living things comprised of matter as opposed to “dead” matter. While life proceeds, life is not fully reducible to or fully explainable by its material substrate and “to reduce life to the lifeless is nothing else than to resolve the particular into the general, the complex into the simple, and the apparent exception into the accepted rule.”⁴¹ What makes collections of living matter different from collections of dead matter or individual atoms is “identity in difference” through the exchange of matter within the living form. According to Jonas,

The material particle, identifiable in its space-time position, is simply what it is, immediately identical with itself without need to maintain that self-identity as an act of its existence. The identity of its Now is simply the empty logical one of $A = A$; its duration is mere remaining it is successively “identical” by no other principle than that of the continuity of the dimensions – space and time – in which “its” states take place. It is this one and not that one, because this is now here and that now there; it “remains” this, that is to say, is “the same” at a different (later) point of space-time, because from its present to

41 Jonas (2001), page 11.

its new position there leads the continuous sequence of all intermediate positions which as it were hand it on from one to the next, without ever letting it outside their bond. ...In purely physical description, no more than continuous presence in the continuum is assumed (but no less can be assumed) for the "sameness" of an entity; and thus, on physical terms alone, there is only this external identity conferred in discrete units (particles or fields) by the *principia individuationis* (space and time), or, equivalently, by the totality of the physical universe defining their place: in either case a matter of external reference.⁴²

In addition,

Concerning the single particle, then, the traceable steady presence in the continuum is the sole operational meaning of "identity," and the traced "path" is its complete verification: no obvious claim to an internal principle of identity, such as retentive historicity or protentive urge for "self"-perpetuation, issues from its manner of inert permanence. And lacking any suggestion of a *threat* to its existing, the imputation of conative inwardness to its enduring seems gratuitous.⁴³

The existence of a solitary particle is a purely externalized existence. Its identity is its pervasion over time in a path traveled through space. According to Jonas, there is no reason to indicate that these particles have any inwardness and "no warrant even for applying the concept of identity at all; and there would be none unless we endow the elemental with an inwardness which by a kind of memory would bridge the discontinuity of actual event."⁴⁴ Alfred North Whitehead, a renowned scientist and philosopher of science dealing with many of the same issues as Jonas, posited the existence of inward experience and teleological existence to particles whereby particles are considered as organisms. He did this likely as a response to the Heisenberg Uncertainty Principle, the discovery in particle physics that ontologically, for any given particle, the position and velocity of said particle cannot be simultaneously know as measurement of one or the

42 Jonas (2001), pages 81-82.

43 Ibid, page 82, note 14.

44 Ibid, page 81.

other affects significantly the measurement of the other. This must have indicated to Whitehead the intentionality or willfulness of the particle. According to Jonas, this transferring of the category of identity to particles is a mere extrapolation based on the capacity to trace the path of the same particle in space over a period of time. Such a transfer of creativity, down to the particle level, cannot account for the phenomena of death (the end of life) and evil (that which is counter to our conception of the good life). If all matter is conscious coming to pass of purposeful action, then life is no different than death. Particles may exist for a time in living creatures and at other times they may not. Yet at any given time, no matter what collection of particles comprise my physical being, I have concerns about any number of things, including death and evil. In human experience, death matters extraordinarily. We plan our lives around avoiding the inevitable as long as possible and when that is not the case we plan according to making the time we have count in terms of the creation of a life we can call good. Often, though, there is the combination of both: we consider the quantity and quality of life. According to Jonas, what Whitehead's process philosophy cannot account for is what Heidegger called our "being towards death," the anxiety one feels as a matter of realizing the possibility of no longer being in the world and no longer having the time for authentic creativity of one's life. It also cannot account for our experience of evil whether connected to death or not. Particles do not care or do not seem to care, yet as a person I do, so there are either parts me as an organism which are at odds with me as a whole, or my existence as an integrated whole makes me something substantially more than the sum of my individual parts. Whitehead seems to have chosen the former, Jonas the latter

stance. Whitehead avoids Jonas's duality in matter but Jonas adequately explains many more phenomena. Life teems with existence based in striving and especially at the higher levels of complexity, the anxiety associated with failed striving, striving put on hold, striving interfered with, etc. According to Jonas, in Whitehead's universe, "the deep anxiety of biological existence has no place in the magnificent scheme. Whitehead, in this respect like Hegel, has written in his metaphysics a story of intrinsically secured success: all becoming is self-realization, each event is itself complete (or it would not be actual), each perishing is a seal on the fact of completion achieved. 'Death, where is thy sting?'"⁴⁵ In Jonas's understanding, the existence of a particle as an identity is its continuation in motion through space over time. The particle is not striving to become something other than what it is, it resides and moves unchanged, and is made nothing beside itself in its travels, except, perhaps, if one takes into account fission or fusion reactions. A similar case can be made about all material objects but as large cohesive collections of particles.

A material object is a

Distributive identity, then, which accordingly is all that accrues to complex bodies, to aggregates, is represented by the "bundle" of individual "paths," running as it were in juxtaposition and presenting the same pattern, or continuous variations of it, in succeeding cross-sections of time – which they do as long as they run, more or less, "parallel." The identity of a material object is thus the collection of the identities of all its simultaneous member units while they travel together through space-time.⁴⁶

An object pervades over time insofar as it is the collection of particles traveling together in a cohesive unit. The fact that they are a cohesive unit and hold together does not imply

45 Ibid, page 96.

46 Jonas (1974), page 189.

anything about their striving. A rock does not strive. It is a collection of particles that pervades over time cohesively bound together. The rock is not so cohesively bound that it cannot be divided. When divided, it is simply two rocks of different shapes and smaller sizes but they are still rocks. The motions of the particles involved have been divided; their paths diverge. The important thing is that the rock doesn't need to do anything to continue being a rock and it will continue being a rock (or a collection of rocks, if divided). As Jonas said, "in the realm of the lifeless, form is no more than a changing composite state, an accident, of enduring matter."⁴⁷ A living creature, likewise divided, is not likely to be so fortunate, which is an indication of the living creature as an integrated whole.

In a rare and beautiful thought experiment, Jonas explains the difference between inert matter (such as that which composes a rock) and a living organism in terms of the view of a divine mathematician and whether such a removed analytical entity could understand much less create the world that we know and in which we live. Considering the organism, regardless of what organism, Jonas states that

As a physical body the organism will exhibit the same general features as do other aggregates; a void mostly, crisscrossed by the geometry of forces that emanate from the insular foci of local elementary being. But special goings-on will be discernible, both inside and outside of its so-called boundary, which will render its phenomenal unity still more problematical than that of ordinary bodies, and will efface almost entirely its material entity through time. I refer to its *metabolism*, its exchange of matter with the surroundings. In this remarkable mode of being, the material parts of which the organism consists at a given instant are to the penetrating observer only temporary, passing contents whose joint material identity does not coincide with the identity of the whole which they enter and leave, and which sustains its own identity by the very act of foreign matter passing through its spatial system, the living *form*. It is never the same materially and yet persists as its same self, *by* not remaining the same matter. Once it really becomes the same with the sameness of its material contents – if any two "time slices" of it become, as to their individual contents, identical with each other and with the slices

47 Jonas (2001), page 80.

between them – it ceases to live; it dies (or becomes dormant as do certain seeds and spores whose life stops, to be resumed under appropriate conditions).⁴⁸

Juxtaposed with this concept of a material object, like a rock, in which form is nothing more than the collection of its matter at any given time over the course of time, is the living organism, in which the composition of matter is never exactly the same at two different times while an identity remains. The form of the organism over time is an “identity in difference” through the process of metabolism. Any living creature, in the process of living, requires sustenance or fuel to continue its very existence as such. The perseverance of its form, as determined by its genetic structure, demands the intake of new matter to be synthesized by the body’s processes. This is just as true for a single-celled organism such as a bacterium as it is for a huge conglomerate of various types of cells comprising organ systems, which work together, like a human being. Although different varieties of organisms take sustenance in various ways, what is unquestionably certain is that sustenance must be taken and there is striving for said sustenance, otherwise organisms die. The form of any living creature is inseparably bound to the material substrate from which it is comprised. This form, if it is to be successful and continue, must continuously overturn itself in terms of the actual particles of which it is comprised through metabolism; “it stands in a dialectical relationship of 'needful freedom' to matter.”⁴⁹ An element of the form, the soul, or the genetic structure of any and all living creatures is the capacity for and the necessity of metabolism. The word metabolism is derived from the Greek word “Μεταβολισμός” – “Metabolismos,” which

48 Ibid, pages 75-76.

49 Ibid, page 80.

means to change or overthrow. This translation of the Greek word is instructive insofar as the organism is overthrowing itself in the process of becoming itself yet again insofar as it is renewed. In order for an organism to continue the process of living it must constantly overturn itself, or part of itself, in order to continue being itself. It does this through a successful economy of the body entailing: (1) the consumption of sustenance, (2) the exchange of this sustenance in the body through digestion, (3) the distribution of sustaining nutrients throughout the body and (4) the production of energy through cellular absorption and waste products remaindered.⁵⁰ The organism must become something other than itself by consuming something outside itself and integrating that which is consumed into itself through digesting that which is other to it. This dialectical process, Jonas calls “needful freedom” insofar as the organism needs the sustenance that it takes from its environment in order to continue living but it is free in its various capacities (capacities based on what type of creature it is) as to what will satisfy it and how exactly this satisfaction will be met out. Jonas’s argument is that

Freedom, which in the traditional dualistic conception of either Descartes or Kant belongs to the *res cogitans* or to the *noumenal* world of the pure reason respectively, actually has its very basis in organic life. The facts of life itself, thus, constitute an ontological refutation of dualism as a misleading abstraction from organic reality. The epistemological direction of Jonas’s theory of metabolism goes from freedom to metabolism, i.e., we understand metabolism in a more comprehensive and deeper way than science or the divine mathematician, simply on the basis of our own human experience of freedom.⁵¹

50 Any similarity between this description and Karl Marx’s description of political economy in *Grundrisse* is purely intentional on my part. Jonas refers to a life as a balance sheet in *The Phenomenon of Life* on page 107. He unfortunately does not fully exploit this analogy. A living being, its process as an integrated set of systems, and its self-motivated preservation can be understood metaphorically as a balance sheet and this demands an economy of the body and the cost benefit analysis of actions taken over a lifetime as preservative or destructive.

51 Wolters (2001), pages 92-93.

Living beings need sustenance and in various degrees through various capacities are free to take sustenance and continue living. The understanding of “needful freedom” is clear and distinct experience of life lived based on the internal composition of the human body, the suffering we undergo when we hunger, and the satisfaction we receive when we have eaten. In the varieties of living creatures, this experience of “needful freedom” is a greater and greater extrapolation of human experience, the further one moves away from creatures that are genetically similar to human beings. The basic foundation of life, what makes organisms different from the matter exterior to them is metabolism, the internal drive of the organism to meet its own needs and preserve its integrity. Jonas explains the difference using the comparison of metabolism in an organic body to the fueling of a car. The car can run out of fuel and at any time in the future it can be refueled and it will run again. The organism is especially “needful” in the sense of being completely tied to a temporal existence where it will at some fixed time no longer be capable of being reinvigorated by sustenance and will be dead. Also, and even more importantly, the car requires gasoline as fuel as we require food but the gasoline does not become integrated into the car as part of it. The food we eat literally becomes part of us, so, “metabolism is more than a method of power generation.”⁵² It is the process by which a living creature continues living.

In another analogy, Jonas compares the body of an antique ship to a living organism. The ship may require significant replacement of its parts over a long period of service. The body of the organism requires constant overturning of its parts through

⁵² Jonas (2001), note 13, page 76.

metabolism, absorption of nutrients, cell repair, cell division, and cell death. The ship may have to be repaired significantly, never being comprised of exactly the same collection of wooden parts. In like manner, from one time to another, the living creature is never exactly what it was previously, in terms of its constituent matter. As an antique, all that may remain of a battle-tested ship is the original shape but none of the original wood. Over a significant period of time, the living organism may completely overturn the collection of particles that constitute its body. According to Jonas, there are four differences between the ship and the organism. First, the ship is changed through the willful actions of human beings who are interested in its preservation. The organism is responsible for its own process of replacement of parts. This process issues from its internal self-management through DNA and, given the capacities of the organism in question, its capacity to act on these demands for sustenance. The organism is its own efficient cause of motion toward reparation of itself. Secondly, the ship only needs repairing if it is in fact damaged in some way. The organism is in constant need of sustenance, an exchange of some of its parts, necessarily. The organism is responsible for the overturning of its own material cause. Thirdly, the ship is only the same ship, through the change of its parts, due to the “continuity of memory and tradition in those who accord it, the identity [of the ship] is the function of another identity, namely, that established in memory, individual and social.”⁵³ The form of the organism is maintained, insofar as it is successful in its striving for sustenance, by the actions of its DNA, its integrated cells and organ systems, through the constant overturning of its material parts.

53 Jonas (1974), page 193.

The organism maintains its own formal cause over the course of its life. Lastly, the repair of the ship is indicative of the same purpose germane to those who find it valuable to preserve it, in a way similar to those who found purpose in building it. The organism is the source of its own striving and purposeful existence, not necessarily just for the preservation of its kind, as is thought by some, but according to Jonas, out of a striving for itself as worthwhile and good. So while the organism is the source of its own final cause, “we cannot credit the ship itself with any such teleology: in Aristotelian terms, it is not an ‘entelechy.’”⁵⁴

From the analogy of the engine in *The Phenomenon of Life*, and the analogy of the ship in “Biological Foundations of Individuality,” Jonas draws a rigid boundary around living organisms, showing that living beings are ontologically different from other collections of matter which are not self-driven. Living things have a wholeness which

Is actively self-integrating: form is not the result but the cause of the material collections in which it successively exists. Here, unity is self-unifying by means of ever-changing multiplicity. Sameness is continuous self-renewal through process, borne on the stream of continual otherness. It is this active self-integration of life that first provides the ontological, as opposed to the merely phenomenological, concept of the individual or subject. ⁵⁵

Metabolism is the ontological foundation of life as purposeful and intentional, according to Jonas. In *The Phenomenon of Life*, Jonas draws the conclusion that God could not be a divine mathematician. Not being a physical being, the divine mathematician of Jonas’s thought experiment could only see the fueling side of metabolism but never the need of such sustenance, the feeling of pleasure and invigoration of consuming sustenance, much

⁵⁴ Ibid, page 194.

⁵⁵ Jonas (1996), pages 65-66.

less the pain of starving to death. It is this existential awareness of our own tenuous position as living creatures in need of sustenance that leads Jonas to call human beings and all living creatures “needful.” We cannot change the fact that we must eat in order for life to continue. We, as humans, have enormous degrees of freedom with regard to how this most basic of needs is met, due to our other wondrous capacities. In this way, Jonas is employing the Aristotelian notion of the “nutritive soul” which is, according to Aristotle:

The most primitive and widely distributed power of soul, being indeed that one in virtue of which all are said to have life. The acts in which it manifests itself are reproduction and the use of food – reproduction, I say, because for any living thing that has reached its normal development and which is unutilated, and whose mode of generation is not spontaneous, the most natural act is the production of another like itself, an animal producing an animal, a plant a plant, in order that as far as its nature allows, it may partake in the eternal and divine.⁵⁶

Whether we call this nutritive power an element of the soul or a part of genetic structure, Aristotle and Jonas were correct. Metabolism of some type is common to all living beings. It is the ontological distinction whereby living creatures at all levels are something other than the matter of which they are made; matter which strives against its own demise. Living creatures in general and human beings in particular

Are individuals whose being is their own doing (and thus, in a sense, their task); entities, in other words, that are delivered up to their being for their being, so that their being is committed to them, and they are committed to keeping up this being by ever renewed act of it. Entities, therefore, which in their being are exposed to the alternative of not-being as potentially imminent, and achieve being in answer to this constant imminence; entities, therefore, that are temporal in their innermost nature, that have being only by everbecoming, with each new moment posing a new issue in their history; whose *identity* over time is thus, not the inert one of a permanent substratum, but the self-created one of continuous performance; entities, finally, whose *difference* from the *other*, from the rest of things, is not adventitious and indifferent to them, but a dynamic attribute of their being, in that the tension of this difference is the very medium of each one's maintaining

56 Smith, J. A. (2001), page 561.

itself in its selfhood by standing off the other and communing with it at the same time.⁵⁷

The essence of a human being as a living creature and distinct from inert matter is that of a constant self-driven, self-creative process whereby individuation occurs not because of simple separation of collections of cohesive particles but due to the process of continually reaffirming one's existence by actively taking part in the preservation of that existence. The basic drive of a living creature is to stay alive. In order to stay alive, the living creature must exert itself according to its capacities to achieve sustenance. The crux of the matter, in terms of achieving sustenance is driven by time, the time and effort required to achieve that sustenance. If too much time elapses between instances of attaining sustenance, then life expires.

Jonas diverges from Aristotle at an important moment. Aristotle was making the case that all living creatures live and reproduce in an attempt to participate in the eternal rationality of the universe. Jonas is not willing to go that far with the nature of the universe or at least not in Aristotle's direction. If the "Big Bang Theory" is correct then reason in the universe is likely an illusion, an accident, or a God acting in a way significantly different than Aristotle's God.⁵⁸ Aristotle's concept of teleology is ultimately involved in a cosmic teleology where everything in nature that moves has some capacity to participate in the eternal reasoning of the universe.⁵⁹ But as Leon Kass has remarked of Aristotle, in agreement with Max Delbrück (see above),

⁵⁷ Jonas (1974), page 187.

⁵⁸ Jonas does develop a cosmogony and a cosmology in the last chapter of *The Phenomenon of Life* which he expands upon in *Mortality and Morality: A Search for the Good after Auschwitz* that could accommodate "Big Bang Theory" and a concept of God, if one is willing to make the metaphysical journeys that he admits to and that he takes.

⁵⁹ This is true of many interpretations of Aristotle including that of St. Thomas Aquinas.

These notions of external teleology, and of design and conscious purposive planning, are all secondary notions. The primary home of teleological thought is the *internal* and *immanent* purposiveness of individual organisms, in their generation, their structure, their activities. It was almost certainly his viewing the activities of living things in and for themselves that called forth Aristotle's view of nature as directed toward ends, and which led him to consider the "that for the sake of which" as an indispensable part of an understanding of natural phenomena.⁶⁰

According to Kass and Delbrück, Aristotle likely extrapolated about nature and the universe in general, based on his observations of living creatures growing and developing according to a plan or program, and doing so coextensively with other creatures.

Aristotle likely used this variety of teleological analysis, the "internal" or "immanent" teleology of organisms as a model for his cosmic teleology.⁶¹ Colin Pittendrigh first recognized the usefulness of a separate term for programmed development: the "teleonomic" processes of living creatures or "teleonomy" (Pittendrigh, 1958). But as Ernst Mayr has pointed out,

Pittendrigh has introduced the concept "teleonomic," as a descriptive term for all end-directed systems, "not committed to Aristotelian teleology." This negative definition not only places the entire burden on the word "system," but it makes no clear distinction between the two teleologies of Aristotle. It would seem useful to rigidly restrict the term teleonomic to systems operating on the basis of a program of coded information.

...Such a clear-cut separation of teleonomy, which has an analyzable physiochemical basis, from teleology, which deals more broadly with the overall harmony of the organic world, is most useful because these two entirely different phenomena have so often been confused with each other.

The development or behavior of an individual is purposeful, natural selection is definitely not.⁶²

Various biologists and philosophers of science have recognized this biological conception of teleology operating in the works of Aristotle and its worth for modern

60 Kass (1978), page 99.

61 For a review of the work on Aristotle and this interpretation of Aristotle as asserting cosmic teleology as an extrapolation of teleology in living creatures, see the works of Allan Gotthelf (Gotthelf, 1976), Martha Nussbaum (Nussbaum, 1978), and Richard Sorabji (Sorabji, 1980).

62 Mayr (1965), page 42.

biology and the theory of evolution, by establishing the term “teleonomy” to differentiate the development of a living creature according to a plan or program, although its use is still contested.⁶³ Even though Jonas leaves open the question of the participation of organisms in cosmic rational teleology, Jonas employs the Aristotelian concept of “internal teleology” or “immanent teleology,” to describe what it means to be alive. As David Levy has remarked, “Jonas redeems the essential truth embodied in the Aristotelian view. What is restored is not a universe of unchanging essences and static forms, each qualitatively different from the other, but a view of relative constancies and intrinsically necessary conditions of survival that is consonant with the modern scientific conception of nature.”⁶⁴ Jonas did not use this alternate terminology “teleonomy” in *The Phenomenon of Life* or afterward.⁶⁵ Given that he explained living creatures as teleological beings, I shall continue to refer to the teleonomic processes of life as teleological or expressions of internal or immanent teleology.

As humans we experience our own teleological behavior directly and then we extrapolate through observation about living things in general. Jonas is making the case that purposive action emanating from purposive beings in nature emerges with life out of the complexity of arrangements of matter; with life evolves purpose and purposeful activity but in a special sense. Rather than perfect reasoning drawing us forward to itself

63 For arguments over the validity and use of the term “teleonomy” see the work of Colin Pittendrigh (Pittendrigh, 1958), Grace A. deLaguna (deLaguna, 1962), Ernst Mayr (Mayr, 1965 and 1974), and Ernst Nagel (Nagel 1977).

64 Levy (2002), pages 57-58.

65 In *The Phenomenon of Life* Jonas likely made no use of the term “teleonomy” because authoritative use of the term was being discussed late in the process of and after the publication of his work – although there is no evidence one way or the other that he knew of the usage of the term “teleonomy”. With regards to Jonas’s work after the publication of *The Phenomenon of Life*, it is not clear why he never embraced the term, if in fact he knew of it.

in terms of our capacities being actualized, living beings operate according to an internally teleological program emanating from DNA. The question has been asked by Strachan Donnelly (Donnelly 2001, 2002) about whether or not Jonas evades cosmic teleology. Some passages in *The Phenomenon of Life* (especially its last chapter) can be understood as indicating at least the possibility of organisms doing Godly work. The more important question is whether he wanted to do so. I will respond to this matter in the Sixth chapter at length but as his philosophical biology allows for but does not demand a cosmogony – one Jonas provides briefly in *The Phenomenon of Life* and more extensively in *Mortality and Morality: A Search for the Good after Auschwitz* – we may leave this question for now. Irreducible to the simple interaction of their constituent particles, Jonas explains all living things as projections of an internal design, an idea informing matter as to how the life in question may progress in terms of growth and development; a projection with a well-defined trajectory in the puzzle of the ever-unfolding history of evolution. Biologists call the sciences involved genetics and morphology; genetics being the study of organic heredity and its methods of transmission, morphology being the study of the growth and shape that living creatures achieve over the course of a lifetime. If Jonas is correct, the ontological distinction of “needful freedom” has its foundation and most common element in metabolism. By extension, organisms are purposeful and intentional beings whose nature it is to continue existing through the process of consumption whereby the self is continually reconstituted. But as stated above, there is a duality of drives at work, one that Jonas was attempting to defend against reductionism, the duality of germ cells and somatic organism.

Living creatures, according to Jonas are intentional beings and therefore strive to stay alive as individuals in addition to being carriers of the genetic possibilities for the next generation. Jonas's attempt at reviving a teleological conception of organisms was to defend the value of life against those who denigrate life through a completely mechanistic account. The value of the individual organism, as it strives toward its own continuation is to balance out the notion of the individual organism as nothing more than part of the environment for genetic material: part of the blind mechanistic march of evolutionary history. Metabolism at every level of life, for Jonas, is the evidence of this striving in the individual organism. But certainly, this basic drive is not the only basic drive we experience as human beings or that we can recognize in other living creatures. Leon Kass has remarked of the incompleteness of Jonas's philosophical biology with regard to reproduction. Kass relates that

I had occasion to present this difficulty to Hans, in person. After pondering the matter in silence for a brief time, he commented that this was the most serious and powerful objection anyone had yet raised against his account. He explained the omission in two ways. First, reproduction and sociality are not indispensable functions of life for an individual animal qua living thing; a sterile or celibate being, and even the last member of his species living on a deserted island, is nonetheless very much alive. ...But Jonas's second reason was more important. I paraphrase: When I was writing this book I was still too much in the grip of the teachings of Heidegger and his view of life as (mainly) a lonely project over-against-death. Were he to re-write the book, he said, he would make the necessary qualifications and corrections.⁶⁶

The problem it presents for Jonas's philosophical biology is that it leaves the duality so important to defending organism against reduction unexplored in any complete way as a phenomenon of lived experience.⁶⁷ Jonas recognized the importance of this duality of

66 Kass (1995), page 9.

67 It should be noted here that Jonas does make reference to reproduction as a "genuine dimension of its own that has its own foundation as irreducible as that of self-interest" in *Philosophical Essays: From*

germ and soma but left elements of the Aristotelian soul unexplored, under the sway of Heidegger or not.

If, as seems to be the case, Jonas was following an Aristotelian conception of life, as purposefully driven, then another expression of purpose at work, as driven from within, is that of reproduction. As Aristotle relates, “nutrition and reproduction are due to one and the same psychic power.”⁶⁸ So within the Aristotelian conception of life, the nutritive capacity drives all organisms in terms of nutrition, growth, and reproduction. The first two are undertaken for the purpose of maintaining the life of the individual in question, the last for the preservation of like members of its kind. Even without an essentialist account of species, this is true. All living creatures reproduce creatures like themselves. Some organisms reproduce asexually and some reproduce sexually. The point is that all life forms have this second basic element that Aristotle incorporated into the nutritive soul, an element that ought to have been accounted for under Jonas’s concept of “needful freedom.” This omission was to the detriment of his argument in *The Phenomenon of Life* and to the detriment of his philosophical anthropology as a foundation for his ethics as stated in *The Imperative of Responsibility*. Jonas himself admitted to this missing link in his philosophical biology to Leon Kass.⁶⁹ The truth of the

Ancient Creed to technological Man. This is, however, an application of the thought to the study of economics and what the study of economics does and should entail, in much the same way that he uses the thought about reproduction and family life as the foundation of his ethics of responsibility in *The Imperative of Responsibility*.

68 Smith (2001), pages 562-563.

69 Leon Kass explains in his article “Appreciating the Phenomenon of Life”, how a student of his, Jeff Weiss, brought up this criticism of Jonas’s book *The Imperative of Responsibility* in a class. Kass then relates a conversation that he pursued with Jonas some months later on the topic. Kass explains that after some time for consideration, Jonas stated this was the greatest criticism leveled against his book to date. After further consideration, Jonas defended his position that a living creature does not need to reproduce once it is alive in order to be considered alive. But then, admitting the problem, he explained

matter is that one does not need to reproduce in order to be considered alive or healthy (although it has been shown that women have less proclivity for breast cancer if they reproduce and that men who are sexually active are less likely to have prostate cancer). But given the fact that reproduction is a capacity within all living creatures, barring injury or malformation, reproduction is a factor that needs explanation, one that Jonas did not provide us due to oversight and later a seeming unwillingness to re-write *The Phenomenon of Life*.

The ontological foundation upon which Jonas builds his philosophical anthropology of “needful freedom” is metabolism. Metabolism involves different actions for different types of living creatures but generally it means that life is about consumption and integration of that which is consumed into the body. Living creatures are self-integrating projections of themselves into a future that is always uncertain and thus perilous because the degrees of freedom the life form possesses (and they vary widely) are always directed by need, the need to consume. Jonas distinguishes, as Aristotle did, between the existence of plants, animals, and human beings, plants having only the capacity to take nutrients and reproduce, animals and humans having much more. In terms of an understanding of humanity, the intentional stance of the human being has a biological foundation in hunger. If, as Heidegger explained, the essence of being human (*Dasein*) is temporality, then Jonas has answered Heidegger’s fundamental ontology with an explanation of human lived experience as experience mediated through a body with distinct capacities. Certainly our awareness of ourselves is of immensely greater depth

his own view at the time of writing the several essays that comprise the book, as overwhelmingly influenced by Heidegger – the consideration of the individual confronted with the reality of mortality.

than just hunger but Jonas's ontology of life takes into account the human capacities insofar as some of those capacities are shared by all living beings. Jonas's fundamental ontology is therefore more complete and robust in terms of explaining life in general as well as human life.

Jonas's employment of the Aristotelian categorization of the soul of the human being, in all of its capacities, yields fundamental insights into nature and all living creatures, including ourselves. The first of these insights is that all life is driven purposefully from within by a plan, the genetic blueprint. Second, as a living creature, any particular living creature must secure sustenance in order to continue living. Last, with regard to metabolism as the foundation of life, given that this nutritive capacity is uniform to all life, a vision of the good life for all living creatures is projected from the living creature itself, through its genetics and what the genes demand for their preservation both in the individual and as part of a line of descent. Jonas's ontology of life is his philosophical anthropology; only with an understanding of what it means to be alive can we understand ourselves as a specific type of living creature, and curiously as a type of being (perhaps the only type of being) capable of reflecting on life, we in fact interpret all of life in a particular way, with regard to similarity to ourselves as human beings.

Mediation and the Great Divide

Metabolism is that capacity which all living things possess. This necessary process of constant self-replenishment and replacement, such that life is a constant

process of transcendence (identity in difference) makes human beings like all other living creatures according to Jonas, despite our other immense differences from other types of creatures. Agreeing with Aristotle, Jonas finds that the nutritive capacity is all that there is to the life of a plant. Clearly, that is only half an understanding of the nutritive soul, the rest being reproduction. Again, this is a particularly troubling omission on Jonas's part given the nature of his ethical theory but one that I will address in Chapter 6 below. Nonetheless in terms of the metabolic capacity, the plant metabolizes through photosynthesis and the absorption of nutrients through its root system. In photosynthesis, plants use sunlight to change carbon dioxide from the atmosphere into sugars. The various components of the plant are composed of these sugars. The soil in which plants grow, supplies them with water and important nutrients. As a certain type of living creature, plants have no use or need for other capacities. The great luxury for plant-life is being wedded to the environment. Through the root system, plants are

Exploiting the inherent advantages of a photosynthesizing organism. Possessing them, the plant is relieved of the necessity (as it is also deprived of the possibility) of movement through their continuous contact with the source of supply, the organism-environment relation functions automatically and no further apparatus for adaptation to short-term change is necessary. Here we have immediacy guaranteed by constant contiguity between the organs of intake and the external supply.⁷⁰

Movement on the part of plants is limited to growth and the reaching involved, over time, to get to the sunlight. No other is needed as even reproduction is carried on and through a supportive environment where other living creatures aid in pollination, indicating that animals and plants evolved together side by side as evolutionary variations. Plant-life is completely wedded to its environment and it is debatable whether Jonas is correct in

70 Jonas (2001), page 103.

calling plants living individuals given that when they are truly individuated or made separate from their environment, namely a supportive soil with moisture, they are extremely likely to die unless re-wedded to the soil. Plants have no gap to bridge between themselves and their environment, as their

Condition is an environment contiguous with the organism: in this stage environment is nothing but the immediate surroundings with which the chemical interchanges of metabolism take place. This situation of material contiguity means also continuity in the process of exchange and thus immediacy of satisfaction concurrent with the permanent organic need. In this condition of continuous feeding there is no room for desire. Need passes of itself over into satisfaction by the steady operation of the metabolic dynamics.⁷¹

Plants are organisms tied to a particular place over time, inextricably, by the demands of metabolism, demands satisfied in and through the environment with little or no control of the environment. Despite the immediacy of plants to the environment, plants are biological individuals because a striving can be interpreted, if not directly seen, in plant growth.⁷² In addition, the newer biological investigations of “plant perception” may provide physiological information that requires a changed conception about plants and their capacities from the traditional Aristotelian conception. In Jonas’s terminology while plant-life is certainly “needful” and its life is a process of constant transcending of the individual organism, it is difficult, and perhaps a significant (if not excessive) extrapolation, to see how it is free, being so wedded to its environment. Jonas’s

71 Ibid, page 102.

72 I have recollections both distant and recent of my own amazement at trees along Interstate 295 between Baltimore and the District of Columbia and the growth patterns that they achieved through multiple years of pruning by the local electric company which tries to keep the power lines clear of interference. The trees actually grew around the power lines in the shape of the letter “C”. This, of course, took the cooperative effort of local authorities preventing the wanton removal of the trees by the power company and the effort of the company to keep the trees alive. What it might show also is the striving toward the sunlight of the trees in the face of pruning. Similar striving can be seen in any vine that grows up against the side of a building rather than being simple ground cover.

perspective is that in all life, “there is inwardness or subjectivity involved in this transcendence, imbuing all the encounters occasioned in its horizon with the quality of felt selfhood, however faint its voice.”⁷³ In plants, this voice seems extraordinarily faint. Nonetheless, from Jonas's perspective, plants are living beings with the nutritive capacity, nothing more but more importantly, nothing less.

Human beings are metabolically driven organisms but, similar to the animals, we achieve our sustenance and live significantly differently than plants do. Following Aristotle, Jonas state that

Three characteristics distinguish animal from plant life: motility, perception, emotion. The necessary connection of locomotion with perception is obvious and has been noted already by Aristotle; that with emotion calls for closer scrutiny, which will show that all three manifest a common principle.

The emergence of perception and motility opens a major chapter in the history of freedom that began with organic being as such and was adumbrated in the primeval restlessness of metabolizing substance. Their progressive elaboration in evolution means increasing disclosure of world and increasing individuation of self.⁷⁴

With the capacities of perception of the environment and movement through the environment, animal and human life becomes truly individuated spatially. These life forms are not tied directly to the environment in which they sprout up. They require the environment in which they find themselves, an environment in which their specific capacities have evolved, but are not completely part of it. Animals and human beings are significantly different, more highly advanced living creatures in that their metabolic process is mediated through time and space. Animals and human beings desire, experience greed, fear, satisfaction, and pleasure (among others), and have powerful

73 Jonas (2001), page 84.

74 Jonas (2001), page 99.

temporal awareness that plants do not have due specifically to the development of the central nervous system.⁷⁵ They have significant spatial awareness of the world around them and what exists in it beside themselves, through the use of the senses (sight being the most useful, most often to most creatures, though not pervading throughout). Last, they have the power to move, once the object of desire is located in space, to move toward it, all for the sake of satisfaction of those desires. They also have the capacity to move away from danger when an object of dread approaches. Therefore spatial awareness is also a protection insofar as the creature in question can defend itself or move away from danger. In addition, animals are imbued with the desire for reproduction, sexual, or otherwise. This animates the salmon to make the arduous journey upstream to lay eggs at a given time of the year. It also motivates human beings to mating rituals like the singles' bar. Each animal and each human promotes its own life and the life of creatures like it in reproduction. For animals and humans, even more so than plants, time and space take on significant and real meanings as necessity and freedom respectively.⁷⁶

Life for animals and humans is sustained through the metabolic process called digestion and its effects, the temporal experience of self-transcendence through nutrition. Like plants, animals and human beings are creatures of need. But for animals and humans, appetite, the feeling of hunger in this case, supplies the urge for movement in

⁷⁵ This is especially the reason why applying "felt selfhood" to plants is controversial. No plant has a central nervous system, so how a plant could feel anything, much less selfhood, is at best a poor choice of words on Jonas's part.

⁷⁶ Against Kant, who understood space and time as only phenomenally real constructs of the human mind as it structures experience, Jonas understood that space and time are not simply constructs of the human mind or the minds of any living creatures but ontologically real modes of existence for living creatures.

pursuit of sustenance, that of which plants are incapable. Food enters the mouth and is broken down with chemicals in the saliva during mastication. Once swallowed, it is pushed, through the peristaltic motion of the esophagus, into the stomach where it is mixed with digestive juices through muscular contraction. Finally it is sent through the intestines for absorption and into the colon for elimination. The animal metabolic process does in fact contain the lower level plant digestive process of absorption, which occurs in the intestines, which may be further proof that the evolutionary standard of the more advanced having surpassed, yet preserved the less advanced-advance considered here in the sense of multiplied capacities, individualization, and freedom. The difference is the source and the transmission of sustenance and the fact that animals must seize their sustenance from the environment rather than passively receive it as plants do. Jonas explained that in order for animal life to exist and thrive, the three parts of the animal soul must exist and in fact do function for the preservation of the organism, the teleology of the organism is still the same however, continued wholeness and existence. The animal craves. According to Jonas, the animal function of desire is an internal consciousness of real time, the proverbial biological clock, a reminder that life will expire if said desire for sustenance is not satisfied: felt discomfort and its correlative emotion, fear. This is of course an extrapolation of the human feeling of hunger pangs and the associated emotion but to the extent that anatomy and physiology of the creature in question is similar to humans the extrapolation is minimal, where anatomy and physiology is significantly different, the extrapolation extensive. The internal experiences of discomfort and satisfaction and the accompanying emotions of anxiety

and pleasure drive the actions of animals and human beings. Jonas speaks of “temporal distance,” the feelings associated with the needs of the body. According to Jonas,

Unlike sentience and motility, emotion has no external organs by which to be identified and to force its way into the physical account, and this invisibility or complete inwardness (any outward expression being feats of motility) seems to make it dispensable in a scientific description of organic behavior, as long ago Descartes and most recently Cybernetics have illustrated.⁷⁷

This internal experience of the emotions is, according to Jonas, inextricable from an accurate and complete account of an organism. As I slave away on the computer, writing this dissertation, it is only by feeling a pang of hunger associated with feeling the emotion of greed for sustenance (or fear of lacking sustenance), that motivates the purposeful activity of seeking something in my environment and acting to secure it for myself. It is only by feeling a pang of hunger associated with feeling the emotion of greed, that motivates a cheetah to seek out an antelope in its environment, hunt it down, kill it, and devour it. The primary experience of time as temporal distance is pain or pleasure associated with emotion like greed, fear, and joy. These feelings are inextricable from the understanding of living creatures insofar as they are the motivating factors behind purposeful perceiving and locomotion.

The animal function of sensation allows the animal in question to locate in its immediate spatial environment, something other than itself for consumption, be it plant or animal. This is the calculation of spatial distance. Finally, the animal function of locomotion allows the animal in question to move toward its prey, which exists outside itself in space, for the satisfaction of its metabolic needs. Whether this is a frog snapping

⁷⁷ Jonas (2001), page 100.

up a fly in mid-flight, a cheetah chasing after and pouncing on a gazelle, or a human being fishing the Chesapeake Bay, the process is the same insofar as the

transitory relation of organic form to its matter distends from the beginning two “horizons” “into” which life continually transcends itself: internally that of time as the next impending phase of its own being toward which it moves; externally that of space, as the locus of the co-present “other” on which it depends for this very continuation. Life by its nature faces forward and outward at once. Now it is the main characteristic of *animal* evolution as distinct from plant life that *space*, as the dimension of dependence, is progressively transformed into a dimension of freedom by the parallel evolution of these two powers: to move about and to perceive at a distance. In fact, only by these powers is space really disclosed to life, while the initial situation of irritability and irritant confines the experience of the inside-outside differential to that of mere contiguity which allows the outward no true dimension but lets it diffusely coincide with the sensitive surface of the organism itself.⁷⁸

Space is a part of the living organism’s experience, its external lived experience as a creature with needs, the condition for the possibility of continued existence through sustenance. It is the relation of the organism to that which exists outside it in the phenomenon of life itself. Space is part of the phenomenal process by which life proceeds and it is absolutely crucial to the living animal organism in the sense that it is the path in the process of life through which the living organism perceives its prey and captures said prey through movement, or the path away from impending danger. Space is the condition for the possibility of life itself, the condition for the possibility of the transcendence of self through mobility to sustenance, as well as the condition for the possibility of the transmission of the form of life, the genetic blueprint, to the next generation. For plants, space can be little more than room to grow, to the extent that other living things or inanimate objects do not interfere, mere contiguity, according to Jonas and “no true dimension.” For animals and humans, space is disclosed as a path of self-transcendence (continued life through capturing sustenance for digestion and

78 Ibid.

reproduction) through the evolution of the sensitive and locomotive capabilities (parts of the soul) and truly a dimension of freedom. Animals and humans make choices, expressions of freedom through selective movement, about how desires will be satisfied. What does not change is that those desires must be satisfied, the temporal dimension of impending mortality. The dialectic of being and non-being (life and death) coincides with the dialectic of freedom and necessity (how one is sustained as opposed to the fact that it must be sustained) through the dimensions of transcendence, time and space. The presence of full expressions of both dimensions through conjoined capacities of appetite, sensation and locomotion indicate purposeful biological existence to Jonas. But the priority of time in the process of life is disclosed clearly by the fact that while space is something that develops, changes, and expands as the dimension of freedom through the hierarchy of nature (formerly the *scala naturae*), the necessity of time and the intractable fact of mortality pervades all life.⁷⁹

Despite thinking that humans and animals are more highly evolved organisms than plants, Jonas admits that plants have one advantage over animals, a constant and immediate access to sustenance, whereas, for animals and humans, sustenance is always something mediated through space, time, and much effort. The integration of plants into their environment is complete whereas individual animals and humans are significantly differentiated from the environment, though nonetheless dependent on it and the other living creatures in it. But this would have to be the only advantage as plants have little or no defense against each other (being in each other's shade cut off from stronger sunlight)

79 A defense of a hierarchy of nature will be made in Chapter 6.

much less the animals around it. Also, they would have no defense against animals eating them which is especially important for species (relatively stable as they may be) who only eat plants and for the animals that eat those animals, namely all animals and humans. Are animals and humans truly better off, whether more highly evolved or not? All must risk their lives, or at least put forth significant effort, in order to take sustenance from the environment but they are also able to defend themselves against the environment and other creatures in it. As all animals and humans must go through the same process of foraging for sustenance, they forage for edible plants but also hunt each other. The evolution of locomotion, then, has a dual purpose; the offensive purpose of hunting and the defensive purpose of eluding the hunter, highlighting once again the dialectic of being and not-being, freedom and necessity. The secret of animal life, according to Jonas is “the gap between immediate concern and mediate satisfaction, i.e., in the loss of immediacy corresponding to the gain in scope.”⁸⁰ The freedom gained by animals and humans is bought at the price of having to bridge the distance between desired object and satisfaction through appropriation and consumption of it, as well as defending oneself against being another creature’s prey.

The living organism as described by Hans Jonas is an organism teetering on the brink of life and death. So wedded to the environment in which they grow are plants that separation from the soil or the sunlight implies death. Animals and humans teeter on the same brink of death in a different way. Separate from the ground itself, animals and humans are left to their own devices for sustenance and protection. Animals’ and

⁸⁰ Ibid, page 102.

humans' experience of existence is that of a war waged against time, the time left before either desire must be satisfied, or else, death faced. It is also a war waged against time in the sense of evading being prey.⁸¹ Animal and human existence is a war waged in and through space, the distance between what is desired and the taking of it from the environment. Animal and human existence is also one trapped between freedom and necessity; the freedom to identify in and move through space to take pleasure in the satisfaction of one's desires and the necessity of doing so as the fear of death by starvation becomes imminent. Living organisms are always engaged in the struggle for existence in an environment. For most living creatures, this environment is one to which they and their ancestors have become adapted. Many animals transposed to different environments simply will not survive as individuals or as a species. Many living creatures besides plants are inextricable from certain environments in terms of flourishing, despite the level of individuation and freedom achieved. Living creatures depend on one another through the relation of space. Life without an environment in which to take sustenance is simply not life but the lifeless matter to which materialism wishes to reduce everything.

All organisms taken together share the need of sustenance through some process of metabolism. For most plants, this process is photosynthesis and for animals, this process is digestion.⁸² Animals process sustenance captured through the hunt and through foraging either of which is a process of racing against time through space toward

81 Clearly, life is also the experience of a war waged in the name of passing along progeny.

82 It should be noted that there are plants which digest in a way similar to animals. Venus Flytraps, Sundews, and Bladderworts (to name a few) attract, eat, and digest their prey. This does not undo what Jonas has to say about the distinctions present in animals but highlights, further, the variance in the degrees of consciousness in plants and their striving.

sustenance. Jonas means us to understand this as the internal experience of life itself. The criticism can be posed against this phenomenal account of life's process that to analyze what happens on the human level and then to interpolate what happens in the experience of other varieties of living creatures, both animals and plants, is to assume too much. After all, these other organisms have no way of communicating to us about their experiences. To recall Thomas Nagel's problem, this would be like trying to know what it is like to be a bat, as well as an elephant, a lion, or any other form of nonhuman animal. However, in the observation of any and all animals, one will find habits of feeding and reproduction. A fish will bite on the hook of a line attached to a fisherman's rod if said hook has a fat juicy worm on it and the particular fish is hungry. A cat will chase and devour a mouse if it desires sustenance. A chimpanzee will invade a termite hill for a high protein snack if it has not had its fill of other forms of sustenance. Observation of such organisms feeding will not disclose the qualities of the excitement the animal has in locating prey, the thrill of the chase, or the satisfaction of a full belly. What is undeniable is that among any and all living creatures, sustenance is required. For animals and humans, the desire for sustenance and the emotions of greed and fear are there and the satisfaction of that desire is a necessity over time. Nagel tells us that the closer the creature is to humans in terms of structure, the closer we can get to imagining what their sensations and experiences are like. But as vague as this might be, what is identical, is the desire for and the need for sustenance along with various capacities to secure it, indicating the pervasion among living creatures of purposeful existence.⁸³

83 This of course begs the questions that proponents of cybernetics, reductive materialism,

Vision, Theory, and Practice: What it Means to Be a Human Being

So far, Jonas has disclosed to us what human beings share with other living things. We share the nutritive capacity as the requirement of all living things. This means that, as humans, at our very essence, is a requirement that we consume sustenance. The reality for any particular human organism, as for any organism, is the need for sustenance. We are “needful” beings. In a sense, life is like a clock running down, a clock that we rewind each time we feed ourselves based on felt need. But clearly, according to Jonas, we are much more than clocks winding down, as many materialists would have us believe.⁸⁴ Unlike a clock that is in need of a good winding, the human being (like all other animals), in addition to lacking sustenance, feels the experience of hunger (among other pains due to the central nervous system), the accompanying emotion of fear if it goes on for extended periods of time, has senses that allow it to perceive instances of sustenance in its surroundings, and has the capacity to move under its own power to achieve the sustenance in question. We have significant degrees of freedom as to how we sustain ourselves. As partaking of the animal soul, humans are often ultimately the subjects to our intentions and often the objects of our intentional actions. I attend to the purpose of preserving myself because my body tells me that preservative measures are required. Yet, what makes my situation different than a cheetah living in Zimbabwe is that I do not have to hunt my prey directly, unless I choose to. I do work which allows me to earn money. The money that I have earned, I can

epiphenomenalism, and behaviorism have all asked, which is, why not use a completely mechanistic model to describe animal and human behavior? I will collect Jonas’s answers to the question in the last section of this chapter.

84 See the last section of this chapter.

spend on a variety of natural and factory-made products. I do not have to eat as much of whatever I buy for fear that there will be none later. The markets are most often quite well-stocked with a myriad of possibilities. The cheetah, on the other hand, will eat until surfeited because of scarcity and competition. So one may ask why the ease of life and enormous freedom for me and not the cheetah?⁸⁵ Jonas's answer is the human capacity to make images as allowed most perfectly by the sensory capacity of sight.

Jonas employs another thought experiment to express the unique quality of human capacities. We are to imagine visitors from another planet trying to determine if and where human beings were present. What would they look for as evidence of humanity? According to Jonas, while looking, if our visitors located paintings, sculpture, or other images created with no clear use, then humans were indeed present. A human is, unlike all other living creatures, "potentially a speaking, thinking, inventing, in short "symbolical" being."⁸⁶ In explaining the image-making capacity, Jonas uses the example of a work of art, such as the cave paintings at Altamira. Perhaps no other human undertaking is a greater example of human freedom at work than the creation of the work of art. All actions involving the making of images would exemplify degrees of human freedom but the work of art

Is one that indulges in the making of useless objects, or has ends in addition to the biological ones, or can serve the latter in ways remote from the direct usefulness of instrumental things. Whichever it is (and it may be all three), in the pictorial representation the object is appropriated in a new, nonpractical way, and the very fact that the interest in it can shift to its *eidos* signifies a new object relation.⁸⁷

85 The capacity to produce mass quantities of agricultural products endows humanity with the freedom to pursue a myriad of other interests and activities.

86 Jonas (2001), page 158.

87 Ibid.

Through an analysis of the work of art, Jonas dissects the image and the image making capacity to show how it is at the root of all of our higher capacities as human beings.

At the root of all of these human actions, whether it is creating a work of art, speaking, thinking, or inventing, is the capacity to capture an image in the mind from experience and translate it into a something physical.

According to Jonas the image as created in the work of art is (1) an exhibition of recognizable likeness with an object; (2) a likeness which is clearly produced with intended representation; (3) a likeness that is incomplete; (4) a likeness that is created with freedom or artistic license (decision processes as to what to include in the representation, what to leave out and what to accentuate); (5) a likeness made with alterations from the original, for the sake of symbolism;⁸⁸ (6) a likeness created through and with a mind to the visual as it is the ground of abstraction – the conveyance of an idea; (7) a likeness removed from the change of causal interaction in the world – an immortalization of an idea; (8) a likeness translated or mediated by the artist. Taking the Altamira paintings as an example, why would the Paleolithic painters have produced the images of bison, deer, and other animals on the walls and ceiling of this cave? Possible answers would include but not be limited to simple decoration (although these deep caves are not thought to be living quarters by anthropologists), keeping a record for the future

⁸⁸ In *Republic* Book 4, in Socrates's argument about the attempt to make all classes of citizens happy rather than just some citizens, Plato makes reference to painting a statue with purple eyes and how that would be ridiculous and unrealistic (making one part so beautiful as to make the entire statue ridiculous). Jonas is making that case that artistic license imbues the artist with the freedom not only to represent reality but to do so as he/she sees fit to express/emphasize an idea. If it clearly meant something to the artist to paint eyes purple and that would convey the meaning to the connoisseur, then the artist will do so even if it conflicts with the real limitations of physiology.

of what is available as safe food, ceremonial prayer for the abundance of such animals as food, or even worship of the creatures through imagery. In the first case, the representation would in fact be simply aesthetic. This does not directly aid in securing the basic necessities of food, clothing, or shelter but bringing the surroundings of the outdoors into living quarters making them visually pleasing (again applying, perhaps, to other cave paintings but not to Altamira). The second reason would be a practical, pseudo-scientific pursuit of maintaining a record of that which is edible to protect others from falling ill. The third reason could be a religious practice of praying for the abundance of sustenance. The fourth might be a praise of such animals but that would indicate that they were venerated and not eaten. In any case there is a projection into the future of an idea significantly shaped by the artist and created in the light of distant future purposes and not immediate practical uses (as would be the case in a man making of a stone axe to be used for falling a tree), though all seem to be useful in the long run in one way or another. But the idea as separable from the intended object has its source is sight. Sight yields that capacity for abstract thought about classes/species/universals whether they exist in any absolute sense or not.

Jonas places the condition for the possibility of image making in the animal and human capacity of vision. Vision, as the title of the sixth essay in the *Phenomenon of Life* makes clear is the noblest of the senses.⁸⁹ This is because of the freedom it conveys both to animals but even more so to humans. First of all, vision presents a landscape and represents this landscape to me simultaneously. The sighted creature sees an exterior

89 Reference here is to "The Nobility of Sight: A Study in the Phenomenology of the Senses".

landscape, differentiated but existing concurrently. The visual spatial field gives me a snapshot of coexistence in time, fixed if not immortalized in the mind. Second, because any moment can be isolated, the movement/change present in reality is neutralized. Objects stand out as existing alongside one another and me. These same objects pervade in time, to me, despite changing – I individuate them, I can think about them, and ultimately I can classify them. Lastly, according to Jonas, vision provides me with distance both spatial and temporal – experiencing the object as different and near to/far from me as well as time to think about the object(s) in question, if any are in question. What sight provides most of all to the creature endowed with the capacity, whether animal or human, is the freedom to decide about interaction with anything in the visual field because it allows the purveyor time to consider options (running toward or running away from, seizing or avoiding, etc.). Interestingly though, according to Jonas, sight also involves a loss, “namely, the elimination of the causal connection from the visual account [whereby] sight is the freest and at the same time the least “realistic” of the senses.”⁹⁰ Accordingly, “[i]t is the sense of “appearances” par excellence, richest in their display, richest also in deception.”⁹¹ Sight is deceptive in the sense that it allows us time to think about the world in which we find ourselves while removing us, at least for a time, from bodily interaction with the world. When my son asks if he can help carry in the groceries, simply seeing me effortlessly lifting two full bags of groceries does not inform him how heavy these objects are for him to actually carry. Even as an adult, if I see a bag of groceries with bread at the top, I might be surprised by the weight of the bag if

90 Jonas (2001), page 147.

91 Jonas (1974), page 227.

underneath are two gallons of milk. Sight by itself does not yield full knowledge of physical objects. Touch and physical straining, here, tell a fuller tale in terms of the interaction of forces. Sight yields spatial and temporal distance. This would indicate an evolutionary tradeoff. Sight yields those creatures that possess it fight and flight advantage (at least) but it also leads to deception about effort required (at least) at least until spatial and physical engagement in the world occurs. For instance, without knowing any differently and based just on looking at a grizzly bear, I would think that given the differences in our sizes that I could outrun the bear and save myself, given that a grizzly bear weighs several times what I do. The truth of the matter is however, that the bear can run roughly twice as fast as I can. Rather, I should lie down and pretend to be dead in order to save myself, perhaps the last thing one would consider based solely on sight. Sight alone would never yield this truth. If sight develops and is useful in the preservation of the lives and genetic material of living creatures, that benefit must yield highly with regard to life given the deception involved with its use by itself. This of course would indicate that the other senses develop before or concurrently with sight and that, as Jonas states, “possession of a body capable of self-motion in counterplay with other bodies, is the precondition for a vision of the world.”⁹² Regardless of the deception that can be involved in the use of sight, the spatial distance of knowing something about an object before I come into contact with it, yields the temporal distance for thinking about said object.⁹³ This substantial degree of freedom being present in animals and

92 Jonas (2001), page 156.

93 Jonas could be suggesting here that idealism of the type that Plato puts forth is ultimately an extreme miscalculation of the deception involved in sight. Plato surely finds knowledge from the senses dubious

humans does not, however, by itself explain the human use of it or how it is different from what animals do. It also does explain how those who are blind are still capable of abstract thought. Jonas makes the case about the blind that they “can ‘see’ by means of their hands, not because they are devoid of eyes but because they are beings endowed with the general faculty of ‘vision’ and only happen to be deprived of the primary organ of sight.”⁹⁴ The images of things existing simultaneously in vision can be captured by the blind person through feeling shapes and filling in that which is missing with imagination. The instantaneous image may take longer to formulate for the blind person but only on first encounter with a new category of objects one would think.

Given that Jonas puts significant emphasis on the visual quality of works of art and the importance of vision to the image in general, then the question is begged about what makes the human capacity for and use of vision different than that of animals? The difference between animals and humans (and the arguable distinction could be “most” animals and humans) is the capacity to recognize similarity in addition sameness and otherness. But as Jonas says,

For the animal mere similitude does not exist. Where we perceive it, the animal perceives either sameness or otherness, but not *both in one*, as we do in the apprehension of similitude.

Likeness, then, must be perceived as “mere likeness,” and this involves more than perception. Indeed, “image” is not a function of perceptual degrees of likeness, but

but not so much because of their excellence or inadequacy but because of the nature of the substance that the senses have at their disposal: matter that changes constantly. If Jonas is correct, then the deception that leads Plato into ontological dualism with the formation of his “theory of Forms” is a double deception based on sight. Plato is deceived ontologically into believing that ideas abstracted exist separate from the objects that embody them. In addition, Plato is deceived epistemologically into thinking that the senses are of little or no use in acquiring truth. Used together, they yield much truth, according to Jonas, as part of an embodied life, be it animal or human with a physical necessity, metabolism as the foundation.

94 Jonas (2001), pages 141-142.

a conceptual dimension of its own within which all degrees of likeness can occur.⁹⁵

An instance of this is the human use of a scarecrow. The human can cast an image (even a shoddy one made of tattered clothing stuffed with hay) and fool a bird into staying away from a cornfield. A neighbor looking for farmer Brown even if fooled for a time into approaching the scarecrow from far away will eventually recognize that while the shape appeared to be farmer Brown, it is in fact a mannequin made to scare birds away. The neighbor will not simply start talking to the scarecrow as if it were farmer Brown. So while the animal can think abstractly insofar as categorizing objects of vision as per se, “prey,” “predator,” “mate,” etc., human beings can, in addition to recognizing something as a member of a category, remember the idea without further visual stimulus at a later time, manipulate the abstract idea through imagination, innovate changes on it, represent it symbolically with language in spoken word and written word, physically construct a copy or an innovative artifact, and as the scarecrow example exemplifies best, recognize another person’s work and purpose in making a scarecrow. Human difference lies not in the perceptual accuracy but in the clarity of what is remembered, the quantity that we are capable of remembering/recording, and our capacity to imagine manipulations of stored images and translate these manipulations into real objects; “the remembered form can be translated from internal imagination into an external image.”⁹⁶ This according to Jonas gives us distance and control of what actions we take and of what we produce. With regard to the work of art and with regard to the casting of any image there

95 Jonas (2001), page 166.

96 Ibid, page 171.

is the act of mediation. The human being perceives the object and is the carrier and manipulator of the image as well as the being that recasts the image into reality as the work of art. Therein, the image represents an entire class and relays an element of truth about the subject of the artwork.

Departing from the work of art as an example of image making, the critical juncture with regard to the extent to human freedom is that

The remaker of things is potentially also the maker of new things, and the one power is not different from the other. The freedom that chooses to render a likeness may well choose to depart from it. The first intentionally drawn line unlocks that dimension of freedom in which faithfulness to the original, or to any model, is only one decision: transcending actual reality as a whole, it offers its range of infinite variation as a realm of the *possible*, to be made true by man at his choice. The same faculty is reach for the true and power for the new.⁹⁷

Human beings, in addition to having the ability to hold an image in mind and translate the image into a copy of most any variety of quality can also manipulate that image purposefully, imagining the idea held as different from what it is. This allows us not only to contemplate the truth of the matter at hand but also to manipulate the ideas in question in any number of ways, what Jonas calls the “eidetic control of imagination.” The ideas that come to me through experience are held, combined, torn asunder, and reassembled in mental imagery. It also implies that “the experience of truth, as simultaneous exposure of untruth, indicates an element of negation.”⁹⁸ The capacity for being clear about the truth of the objects of experience entails, beyond the shadow of a doubt, a critical capacity to compare and contrast experiences and to integrate experience into a working theoretical whole: collective human knowledge. In addition, beyond the capacity to remember and

97 Ibid, page 172.

98 Ibid, page 175.

wield ideas, we must have what Jonas calls an “eidetic control of motility,” an understanding of the body as usable and useful toward translating our ideas into physical realities, “that is, muscular action governed not by stimulus-response pattern but freely chosen, internally represented and purposefully projected *form*.”⁹⁹ In the process of learning about the world, I learn about my body and vice versa. Put differently, I can only learn about the world by being a being in the world whose body is part of the world and at use in the world while being capable of affecting change in that world. The eidetic control of the imagination *and* the body, for Jonas, is the origin and foundation of the capacity for the retention of theoretical knowledge and its practical applications: internalized imagery and externalized image.¹⁰⁰

Only by prior visual experience of the bison painted in the Altamira paintings could the painter have thought about them. Only by thinking about those bison could the painter have made decisions about what use they might be. Only by thinking about what use the bison might be could the painter (or people like him) even considered hunting bison. Only by hunting and eating bison could bison be determined to be good food and their skins used for clothing, etc. This of course involves the capacity to collect evidence that is true and over time, to weed out what is false about our knowledge – bison might well be good food but all mushrooms are not good food. Bison are defined as sources of food and clothes by manipulating them in the mind before killing them in the flesh. In the same way, humans can have any variety of theoretical knowledge and practical uses

⁹⁹ Ibid, page 172.

¹⁰⁰ Again this demands that Jonas overturn the Kantian phenomenal quality of space and time as exert the reality of space and time as constitutive of an intentional being determined significantly by time and free in actual spatial bodily existence.

for it, ultimately due to the capacity for vision (along with the other senses), in a body that moves under the command of emotion fueled primarily by hunger for sustenance, along with the will to be in command of said knowledge. Human beings are aptly classified *homo sapiens* but

The eidetic control of motility, with its freedom of external execution, complements the eidetic control of imagination, with its freedom of internal drafting. Without the latter, there would be no rational faculty, but without the former, its possession would be futile. Both together make possible the freedom of man. Expressing both in one indivisible evidence, *homo pictor* represents the point in which *homo faber* and *homo sapiens* are conjoined – are indeed shown to be one and the same.¹⁰¹

As products of evolution, humans are rational knowledgeable creatures, but only by first being visual symbolic creatures, creatures that have the urge and the capacity to make things, what Jonas names “projective thinking.” This leads Jonas to conclude, in terms of the original thought experiment, that

Our explorers, chancing upon pictorial representation, whether accomplished or poor, can be sure of more than having discovered creatures with a certain peculiarity of behavior (“species S with habits a, b, c..., among which is picture making”). They can be sure of having discovered, in the makers of those likenesses, creatures who enjoy the mental and corporeal freedom we term human; who also give names to things, that is, have language. They can be sure of the possibility of communicating with them. And as a possibility, they can anticipate that the abstractions shown in those likenesses will lead in time to the abstraction of geometrical form and rational concept; and that the motile control implied in their making will, in conjunction with that abstraction, lead in time to technology.¹⁰²

Sight, the capacity to see the landscape of one’s surroundings, allows the seer to differentiate himself from things around him and to see himself as part of that landscape as embodied. In the halting of time presented in the visual images, differentiable objects present themselves to the seer and allow for abstract thought about said objects as classes

101 Jonas (2001), pages 172-173.

102 Jonas (2001), page 174.

of things. And all of this is done at a distance so as to allow for consideration of that which is perceived, to study it and to master it in theory as truth. All of this depends on, evolutionarily speaking, the seer having a body capable of movement whereby seeing that which is around one would make a difference, the difference being survival capacity for the individual and members of its kind. Humans are creatures with the capacity to behold ideas in the mind abstracted from the objects of experience, to think about them, and to manipulate them. The images produced are intentionally created images, produced purposefully, whether for aesthetics, keepings records of adequate foodstuffs, praying for plenty of these foodstuffs, worshiping said objects, or any other reasons. Just as today scientists and technicians have provided hungry people in libraries with machines filled with food of little or no nutritional value based on the intentions of feeding ourselves in the simplest, tastiest way possible, using accumulated work value that we call money. Whether it is the simpler application of the capacity to copy, manipulate, and discharge an image intentionally, as is depicted in the Altamira paintings, or the use of money on industrially manufactured nutritionally valueless foodstuffs, image creation leads, over the course of human history, to the sky itself not being a limit on this creature.¹⁰³

The Image of Man: Who We Are and Who We Should Be

In considering what it means to be a human, Hans Jonas has shown us three separate levels of human mediation where we as living creatures act intentionally in the maintenance and creation of ourselves as individuals. Thus he has also described three

¹⁰³ Not only can we scare birds away from our crops by making a scarecrow, we can build devices that allow us to fly through the atmosphere and into outer space, thus surpassing the birds themselves.

degrees of human freedom but still “needful freedom.” Plants are completely immediate to their environment, wedded to it by a root system where the necessity of sustenance is met through a connection with the environment itself. If there is a trace of intentional activity here, it is a significant extrapolation to call it freedom of action, but there is striving for sunlight, be it significantly dependent striving through the gathering of nutrients through the root system. The first level of mediation is the level that, according to Jonas, only animals and humans share. This is the active procurement of sustenance by being divorced as individuals from physical connection to the environment. These capacities are expressed as various types of sensation (the capacity to gather data from the environment), locomotion (the capacity to move through the environment under one’s own power), and emotion (the internal feelings associated with pain, pleasure, etc.). For animals and humans space becomes a dimension of freedom but also one of risk. The creatures in question can be motivated by the intricate experience of their own bodies to find and move toward their basic source of security: sustenance. It is of necessity that all living creatures must consume sustaining matter, animals and humans have the degree of freedom of determining when consumption occurs, where it occurs, and what is consumed. As an extrapolation of the human capacity to feel hunger, find sustenance, and move toward procurement, Jonas has explained that animals must feel something like what we do and to the extent that we experience ourselves as freely capable of procuring sustenance animals must experience something like this due to the existence of the central nervous system. Certainly, the understanding what it is like to be a cheetah is an extrapolation of human experience, but given that the creature has senses like we do, has

a central nervous system, and strives so mightily through its actions, it seems motivated and intending to procure and the undeniable fact of the matter is that it must eat. Cars don't drive to the gas station to pump their own gas nor is gasoline integrated into the machinery of the car. Animals and humans decide upon and move toward sustenance based on feelings of pain before and pleasure in the procurement. Animals and humans consume what will eventually become part of them, freely, according to Jonas.

The second degree of freedom is explained by the capacity on the part of human beings to think abstractly and make images. In this capacity, all experience becomes integrated with past thought insofar as

Imaging and speaking man ceases to see things directly: he sees them through the screen of representations of which he has become possessed by his own previous dealings with objects, and which are evoked by the present perceptual content, impregnating it with their *symbolic* charge, and added to by the new experience itself.¹⁰⁴

Experiences remembered are experiences that one not only stores in memory but are also what one can call up when needed. In fact that is what happens according to Jonas. Constantly and consistently, all present experience for a human being is experience occurring through the lens of the integrating capacity of thought itself: memory and imagination. Thought is constantly studying its own content and comparing and contrasting what it already knows with what experience is currently telling it. Human action is then the attempt to keep up with the dictates of this integration of knowledge, which then allows for improvement in making and acting in general. The capacity to think abstractly and act based on the knowledge of these abstractions is the second degree of human freedom. The comparison and contrast of facts leads, according to Jonas, to the

104 Jonas (2001), pages 184-185.

third act of mediation for humans.

The phenomenon of truth itself is according to Jonas the third degree of freedom. This is literally a process of building and weeding out. Based on the individual's collected experiences, which are constantly integrating new knowledge from experience into memory, a process of discernment occurs where we not only classify objects of experience according to type, but come to an understanding of truth about these classifications that is not naive. More importantly, as image creating, linguistic beings, this is not only an individual capacity but also a collective human body of knowledge, shared to the extent that people are in communication with one another. Copernicus could have never developed his theory of the heliocentric cosmos without a having working knowledge of mathematics, the terra-centric cosmos, etc. In spite of experience telling us that the sun revolves around the Earth (and Judeo-Christian religious indoctrination demanding that God would put his greatest creations only at the center of the universe), Copernicus comes to understand through reflective theorizing that the Earth itself is moving in two ways at once (rotating on its imaginary axis and revolving around the sun) which gives the appearance of stationary position. The contemplation of truth and falsehood and, therefore, the attempt to attain objectively valid knowledge about the world and use it to our benefit is of the utmost importance in the freedom of man and in our success as living creatures. But there is a fourth degree of human freedom, which ultimately is an extension of the second and third degrees: the image of man.

In addition to gaining truth about the objects of experience, developing scientific

conceptions of the world, its parts, and how they can be used, man, in the process becomes an object of study to himself collectively. History is the telling of the tale of human happiness and misery, success and failure, war and peace, kindness and savagery, etc. In our excursions in acting in the world, we as human beings develop along with a collected body of knowledge about the world itself, a collected body of knowledge about ourselves as individuals and as players in the ensemble cast constantly creating and recreating the “idea of man.” On the individual level, along with my consciousness of the world, “there is constituted the new entity, ‘I.’ This is of all, the greatest venture in mediacy and objectification.”¹⁰⁵ But in addition we also encounter, already formed, an “idea of man.” This “idea of man” entails based on collective human experience, over the course of history, every possible facet of what humans have been, holding onto what is true about humans and discarding what is myth or false. Although if Jonas was correct and my portrayal of his thought is accurate, sometimes we throw away too much of what we know. As an example, the image-making faculty and the capacity for discerning truth culminate in learning how to conquer the challenges of spatial distance by making movement through space faster and more efficient. But human ingenuity has given us many efficient ways of travel: the bicycle, the steam locomotive, cars/buses/trucks/trains that use the internal combustion engine, and airplanes with a variation of the same. Each began as an idea in the mind of its inventor with a purpose in mind and ended up as an artifact that allowed people to conquer distance that required traveling. But human knowledge is a collectively held body of knowledge that seeks truth as well. This

¹⁰⁵ Ibid, page 185.

evaluative capacity allows us to decide that, in terms of efficiency of time and amount of distance traveled, if expense is not an issue, the airplane is the wise/good choice. In considering the evaluative capacity with regard to ourselves as individuals and as part of the “image of man,” Jonas makes the case that

Man models, experiences, and judges his own inner state and outward conduct after the image of what is man's. Willingly or not he lives the idea of man – in agreement or in conflict, in acceptance or in defiance, in compliance or in repudiation, with good or with bad conscience. The image of man never leaves him, however much he may wish at times to revert to the bliss of animality. ...That image is worked out and entertained in the verbal intercommunication of society, and thus the individual finds it ready-made and thrust upon him. As he learns from others to see things and to speak about them, so he learns from them to see himself and to express what he sees there “in the image and likeness” of the established pattern. But learning this, learning to say “I,” he potentially discovers his own identity in its solitary uniqueness. A private objectivity of the self is thus in constant rapport with the public image of man and through its own exteriorization contributes to the continuous remaking of the latter – the anonymous share of each self in the history of all. In complete accommodation, it may let itself be absorbed into the general model; in defeated nonconformity it may withdraw into its own solitude; in rare cases it may assert itself to the point of setting itself up as a new image of man and impose it on society, to replace the prevailing image.¹⁰⁶

Jonas describes here a dialectical interplay in which the individual self-conscious person is in a constant process of study of what it means to be human by existing in a world bound up with an historical preconceived idea of what it means to be human. The idea of humanity as collected in the annals of human history through the actions of other people, who have already lived – what Jonas calls the “image of man,” is thrust upon the individual thereby determining, in many ways, how the person will live. Clearly biological needs and the capacities to satisfy those needs freely, profoundly influence the “image of man” as well. This simply means that social, historical, anthropological indoctrination and biological “needful freedom” frame/shape/determine to a significant degree, how a person is likely to live. The capacity for freedom here, on the part of the

106 Ibid, page 186.

individual is either to accept the “image of man” and live according to what it is, to rebel against the “image of man” and live the life of an outcast, or, in rare cases, to profoundly affect the “image of man” by radically changing what it means to be a human being.

Which one a person will choose and the amount of discretion each person has to choose, may well vary but that the comparison is constantly made between the individual’s life experience and the prevailing “image of man” is undeniable, according to Jonas.¹⁰⁷

What is also undeniable, according to Jonas, is that we can, based on the prevailing “image of man,” of what it consists, make an evaluation as to the good life for humans. The “image of man” contains within it historical factual accounts of what humans have done, as well as scientific understandings of humanity (physical, chemical, biological, anthropological, political, social, economic, pedagogical, and psychological to name a few), religious understandings of humanity (Judaism, Catholicism, Muslim, Buddhism, etc.), moral understandings of humanity (deontological, utilitarian, natural, etc.), etc. The historical understanding of what humans have actually done is descriptive as is the description of the various modes of travel one can use. The various human endeavors, be they scientific, religious, or moral, are all attempts to discover the nature of the world in which we live and to determine what if anything is the good life for us as creatures possible of such investigation; the attempt at knowing ourselves and of prescribing to ourselves the good life. So in the process of investigating the world around us we inevitably investigate ourselves as human beings intentionally seeking the good life. All

¹⁰⁷ Such considerations as the strictness of parents, rigor of religious indoctrination, and penal code of the political/legal regime that one lives under would influence the above consideration of degrees of freedom.

investigation into the nature of things is purposefully driven with the search for the good life at its foundation. In terms of the fourth degree of freedom, Jonas states that

As in all achievements of life, the price is high. As human satisfaction is different from animal and far surpassing its scope, so is human suffering, though man also shares in the animal range of feelings. But only man can be happy and unhappy, thanks to the measuring of his being against terms that transcend the immediate situation. Supremely concerned with what he is, how he lives, what he makes out of himself, and viewing himself from the distance of his wishes, aspirations, and approvals, man and man alone is open to despair.¹⁰⁸

Only humans can reflect on and about themselves. As individuals, we can reflect on how we compare with the “public image of man” that already exists. As individuals, we can reflect on how we affect the “public image of man.” Only we can feel the elation of being a role model or the misery of being a disgrace, the magnificence of being a hero or the disgust of being a coward, the satisfaction of being a benevolent king or the terror of being a tyrant. But in terms of collective action this is even more important. As nations, whole groups of people act, contributing to the “image of man” and as individuals and as citizens alike, we have to be able to live with the “image of man,” what we have made of it in the past and what we can/will make of it in the future. The fourth human degree of freedom is in the ethical/political degree, considerations of what the good life for man is, how we as human beings have succeeded or failed in the past and how we can succeed or fail in the future.

In this respect, the larger the scale of the action and the more people it affects, the more likely it is to be remembered. The more likely it is to be remembered, the more likely it is to truly affect the “image of man” for better *or* for worse. But as Jonas states,

Without Homer, Plato, the Bible, etc., we should not be the people that we are. Even the

108 Jonas (2001), page 186.

unread Homer, Plato, Isaiah can determine us, for they have entered into the anonymous background that has formed us and lives on in our speech. Better of course is Plato read, than unread to enlighten us on the antecedents and constituents of our being.... ...Here we experience the joy of recognition, of a return to the origins, of salvaging what was buried under the rubble of time, of the renewal and deepening of our being. Only thus can we pierce through its invisible sedimentation, only thus can we really make what we possess our own.¹⁰⁹

If human beings are the freest examples of “needful freedom” with the capacity to act freely, create images and think abstractly about ideas, collect these images and ideas into evaluations of truth versus falsehood, and to do the same with regard to ourselves in the “image of man,” then the last two thousand years, in addition to making enormous strides in terms of science and technology, has in the meantime through the loss of teleology occurring at the three levels mentioned above, lost our way with regard to uniting a full image of nature and of humanity.¹¹⁰ According to Hans Jonas, from all life, emanates degrees of subjectivity, intentional activity, and freedom of achieving life’s continuance at the level of the individual and on the level of the species. If Jonas was right, then while Aristotle was incorrect about the existence of immutable species as indicated by the continuing question of what species are and whether they exist in nature away from human naming, he did provide for us a sound account of what it is like to be a human being and a living creature. We cannot escape the fact that humans and all living creatures strive for their own continuance. My experience of myself as a human being, driven to interacting and surviving in a world by my biological needs and the feelings associated with their lack, allows me to project into the future an image of myself and an

109 Jonas (1974), page 258.

110 See the examination of the loss of teleology in the Judeo-Christian tradition, in Descartes’s dualism, and in Darwin’s theory of evolution by natural selection in chapter 2 above.

image of humanity that is well informed and ethically satisfying. Humans are intentional beings of their own making and project into the future their own well-being by the nature of their very existence.

Jonas and the Problem of *Automatomorphism*

The term used in the title of this section, *automatomorphism*, is one coined from a consideration of what Jonas's ontological distinction between "dead matter" and "living matter." When Jonas attributes to all organisms degrees of the characteristics of subjectivity, intentionality, purposiveness, and freedom, he could be accused of anthropomorphism, the process of attributing human characteristics to nonhuman entities. What this assumes is that humans have subjectivity or consciousness and that said subjectivity or consciousness is causally efficacious whereby a human being could be said to be free. What he, however, was accusing cyberneticians, reductive materialists, epiphenomenalists, and behaviorists of was what I will call *automatomorphism*, the process of attributing the characteristics of automata or machines to entities which are ontologically different than machines. Jonas admitted that the ontological commitment of modern philosophy and science, as the heir to Cartesian dualism, is to materialism and that he would hold true to this with the rejoinder that complete reduction of all that exists to a mechanistic model could not adequately describe the internal experience of subjectivity, the emotions, and the experience of freedom of acting in the world and this particularly true at the human level but likewise of animals. The broad term *automatomorphists* would be used to describe the range of philosophers and scientists

who (1) defend the thesis that animal and human action can be fully explained in terms of the model of a machine with servo-mechanisms: cybernetics, (2) defend the thesis that consciousness is an epiphenomenon – a mirroring and doubling of the action of the brain: epiphenomenalists, and (3) defend the thesis that all animal and human actions are simply mechanical conditioned reactions to stimuli: behaviorism. All of these are extensions of the basic tenets of reductive materialism, materialism that attempts to reduce the universe and everything in it to material and efficient causes. Such irreducibility of intentionality and subjectivity has led even a strong materialist like Daniel Dennett to give explanatory credence to what he calls the “intentional stance” as different in terms of abstraction and meaning to the “physical stance” and the “design stance.”¹¹¹ Jonas, of course, explains to us, after Aristotle but informed by modern science, that formal and final causes are essential to understanding collections of matter that are alive: organisms.

In defense of a teleological account, as I have been arguing, Jonas believed that there is an ontological difference between a machine or an artifact and a living creature.¹¹² A machine and a living creature are both collections of matter moving through space and they both are subjects to the laws of nature but different from a car that burns gasoline or diesel fuel, a living creature actually integrates the fuel it consumes into itself, some of the matter consumed becomes part of its body through metabolism. The living creature is this very process of purposeful self-creation and maintenance. The organism itself is the object of its own purposeful activity in terms of its genetics and physiological makeup projecting it into the future of its own possibilities through

111 See Dennett (1987), (1995) and (2003).

112 Pages 46-48 above.

intentional actions. In further defense of this position, Jonas includes in *The Phenomenon of Life* an entire chapter explaining cyberneticians' confusion in the use of the term purpose.¹¹³ But there are machines that have regulative power over themselves, according to cybernetics.

Cybernetics is the comparative study of the interwoven working of the nervous system and brain of an organism with the feedback mechanism of a machine capable of self-regulation, a machine with servomechanisms. The thermostat attached to a furnace used to regulate the temperature of a house is an example. If a person enjoys the house at 75 degrees Fahrenheit, then by setting the thermostat to 75 degrees, the thermostat will measure the temperature in the room and if and when the temperature falls below 75 degrees, there is a toggle switch to turn the furnace on that will be turned off again when the desired temperature is reached. This reduces purposeful action to the thermostat's registering the "negative feedback" of the falling temperature and the resulting movement of the furnace to start running and warm the house. It reduces causality to the materials of which the system is made and the movement of the machinery to its indicated destination. The furnace will stop running when entropy is reached, in this case the desired temperature of 75 degrees. In like manner, Jonas considers a more complex example, the target-seeking torpedo. In this mechanism, the torpedo has a target-seeking device that can follow a moving target and through "negative feedback" once again correct its direction in order to stay on target and destroy said target. Movement in the target is registered by the servomechanism, which corrects the direction of the motion of

¹¹³ This is the fifth essay of *The Phenomenon of Life*, "Cybernetics and Purpose: A Critique".

the torpedo. The purpose of the motion itself is the end of the motion and its effects on the target.

If cyberneticians are correct, then all human and animal movements can be explained in terms of the body being a system of servomechanisms controlling motions based on the negative feedback from perception which goes to correct motion. This goal would solve Cartesian dualism once and for all by eliminating the need for any intermediate factors among living things, which would make them different from machinery like a torpedo. But as Jonas says with regard to a quotation by cyberneticians Rosenblueth, Wiener, and Bigelow,

Purposeful behavior appears as a subdivision of active behavior, and “the term purposeful is meant to denote that the act or behavior may be interpreted as directed to the attainment of a goal – i.e., to a *final condition* in which the behaving object reaches a *definite correlation* in time or in space with respect to another object or event” (italics mine).

Obviously the whole definition turns on the meaning and relevance of the term “final condition.” Now what condition is to be regarded as final? We are not permitted to answer “the one in which the goal is reached,” since it is the finality of the condition which alone gives meaning to the term “goal”; this meaning is not derived, for example, from the anticipatory presence of such a condition in the initiation and throughout the successive stages of the motion. Nothing remains but to understand as “final the condition in which the action ends, that is, a condition of rest, in the broad relativistic sense indicated by the phrase “in which the behaving object reaches a definite correlation... with respect to another object.” This sounds almost Aristotelian, except that to Aristotle a body comes to rest in its natural place because this *is* the aim of its motion, while to our authors the motion “may be interpreted” as having had that aim because it ends where it does.¹¹⁴

The cyberneticians in question were speaking of the purpose or goal of the action as the end of the placement of the action when and where it comes to its final rest. No distinction is made between the simple position of rest or end of the motion and the intrinsic end or purpose the action served. This leads Jonas to interpret the logical conclusion of the cybernetic thesis as

114 Jonas (2001), pages 112-113.

Death – the most definite correlation to the environment reachable, and inevitably reached, by an organism – indeed *is* the goal of the total motion of life as one sequence of “active behavior,” and I see no way for them to escape this conclusion. To generalize this, we may say that “running down,” that is, increase of entropy, defines the direction of all natural processes, and therefore maximum entropy is the goal to whose attainment all behavior may be interpreted as being directed. In this sense all behavior is purposeful – by the terms of the definition.¹¹⁵

According to cybernetics, all animal action and human action can be resolved into this interlocking web of bodies in motion continuing in motion until it is brought to rest by a counteracting force: Newton's First Law of Motion (along with the other Laws of Motion and the Principles of Thermodynamics). This has the implication that all actions from the “Big Bang” moving forward are instances of forces acting on collections of matter and those collections of matter interacting with other collections of matter that have forces acting on them, all moving toward complete entropy. Among these actions is the behavior and actions of animals and human beings. All seemingly purposeful action in the Aristotelian sense of having a purpose in advance of the motion and a goal in mind, with its origin in the mind that can be judged as successfully met or not is a fanciful illusion to matter simply existing in motion over time, a very long time. Teleology for the cybernetic model in terms of even animal and human action is “behavior controlled by negative feedback. ...that is, motility and perception alone – is sufficient to make up motivated animal behavior.”¹¹⁶ But here Jonas shows an extremely important reason for his use of the Aristotelian capacities of the soul of a living creature. For the cybernetics model of behavior, the external organs of perception and locomotion are substantial to explain the motion in an organism. This leaves out the feeling of the organism in

115 Ibid, page 113.

116 Ibid, pages 116-117.

question and the emotions that accompany the feelings from the central nervous system. It is from within organism that action emanates according to Jonas. It is the internal constitution of the animal or the human whereby the organism in questions wills the action. The third component of the animal soul, appetite and the emotions that accompany such a feeling, motivate behavior. The integrity of the organism strives for life, constantly and consistently, even as it moves toward inevitable death. Life itself is the struggle against entropy.

In terms of explanatory completeness then, the cybernetics model, according to Jonas, cannot and to this day has not been able to account for all of the emotions and the internal feelings that we as human beings have, including those that our actions emanate from within the power of our own will. Jonas reduces the whole inadequacy of the cybernetic model to “a confusion of ‘serving a purpose’ with ‘having purpose’; and more specifically to the confusion of ‘carrying out a purpose’ with having purpose.”¹¹⁷ The machines we make, such as thermostats to maintain the temperature in our houses and target-seeking torpedoes do not create themselves nor do they exist without a purpose existing prior to their being built. A person, owning a home, puts a thermostat on his furnace to maintain a constant or close to constant temperature. Because someone has a purpose in their own comfort, they own a home with a furnace that they can regulate evenly in terms of temperature with a thermostat. The thermostat serves the purpose of making the person's comfort easier to attain just as the furnace itself and the house do. In like manner, target-seeking torpedoes do not exist without a reason on the part of the

117 Ibid, page 122.

people who commission their construction for the purpose of waging war. A society has a purpose is defending itself at sea and builds ships with torpedoes to serve the purpose of sinking enemy ships more efficiently, using torpedoes that guide themselves toward a target.

According to Jonas, cybernetics, as a science, has missed the target of achieving an accurate explanation of behavior insofar as it cannot explain the internal experience of being master of one's own actions. Animal and human behavior are more than perception and movement, more than mechanisms winding down over time, more than the reduction of all action to reaction, which is the thesis of behaviorism. Jonas's arguments against cybernetics carry over to behaviorism as well. Intentionality of consciousness would indicate that actions are more than reactions to external stimuli but originate with a formulated goal from within the organism in question, based on desire. Cyberneticians and behaviorists are, according to Jonas, guilty of "split-personality theorizing – a phenomenon unavoidable and to that extent excusable, in some of the special sciences, but inadmissible and fatal in philosophy, and hardly less so in those sciences that include man among their objects."¹¹⁸ Cyberneticians and behaviorists must exclude themselves from the theory they wish to apply to all animal and human behavior. Those involved cannot be said to have interest in what they do. They cannot be said to be innovating thoughts. They are no more than conduits for information that exists out there and needs recording. Beyond what Jonas says, perhaps the worst failing of the cyberneticians and the behaviorists is taking credit for the work they do, claiming responsibility for research

118 Ibid, page 124.

intentionally performed and reaping the rewards of tenure if they are university professors, money when they sell their books, and fame in the scientific and philosophical community. If all behavior is conditioned response to external stimuli and we are simply mechanisms running down with no purposes other than running down, those involved in these schools of thought are by their own theories taking credit when no credit is due for work that is already there waiting to be stated.

Jonas, willing to make some concessions, says that some animal behavior does in fact match the cybernetics model of perception and movement and that some behavior is conditioned response but that the model eventually falls short because “living things are creatures of need. ...The mere element of effort lifts bodily activity out of the class of mechanical performance, and the fact that movement requires effort means that an animal will move only under the incentive of an interest.”¹¹⁹ The interests of an organism emanate, according to Jonas from within and my experience of myself as a conscious being with intentions, who can realize those intentions through purposeful action, means something, something the “Divine Mathematician” mentioned earlier could never know without being embodied himself.

Epiphenomenalists, as well, make grave errors in their insistence that consciousness is a byproduct of the functioning of the brain and that is not a source of locomotion in the world and that all seeming locomotion among organisms is reduced to mere motion. At the foundation of the epiphenomenalist thesis is the underlying argument about psychophysical incompatibility. This belief, which reigns as the chief

119 Ibid, page 126.

criticism against Cartesian dualism, is the argument that the material world is a closed system of matter being acted upon by purely physical forces and energy, again governed by the laws of motion and the principles of thermodynamics. Jonas states however, that the validity of the laws of Newtonian mechanics are proven inductively and that while they appear valid, there is not necessarily any reason to believe that they are unconditionally valid, this especially in light of quantum indeterminacy and the Heisenberg Uncertainty Principle. Scientists have made an induction assumption as to the absolute validity of Newtonian mechanics. This of course does not prove that there is a immaterial/spiritual *res cogitans* inhabiting our bodies as Descartes would have had us believe, it just means that the argument against it, while strong is not categorically true but extremely likely. The epiphenomenalist thesis takes up on the assumption that psychophysical compatibility is impossible (even though it is only extremely unlikely) and therefore a completely reductive materialism must be the case.

The epiphenomenalist thesis states that consciousness and intentionality are a byproduct of the brain's activity and purely physical causation and just an appearance. This implies, according to Jonas, that when raising my arm, “*only* the objective, neuromuscular explanation (or description) is correct, while the subjective one- in terms of will and intention – is a non-authentic symbolic transcription for it.¹²⁰ Jonas develops an argument showing that epiphenomenalism involves problems for the consistency of Newtonian mechanics and the very idea of efficient causation itself. Epiphenomenalism grants that consciousness exists but states that it is a byproduct, an illusory appearance of

120 Jonas (1984 - A), page 210.

what happens in the brain. According to Jonas, the thesis states that

matter is the cause of mind and mind the cause of nothing. But causal zero-value is compatible with nothing adhering to matter; and in particular it runs plainly counter to the idea of causal dependency itself that something dependent be an end only (effect only) and not also in its turn a beginning (a cause) in the chain of determination.¹²¹

The first problem with this theory, according to Jonas, is that something that is said to exist is created from nothing - in other words, with no expenditure of force or energy. If something is said to exist in a purely physical world then it must have had an efficient cause and there must have been an expenditure of energy in its production but proponents of epiphenomenalism deny this. Second, as something existing in a purely physical world, produced according to efficient causes, the product must be capable of being an efficient cause itself and transferring energy to an effect itself. Epiphenomenalism denies this. Third, subjective experience tells me that I am conscious and that I am causally efficacious in the world through the intentions that I entertain. Epiphenomenalism leads to the conclusion that this is all an illusion which leads Jonas to say that this theory “serenely casts nature in the role of that ‘deceiving demon’ from whose unsettling idea Descartes sought sanctuary in the veracity of the benevolent God.”^{122 123} And even if this were true and we take into account a rigid materialistic Darwinism, what possible evolutionary purpose could this illusion serve, as it would seem to me to thwart innovative human action if actually believed.¹²⁴ But then again, thwarting itself would be

121 Ibid, page 211.

122 Jonas (2001), page 133.

123 In his book *The Alienation of Reason*, Leszek Kolakowski develops a similar argument against positivism. He explains that radical forms of positivism see the human capacity for metaphysical reasoning as wasteful “biological decadence” in that it detracts from the pressing needs of survival (Kolakowski, 1968).

124 If the thesis of epiphenomenalism is true and I only appear to be conscious and free but in actuality I

an illusion. Lastly, thinking itself becomes an illusion and the words written on this page are just splotches of ink of the remnants of a former tree, rather flattened carbon.

This leads Jonas to a possible, but only possible, solution of how consciousness and freedom could be possible within a materialist framework where quantum indeterminacy allows for a “triggering principle” in the mind amplifying the indeterminacy to the degree that the conscious self is free and action emanates from within. This is developed along the lines of the famous thought experiment performed by Erwin Schrödinger about an ill-fated cat in a box with radioactive material. This thought experiment shows how the statistically likely change at the particle level could have significant effects at the levels of organisms. This does not prove that actions emanate freely from within the conscious mind but only that it is possible. The existence of a conscious mind that thinks for itself, influenced but not completely determined, by external forces is a possibility (if not an actuality) that materialists will need to concern themselves moving forward.¹²⁵

The same criticism that Jonas levels against psychophysical incompatibility, that it is only extremely likely by the preponderance of evidence and thus only true by induction and reducible to faith, can be leveled against Jonas himself. Jonas has made the case, like the epiphenomenalists, that consciousness exists, and that we are surrounded by organisms striving for the continuance of life, both on the level of the individual and the genome, based on an internal purposefulness and integrity which

am a robot playing out some completely determined set of actions, then what is the point of doing anything or entertaining any thoughts or ideas.

125 For an instance of such considerations, see an argument made by Robert Kane about random number generators along the lines of Jonas's (Kane 1996) and a counter-argument made by Daniel Dennett (Dennett, 2003).

projects life onto itself and through its continuation. Jonas makes an induction assumption of his own that spreads degrees of consciousness and intentionality throughout all organisms, the most license taken with regard to regarding plants in this way. What cannot be doubted, I think, is that among humans and animals, but humans especially, there is consciousness and intentionality, and regardless of whether it can be explained in purely physical terms even with quantum indeterminacy, any theory that tries to reduce organism to mechanism, must face the intentional strategy of its own thought process. The intentional stance remains intent.

CHAPTER 4 JONAS'S REVIVAL OF ETHICAL THEORY

Ethical Theories and Moral Theories

In the preceding chapters, I have made the case that while the truth of the theory of evolution by natural selection does demand that we overturn certain elements of Aristotelian biology such as the immutability of species and the need for an external teleological motivation in the universe, Aristotle's "prime mover", that does not mean that we should denounce all of Aristotle's biological thought. I have defended the position of Hans Jonas that Aristotle's concept of the human soul as defined by genetics is a useful conception for understanding what it means to be a human being with a body that has certain capacities and that while there may have been no purpose served by life evolving and evolving into human beings, life itself, whether at the level of bacterium or human being does have purpose, namely its own continuation on the individual level and on the level of reproducing one's kind. Ultimately though, the purpose of his work on ontology and philosophical anthropology seems to have been a way of underpinning his ethical and moral theories as will be detailed below. As Hannah Arendt was to remark about a manuscript of *The Imperative of Responsibility* prior to publication, "it's clear to me that this is the book the good Lord had in mind for you."¹²⁶ It is also clear that his ontology and philosophical anthropology are the foundation for his theory of responsibility: value emanates from biological foundations: genetics.

The terms ethics and morals are often used interchangeably but I will differentiate

126 Jonas (2008), page 203.

them as follows.¹²⁷ Ethical theories are to be understood as those theories which attempt to explain the good life for human beings in terms of character – the qualities that people should aim to cultivate with the goal of the good life in mind: teleology. Examples of this would include but not be limited to Plato’s explanation of the eternal “Forms,” the human soul, and of the good life in his *Republic*, Aristotle’s explanation of the “prime mover” and the rational universe - in his *Metaphysics* and *Physics*, of the human soul - in his *De Anima*, and of the good life - in his *Nicomachean Ethics*-, and the explanations of the good life as based on creation by God – as given in The Old Testament, The New Testament, and The Koran. For instance, in Aristotle, the “prime mover” exists as complete and perfect rationality - toward which all movement in the universe is driven. All movement in the universe is rational movement toward the ultimate purpose of achieving Godliness, out of respect, awe, and love. The human soul (as is the case for any soul in Aristotle's thought) is the dynamic plan existing within all members of the human species, whereby the potential existing in that plan becomes actualized, through the course of life. What potentialities exist for human beings is determined, according to Aristotle, by the human soul: nutrition, sensation, appetite, locomotion, and thought. The good life, happiness, is then the full actualization of all of the potential in the human soul through intellectual virtue (thinking well) and moral virtue (acting well).

Moral theories, by contrast, are systems of rules that govern behavior defined as good versus evil, right as opposed to wrong, or just and unjust. Examples would include

127 This distinction is inspired at least in part by a distinction that Bernard Mayo makes in his work *Ethics and the Moral Life*, between an “ethics of being” and “ethics of doing”. Aristotle is an example of an “ethics of being” and Kant is an example of an “ethics of doing” in Mayo's work (Mayo, 1958).

Kant's deontological moral theory, John Stuart Mill's utilitarianism and the hybrids which attempt to take the good and to avoid the incapacities of both.¹²⁸ Kant relies on the “categorical imperative,” in all of its forms, as the intuitive rational principle whereby one achieves moral rectitude as a free rational agent by performing those actions which are rationally or logically consistent or universalizable. The intentions guiding our actions and the duty to perform those actions as rationally consistent actions, are what make our actions morally good for Kant. For Mill, on the other hand, there are tiers of rules focusing on the consequences of our actions. The only thing good in itself for Mill is happiness and it is the consequences of our actions at which we aim in terms of achieving happiness. His rule utilitarianism revolves around the primary rule called the “Greatest Happiness Principle,” which “holds that actions are right in proportion as they tend to produce happiness; wrong as they tend to produce the reverse of happiness.”¹²⁹ Beyond the primary rule are the many and variable secondary rules that we develop in order to support the primary rule.¹³⁰

Using this terminology, one might say that any ethical theory, that attempts to define the good life, in order to be practical, would require a moral theory (a system of rules governing behavior defined as good or bad, etc.). One might also say that any moral theory, in order to be truly wise, must be guided by an ethic. An ethical theory without an accompanying moral theory could be analogous to a bull’s-eye without a bow

128 Just as examples, W. D. Ross attempts this in *The Right and the Good* (Ross, 1930) and John Rawls attempts this in his *A Theory of Justice* (Rawls, 1971).

129 Mill (2001), page 7.

130 As an example, happiness being the general and overall goal, the secondary rule which outlaws and punishes murder supports the greatest happiness by giving all those under a system of government a heightened sense of security, even the murderer himself.

and a quiver of arrows; a moral theory without an accompanying ethical theory could be analogous to the bow and arrows with nothing at which to aim. Below I will argue that the two main strands of moral theorizing, deontology and utilitarianism are each well-armed archers with no bull's-eye. Below, I will argue that Hans Jonas wisely developed an Aristotelian ethical theory under which he focused a deontological moral theory. While Jonas's ethical theory is Aristotelian in the sense of an "immanent teleology," explained by Jonas as purpose emanating from within according to genetics, it departs from Aristotle's in the sense of there being a need for a "prime mover" or cosmic reasoning toward which everything in the universe is striving.¹³¹ Jonas's theory makes room for the possibility of a God without making it a necessary foundation. From the concept of what it means to be a human being in his philosophical anthropology, emanates a projection of the good life which must defend the preservation of humanity as a species. Put bluntly, from the existence of human beings in our advanced state of technology, with the capacity to destroy nature and ourselves, emanates the "imperative of responsibility". We must use our immense technological power well, to preserve rather than endanger our existence as a species and ensuring that governments act wisely, like parents caring for children under the auspices of the dignity of humanity. Jonas is making the case that a fact does imply a value, that "is" does imply "ought." Before considering the details of this "ought," we must consider the main problems that Jonas had to overcome in doing so, namely Hume's divide between factual and evaluative statements and the lasting effects of this proposition on ethics and morality ever since.

131 Jonas's ontology makes room for a deity without demanding the existence of a deity.

Of importance first is whether Hume did in fact separate value judgments and actions from knowledge of relations of ideas and matters of fact and, if he did, whether moral philosophers that followed him have been correct to do so.

Hume's Guillotine

In his *Treatise of Human Nature*, David Hume made the case that

In every system of morality, which I have hitherto met with, I have always remark'd, that the author proceeds for some time in the ordinary ways of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when all of a sudden I am surpriz'd to find, that instead of the usual copulations of propositions, *is*, and *is not*, I meet with no proposition that is not connected with an *ought*, or an *ought not*. This change is imperceptible; but is however, of the last consequence. For as this *ought*, or *ought not*, expresses some new relation or affirmation, 'tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason should be given; for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it. But as authors do not commonly use this precaution, I shall presume to recommend it to the readers; and am persuaded that this small attention wou'd subvert all of the vulgar systems of morality, and let us see, that the distinction of vice and virtue is not founded merely on the relation of objects, nor is perceived by reason.¹³²

This oft quoted passage has provided for significant difference of opinion about the content of Hume's value theory. In the traditional interpretation of Hume's words, he is understood to have defined an unbridgeable logical ravine between factual propositions and moral/evaluative propositions, wherein, as stated by R. M. Hare, "no imperative conclusion can be validly drawn from a set of premises which does not contain at least one imperative."¹³³ This traditional interpretation of Hume's work (Ayer, 1936) (Stevenson, 1944) (Hare, 1952) holds that value judgments are based on the influence of the passions and that considerations of human knowledge or reasoning, whether in the

132 Hume (2000), page 302.

133 Hare (1952), page 28.

form of “relations of ideas” or “matters of fact,” cannot by themselves affect moral decision making.¹³⁴ Value judgments are purely declarations stating “I approve of this action” or “I do not approve of that action,” perhaps informed but not substantively directed by reason. This understanding led Max Black to coin the name “Hume's Guillotine” for this passage because of the sharp divide it cast between “is”/factual statements and “ought”/evaluative statements. The challenge to the traditional interpretation, let us call it the “upstart” interpretation (MacIntyre, 1958) (Scott-Taggart, 1961) (Hunter, 1963) (Yalden-Thomson, 1978) holds that the traditional interpretation of Hume's passage is incorrect, that Hume was showing that the ravine between “is” and “ought” is difficult but not impossible to cross. These writers contend that Hume was equating moral sentiments with matters of fact and demonstrating how moral judgments are inferred through induction much like scientific laws, through the regular following of effect after cause. Hume was clearly separating factual propositions from evaluative ones in the sense of neither logically entailing the other as Hare described it. The point of contention is whether or not evaluative propositions could be inferred from factual propositions through induction. The preponderance of evidence with regard to what Hume meant would have one side with the traditional interpretation of Hume as dropping the guillotine which “emotivists” like A. J. Ayer (Ayer, 1936) and C. L. Stevenson (Stevenson, 1945) and “prescriptivists” like R. M. Hare (Hare, 1952), among others, have done. We can be clear that the guillotine has made its cut whether or not it was the

134 More literature of this type can be found in the works a series of articles written in the late 1950s through the 1970s (Nowell-Smith, 1954) (Smith, 1960) (Diggs, 1960) (Atkinson, 1961) (Flew, 1963) (Searle, 1964) (Black, 1964) (Hudson, 1964) (Castaneda, 1973) (Stove, 1978).

work of Hume's hand. I will assume through the rest of this discussion that Hume's Guillotine is aptly named by Max Black, that Hume did actually mean that no evaluative propositions can be entailed or inferred from factual propositions and that moral judgments are purely based on passion and sentiment.

Hume scholarship aside then, for my purposes and the consideration of Hans Jonas's ethical theory, Hume's Guillotine and the subsequent tacit or stated adherence to it in much value theory since has caused a significant challenge to the very possibility of teleological considerations in value theory and an ethical theory in general. This is neither to make the claim that ethical theories no longer exist nor that they are obsolete (MacIntyre, 1984, 1988) (Taylor, 1989, 1992) but to say that the preponderance of value theories after Hume are moral (Kant and all of the versions of deontology, Mill and all of the versions of utilitarianism, or the hybrids of both which attempt to account for the weakness of both) and not ethical theories. This simple fact makes moral philosophers analogous to archers without a target at which to shoot. This aimlessness in value theory leaves us with moral theories incapable of solving all moral situations (as these systems of rules seem to do so often) so that the actions and the logical implications of those actions are palatable even within the confines of the given systems of principles. The rescue from these aimless systems of rules lies, I think, in the philosophical anthropology of Hans Jonas - the particular version of "needful freedom" which human beings embody, projecting an image of the good life that demands an explication of an ethical theory.¹³⁵

135 G. E. M Anscombe pled for an account of human nature in order to save value theory in her classic article "Modern Moral Theory".

Kant's Deontological Moral Theory: Aimless Duty

As I will show below, Hans Jonas's value theory is comprised of a Kantian deontological moral theory as focused through the lens of an Aristotelian ethical theory that results in a communitarian virtue theory. This of course begs questions about the inadequacy of Kant's moral theory and why at best, it does only half of the job, or as I have described above, it is comparable to an archer with no target.

Kant's project in his *Grounding for the Metaphysics of Morals* (from here on GMM) was to find the supreme principle of morality and then to explain its justification.¹³⁶ This would be the principle by which all decisions regarding judgments of good and evil could be made. At the beginning of the first section of the GMM, Kant defines deontology as a moral doctrine. He writes

There is no possibility of thinking of anything at all in the world, or even out of it, which can be regarded as good without qualification, except a *good will*. Intelligence, wit, judgment, and whatever talents of the mind one might want to name are doubtless in many respects good and desirable, as are such qualities of temperament as courage, resolution, and perseverance. But they can also become extremely bad and harmful if the will, which is to make use of these gifts of nature and which in its special constitution is called character, is not good. The same holds with gifts of fortune; power, riches, honor, even wealth, and that complete well-being and contentment with one's condition which is called happiness make for pride and often hereby even arrogance, unless there is a good will to correct their influence on the mind and herewith also to rectify the whole principle of action and make it universally conformable to its end. The sight of a being who is not graced by any touch of a pure and good will but who yet enjoys uninterrupted prosperity can never delight a rational and impartial spectator. Thus a good will seems to constitute the indispensable condition of being even worthy of happiness.¹³⁷

With this statement, Kant differentiates his deontological moral theory from the ethical theories of, among others, Plato, Aristotle, and St. Thomas Aquinas. In the aforementioned ethical theories, a conception of "the good" preceded any conception of

¹³⁶ I will take the liberty of referring to this text of Kant's as the concise explanation of his position about morality

¹³⁷ Kant (1993), page 7.

rules or regulations as to how it is to be achieved. In other words, what is right for a person to do is only definable in terms of the pre-existing conception of “the good.” A bull's-eye is thereby placed before the archer. For Plato, the bull's-eye is the “form of the good.” For Aristotle, it is God and the soul of the human being. For St. Thomas, the target is God, natural law and the immortal human soul as part of it.

In Kant's moral theory, acting according to the moral law and for the sake of the moral law is what is good in itself and what is made immanent in his concept of the “good will.” The “good will” is that which preserves rationality in his actions by living according to the categorical imperative in all four of its forms.¹³⁸ Therefore an action must be universalizable, must regard the integrity and worth of other rational agents as ends in themselves, must protect and preserve the autonomy of the rational agents acting and acted upon, and be capable of being made a law in a social arrangement among other rational agents. But rational agents also have competing desires to which we often cater, much to Kant's chagrin, much to the detriment of the will of the individuals involved, and much to the detriment of the moral law as emanating from these individuals, as having been transgressed. Here the distinction between hypothetical imperatives and the categorical imperative is brought to life. Hypothetical imperatives are those which we use in order to achieve ends that are prudent or related to skill but both toward some subjective end that will make us happy; Kant's concept of the “heteronomy of the will.”

But as Kant tells us,

138 I will take the traditional approach to the matter that there are four versions of the categorical imperative which can be derived from one another: the universal “law of nature” formulation, the “humanity as ends” formulation, the autonomy formulation, and the “kingdom of ends” formulation. I take the names for the first three formulations from John Rawls (Rawls, 2000).

Everything empirical is not only quite unsuitable as a contribution to the principle of morality, but is even highly detrimental to the purity of morals. For the proper and inestimable worth of an absolutely good will consists precisely in the fact that the principle of action is free of all influences from contingent grounds, which only experience can furnish. This lax or even mean way of thinking which seeks its principle among empirical motives and laws cannot too much or too often be warned against, for human reason in its weariness is glad to rest upon this pillow. In a dream of sweet illusions (in which not Juno but a cloud is embraced) there is substituted for morality some bastard patched up from limbs of quite varied ancestry and looking like anything one wants to see in it but not looking like virtue to him who has once beheld her in her true form.¹³⁹

Any intentions that we have that are in any way related to happiness, the experience of happiness in the past, or a similar experience of happiness on the horizon has nothing to do with morality as they are matters of subjective taste. The moral law, by contrast, applies categorically if it is to be moral law at all. Here, Kant has stated that the consequences of our actions (and therefore any happiness that we may accrue through performing them) are amoral or lie outside the realm of judgments about moral good and evil. Here also, Kant has applied Hume's Guillotine according to R. M. Hare, as the fact that a person has an inclination toward some end has nothing to do with the moral quality of the action (Hare, 1952). The value that is expressed in Kant's deontological moral theory is the value of reason in and of itself as an absolute value. Without consideration of the consequences of action or of happiness, Kant bases his assessment of the goodness of an action solely on the intentions guiding the action. The intentions behind our actions are what deem us as morally good, morally evil, or amoral. The trouble lies in the conflict that arises between duty and inclinations. One of Kant's examples of an action that conforms to duty but for which I have no immediate inclination, concerns a merchant who prices each of his goods the same for all customers. The moral question for Kant

139 Kant (1993), page 34.

concerns the intention of the merchant. Most clearly, the merchant who changes his prices according to the savvy of his customer is acting in a morally evil way because no rational agent could universalize a principle of price variation according to intelligence (or any other such criterion) and still respect rational agents as ends in themselves worthy of said respect. Changing the price of one's products based on the intelligence of the consumer is to wantonly cheat the innocent. But assuming that the merchant does price his goods fairly for all customers, he may be acting on a long term inclination (and thus not the immediate one of profit) of having a reputation of fairness just so as to keep customers happy and to stay profitable in his business. If he prices his goods uniformly for customers out of this pragmatic concern of long-term profitability and only that pragmatic concern, then his action is amoral insofar as it conforms to duty but is not done for the sake of duty. The merchant is interested in maximizing profitability over time (rather than maximizing the profit on this item right now by cheating an unwary customer) by developing a reputation of fairness among consumers. If on the other hand, the merchant prices uniformly based on universalizing the maxim of price variation according to intelligence, and finds that it is at odds with a rational concept¹⁴⁰ of treating rational agents fairly, as ends in themselves, then the merchant is performing a morally good action, one that conforms to duty and is done for the sake of duty. He treats customers fairly in that it is rational to do so for the sake of consistency and respect of the customer who is his equal. Of course, the intentions could be mixed and the merchant and

140 It is clear that the duty to a customer in terms of pricing fairly would be a perfect duty as Kant never explains any possibility of it being violated like one could with an imperfect duty but it is unclear and beyond the scope of my work here to inquire as to what concept would be violated by price variance according to the intelligence of the buyer.

those evaluating his actions could see the value in both approaches, in which case the categorical imperative is satisfied. Beyond question however, Kant values the motive of reason being consistent with its own logical lawfulness.

But through a review of certain criticisms of Kant's deontological moral theory, it would seem that satisfaction of the categorical imperative in all of its forms does not make for a robust value theory. In abiding by Hume's Guillotine and separating all facts about consequences and happiness from rational valuation of the good, based on duty, Kant has left himself with a principle that demands the empty consistency of reason with itself. Moral values are purely rational intuitions separate from inclinations and desires. This critique of Kant's moral theory is given first by G. W. F. Hegel when he states in his *Philosophy of Right* that it must be

Emphasized that the point of view of Kant's philosophy is sublime inasmuch as it asserts the conformity of duty and reason, it must be pointed out here that this point of view is defective in that it lacks all articulation. For the proposition 'Consider whether your maxim can be asserted as a universal principle' would be all very well if we already had determinate principles concerning how to act. In other words, if we demand of a principle that it should also be able to serve as the determinate of a universal legislation, this presupposes that it already has a content; and if this content were present, it would be easy to apply the principle. But in this case, the principle itself is not yet available, and the criterion that there should be no contradiction is non-productive – for where there is nothing, there can be no contradiction either.¹⁴¹

Along the same line of reasoning, Kant's categorical imperative leads John Stuart Mill to say that “he fails, almost grotesquely, to show that there would be any contradiction, any logical (not to say physical) impossibility, in the adoption by all rational beings of the most outrageously immoral rules of conduct.”¹⁴² According to Gertrude Anscombe, Kant's “rule about universalizable maxims is useless without stipulations as to what shall

141 Hegel (1995), page 163.

142 Mill (2001), page 4.

count as a relevant description of an action with a view to constructing a maxim about it.”¹⁴³ Alasdair MacIntyre claims that “in practice the test of the categorical imperative imposes restrictions only on those insufficiently equipped with ingenuity.”¹⁴⁴ Lastly, Hans Jonas remarked that

The meaning of the categorical imperative is, as all its casuistic applications show, not the setting of ends, but the self-limitation of freedom, through the rule of the consistency of the will, in the pursuit of ends. But if this is the idea of the moral law, then the Kantian formulation amounts in the end to “self-limitation of freedom out of reverence for the idea of the self-limitation of freedom” – which is obviously vacuous. Or ...one could also say, “universalization of the particular will out of reverence for the idea of universality.”¹⁴⁵

These five comments from authors of significantly different philosophical comporment, amount to the same criticism; the first version of the categorical imperative, the universal “law of nature” formulation, is an empty demand that reason be consistent with itself and non-contradictory in its usage and that with enough effort any maxim can be universalized if one makes it specific enough. This would likely be true of Kant's other formulations as they are derivable from the first. But as an example, in the “humanity as ends” formulation, further distinction needs to be made as to how one defines and who is included in humanity, especially insofar as it is regarded as of import due to its unique rational capacity. As an example, without articulation to the contrary, humanity can be and has been defined with, to name a few, sexually divisive (which has prevented women from being treated as the equals of men), racially divisive (evident at the heart of American slavery for instance) and genetically divisive (which would have us practice

143 Anscombe (1958A), page 2.

144 MacIntyre (1998), page 198.

145 Jonas (1984 -A), pages 88-89.

positive or negative eugenics as a matter of law) consequences, due to humanity being associated with very narrowly defined margins which support those with power. The account of the “rational agent” would likewise be necessary for the autonomy formulation and important in terms of moral decisions to be made, for example, about abortions and euthanasia. In this way Kant's moral theory is like an archer with a full quiver of arrows and an excellent bow but with no target at which to aim or, more to the point, Kant's moral theory is a principle of action with no guidance for its application.

In like manner, other criticisms of Kant's moral theory amount to the same aimlessness of the categorical imperative. One such criticism is that Kant's categorical imperative cannot adequately solve conflict between/among duties. W. D. Ross attempts to solve this problem with his version of intuitionism and the difference between “*prima facie duties*” and “*real duties*.” That attempt, while valiant, does not make Kant's deontology adequate in itself as Ross is forced to consider the consequences of actions in deciding between/among competing “*prima facie duties*,” a line of argumentation that Kant would never make as it involves what Kant called “heteronomy of the will” and subjective inclinations. Ross's version of intuitionism could be seen as blind as well, as it does not give adequate definition of which duties are the most worthwhile.

A last criticism of Kant's deontology that falls under this rubric is the concern that consistency of application of the categorical imperative would lead to unpalatable consequences, such as having to tell the truth to person A about the whereabouts of person B, knowing that person B will face physical threat if their location is revealed to person A. But Kant, as a moral absolutist, would not consider the validity of the

consequences, no matter how awful for person A, given that the truth must always be told.¹⁴⁶ So with these considerations understood, the claim can be made that deontology on its own is not robust enough either to handle all possible cases of human interaction or to account for how its own main principle is to be applied.

Beyond the criticisms of Kant's work as an aimless/inadequate moral theory, and though it seems very unlikely that Kant meant anything like this, the case has been made that Kant is actually a teleological thinker. Paul Guyer has made the claim that there is an ontological grounding for Kant's placement of absolute value on the "good will" and that strict adherence to duty is a value emanating from the factual existence of rationality autonomy/freedom (Guyer, 1998). Barbara Herman has made a similar case about Kant with regard to the existence of rationality (Herman, 1993). Allen Wood has done the same with the value of the "good will" emanating from the existence of the human being itself (Wood, 1999). While such interpretations are inventive, imaginative, and describe what Kant should have attempted, they would seem to do disservice to the original conceptions to the boundaries of rational capacities to judge as laid out in the *Critique of Pure Reason*, as well as giving too much credence to Kant's understanding of teleological reasoning as "constitutive" and not just "regulative." The case I am making with regard to the work of Hans Jonas is to do exactly that, to explicate and defend his ontologically based ethical theory, a teleological ethic with biological origin. But, however correct an ethical theory like Jonas's is, it is not, in spite of these efforts to the contrary, the correct

146 A way out of this has been explained by proponents of "threshold deontology" where, beyond a certain extent of misery caused by adhering to the categorical imperative and its duties, it is necessary to consider the outlandishly awful consequences and evade duty in the name of preventing the awful consequences (Moore, 1997).

way to interpret Kant.

The Utilitarian Problem of Consistency: Too Many Targets Spoil the Archer

In approaching utilitarianism as a moral theory, the first significant problem to deal with is whether to speak of, “act utilitarianism” (hereafter AU) or “rule utilitarianism” (hereafter RU). Both have significant problems but the very fact that there is no consensus as to which is the better of the two, provides opportunity first to make the case that although RU is superior to AU as a moral theory, it still is not robust as a moral theory.

Utilitarianism, in general, has as its main principle, the “Greatest Happiness Principle” (from here on GHP), which states that “actions are right in proportion as they tend to promote happiness; wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure and the absence of pain; by unhappiness, pain and the privation of pleasure.”¹⁴⁷ If we take Mill’s understanding as the general thrust of all utilitarian thought, then the question between AU and RU is how the GHP should be applied. In the case of AU, the GHP should be directly applied to a decision to determine the greatest happiness that can be achieved by various courses of action in that scenario. In RU, the GHP is used to develop secondary rules that will cover categories or types of actions and these secondary rules will serve the goal of the GHP. With regard to these secondary rules Mill states that these

147 Mill (2001), page 7.

Corollaries from the principle of utility, like the precepts of every practical art, admit of indefinite improvement, and, in a progressive state of the human mind, their improvement is perpetually going on.

But to consider the rules of morality as improvable, is one thing; to pass over the intermediate generalisations entirely, and endeavour to test each individual action directly by the first principle, is another. It is a strange notion that the acknowledgment of a first principle is inconsistent with the admission of secondary ones. To inform a traveller respecting the place of his ultimate destination, is not to forbid the use of landmarks and direction-posts on the way. The proposition that happiness is the end and aim of morality, does not mean that no road ought to be laid down to that goal, or that persons going thither should not be advised to take one direction rather than another. Men really ought to leave off talking a kind of nonsense on this subject, which they would neither talk nor listen to on other matters of practical concernment. Nobody argues that the art of navigation is not founded on astronomy, because sailors cannot wait to calculate the Nautical Almanack. Being rational creatures, they go to sea with it ready calculated; and all rational creatures go out upon the sea of life with their minds made up on the common questions of right and wrong, as well as on many of the far more difficult questions of wise and foolish. And this, as long as foresight is a human quality, it is to be presumed they will continue to do. Whatever we adopt as the fundamental principle of morality, we require subordinate principles to apply it by; the impossibility of doing without them, being common to all systems, can afford no argument against any one in particular; but gravely to argue as if no such secondary principles could be had, and as if mankind had remained till now, and always must remain, without drawing any general conclusions from the experience of human life, is as high a pitch, I think, as absurdity has ever reached in philosophical controversy.¹⁴⁸

Mill explains the need for secondary rules derived from the GHP that can be modified toward “indefinite improvement” and compares the lack of such secondary rules comparable to trying to give directions to a lost traveler without the use of landmarks.

The proponent of AU would have to make all decisions based on the GHP and with no such landmarks beside the GHP, else it would be no different than RU. But what could this possibly mean to a society and for the notion of law? Are we to imagine a society with a ruler, or a governing body of rulers, trying to legislate social policy from the GHP alone? Even Plato’s “philosopher kings” must have instituted laws to follow in the

148 Ibid, pages 24-25.

pursuit of happiness.¹⁴⁹ Sticking to the GHP alone would completely eliminate the “rule of law” and demand the “rule by decree” from such a governing body - and they would have to be an ideal governing body. Alternatively, the pure use of the GHP might imply a participatory democracy, a rule of all by all, attempting to determine happiness on a case by case basis for everyone.¹⁵⁰ Citizens would spend their days determining the minutia of each others’ happiness. Clearly, the time required to decide all such matters regarding happiness on an individual basis would grind life to a halt for everyone, if everyone took part in the voting procedure.¹⁵¹ If voting were a choice and not mandatory and only a few participated, then we would be back to the need for a truly ideal senate of citizens the likes of which men can only dream.¹⁵²

But given these misgivings about saintly human virtue and the boundaries of time, the most important issue with AU is the likelihood that it cannot refrain from becoming RU over time or be consistent with the ideal of the GHP. Security is important and the happiness brought about by the security of written laws is significant. Imagine if, in our society, there was no written law against murder. It is safe to say that people would feel less secure in their daily lives without this law. One might be less willing to leave home and even less likely to leave said home without a weapon that could be used efficiently, even if actual murders were not substantially more prevalent. People would live in fear.

149 Just as an example, Plato describes the necessity of eugenic laws for the preservation of the purity of his ideal classes of citizens in the *Republic*.

150 It would seem to eliminate even the possibility of an extremely limited system of rules as one might expect in a libertarian arrangement where rules exist for criminal and tort law and nothing beyond it.

151 This is a naively idealistic conclusion to reach when we consider that even Presidential elections in the US have garnered the attention of less than sixty percent of the voting populace recently.

152 Even Plato admits to the extraordinary unlikelihood of his ideal state being achieved much less maintained in *Republic* book 8.

Within a utilitarian framework, having the rule against murder makes us happier insofar as it promotes security. The security comes from knowing that society punishes murderers severely and that this heavy punishment for murder should act as a significant deterrent to would-be murderers. But security or not, let us imagine that no such law punishing for murder exists as written law and imagine a society of act utilitarians (if this is not an oxymoron). It would likely be true in each individual case where a human being is killed, other than out of self-defense, that the person doing the killing would be found guilty of a crime by our voting body, as it would maximize happiness to punish the perpetrator for the typical utilitarian reasons.¹⁵³ Over time, if all killings where the killer killed for a reason other than self-defense were punished, then there would implicitly be a rule that develops against murder and a sanction for its occurrence. In this way, AU would eventually become a version of RU for any action where extreme regularity of punishment exists. But under what possible auspices could a society be happier for not punishing a particular murderer for a particular murder? We might differ in opinion as to how much punishment is adequate/fair for a murderer but that utility is served by punishing such a person cannot be questioned. This might be the case for only a few actions such as murder, theft, rape, and fraud but if even we admit to these then AU cannot resist becoming RU in order to be consistent with the GHP. If certain actions serve the greatest happiness so regularly as to become constantly judged to be wrong by “act utilitarians” then there will be some rules which will never be overridden and RU sustains utility. Insofar as happiness is substantially achieved in society through the

¹⁵³ These reasons are typically understood by utilitarians to involve deterring individually, deterring generally, and allowing for rehabilitation.

security of knowing about and being deterred by punishment, the GHP requires at least some secondary rules that Mill describes.¹⁵⁴

Now, considering RU as a possible moral theory, I will ground my arguments against RU in the specifics of Mill's *Utilitarianism*. In Mill's version of RU, given that happiness is the greatest good and the good that we all seek through acting, we are to employ the GHP, as our primary rule and create secondary rules which will act as landmarks in finding the happiness we seek. Mill qualifies the achievement of happiness in two ways. First, Mill makes the case that intellectual pleasures are superior to the pleasures of the body. At first glance, it could be taken that being human and having the capacity to experience this second variety of pleasure leads to greater happiness in general simply due to variety. But Mill explicitly states that these pleasures of the intellect are an intrinsically more valuable and higher type of pleasure, to which only human beings as rational creatures are privy. He also explains that when a person considers an action and the consequences of the action, in terms of achieving happiness, "utilitarianism requires him to be strictly impartial as a disinterested and benevolent spectator."¹⁵⁵ I am not to regard my personal happiness as more valuable or pressing than the happiness of anyone else in my social dealings. Arguing in this way, Mill seems to be arguing in the direction of Aristotle, that the happiness of a human being is defined because of the nature of man as rational and social but all of Mill's arguments are inductive in terms of the behavior of human beings and not deductive as to the nature of

154 This is not to fully penetrate the problems of AU but to scratch the surface and to argue that if one is to consider utilitarianism as a moral theory, it should be RU. Other problems emanate from AU in abundance (Hodgson, 1967).

155 Mill (2001), page 17.

human beings. He makes the case that the

Only proof capable of being given that an object is visible, is that people actually see it. The only proof that a sound is audible, is that people hear it: and so of the other sources of our experience. In like manner, I apprehend, the sole evidence it is possible to produce that anything is desirable, is that people do actually desire it. If the end which the utilitarian doctrine proposes to itself were not, in theory and in practice, acknowledged to be an end, nothing could ever convince any person that it was so. No reason can be given why the general happiness is desirable, except that each person, so far as he believes it to be attainable, desires his own happiness. This, however, being a fact, we have not only all the proof which the case admits of, but all which it is possible to require, that happiness is a good: that each person's happiness is a good to that person, and the general happiness, therefore, a good to the aggregate of all persons. Happiness has made out its title as one of the ends of conduct, and consequently one of the criteria of morality.¹⁵⁶

Mill is arguing from inductive inference that in general, people seek happiness, the extension of pleasure and the absence of pain. In doing so, Mill generally found that most people prefer intellectual pleasures to bodily pleasures and that, when this is not true, the intellectual pleasures have not been fostered in the person who disagrees. Also, Mill argues that in general, when people look after each other's happiness and not simply their own, they end up happier. He is not making ontological deductive arguments about the idea of the good based in human nature. Noticing that people seek happiness they ought to continue to do so. Secondary rules that help us to maximize happiness ought to be continued and when the secondary rules no longer serve the ideal of the GHP, then we must remember that the process of achieving happiness can be improved upon and that new secondary rules can be invented and old ones can be changed or removed. Mill is violating what I have called the "traditional" interpretation of "Hume's Guillotine" but upholding what I have above called the "upstart" interpretation. He is not deriving values from facts through deduction. He is inferring values from facts through his inductive

¹⁵⁶ Ibid, pages 35-36.

arguments about how people generally behave and saying that that behavior ought to continue.

Just as AU can be accused of necessarily changing into RU, so RU can be accused of necessarily changing into AU. There will be times when under a system of RU, greater utility will be served by breaking a rule. In order to stay consistent with the GHP, RU will have to develop more and more specific rules in order to keep utility served. So if there is a secondary rule or societal law that makes it a crime to defraud an insurance company by assuming the identity of an insured person and making claims against that person's policy then one ought never to do it. But imagine if Jerry Mathers, who, having fallen on hard financial times after working only sporadically since his stint on "Leave It to Beaver" and who has no health insurance, needs a kidney transplant. Also imagine that the only way to save Jerry is to enlist Tony Dow, who is insured, and Tony's physicians, to perform the transplant on Jerry and claim that the procedures were done on Tony. Lastly, because of the significant love that people have for Jerry Mathers, wouldn't greater happiness be fulfilled by defrauding the insurance company? Jerry would be happy to be alive. His family would share the joy. All of his fans and the autograph seekers would certainly approve and it would only cost each member of Tony Dow's group of insured a few dollars each, for the privilege of saving the life of a television icon. The point is that, either we would suffer the loss of Jerry Mathers, have less happiness, and be inconsistent with the GHP or we would have to develop a new rule which provides for television icons and their maladies so as to not break the existing rule. Over time, with more and more specific rules, the argument goes that in effect, AU is the

case as there would be so many rules that they would each define a particular act. The conclusion to all of this is that utilitarianism is a self-contradicting moral theory in terms of its application. AU cannot be consistent with the GHP insofar as some rules are necessary to all societies¹⁵⁷ Further, AU cannot be consistent with the GHP insofar as security is an element of happiness and security is lacking in any society with no rules. RU fails to be consistent whenever a secondary rule that typically helps us achieve the greatest happiness needs to be broken in order for the greatest happiness to be achieved. This is the slippery slope of RU becoming AU. Without a movement closer to Aristotelian thinking that involves some general concept of the good life, an ontological movement that utilitarians have been unwilling to make, the utilitarian moral theory will continue, without even knowing it, to aim at targets that are unworthy of its arrows and not even know it. Archers require and deserve better.

One Reprieve from the Guillotine: Wittgenstein's Legacy

Without examining every modern moral theory¹⁵⁸, the two main branches of modern moral theory seem to be under the sway of "Hume's Guillotine" and that this may in fact explain the reason that both deontologists and consequentialists have failed to devise a set of moral principles robust in their application to master every situation.

157 For an interesting argument toward this end, see James Rachels book *The Elements of Moral Philosophy* (Rachels, 1993).

158 The glaring example would be the case presented by John Rawls in his classic *A Theory of Justice* (Rawls, 1971) and after. Rawls case is a special one in that he may well be considered a teleological thinker. For instance, the context or framework of society places the demands for certain rational considerations by individuals as to what the rules of the game called "society" should be given that any player could end up being the loser. The real question for Rawls's theory is whether his understanding of human nature as a rational individual is correct or whether communitarianism should compliment or replace his theory of justice.

Thankfully, several authors in discussion directly about “Hume’s Guillotine” have made the case that “Hume’s Guillotine” is neither a guillotine nor a general rule and that facts can entail values (factual propositions do entail evaluative propositions). For instance, in his article “A Technical Ought,” B. J. Diggs makes this case about giving directions to someone, which involves plain and simple factual propositions which eventually entail an evaluative proposition. When a person asks for direction, the person doing the asking is most often not doing so for sport or for the purpose of studying the reactions of people who are asked for directions. The advisee is in need of assistance for getting from point A to point B. The advisor, given the abundant likelihood of purpose in the asking, if he is in a position of knowledge, replies to the asker with directions describing a correct route from point A to point B and if he knows more than one route, he replies with the directions for the most direct or simplest route. He assumes the intentions of the asker to get from point A to point B and to get there expediently; the “advisee himself in stating his purpose and requesting advice asks another *to think for him* – he lacks pertinent information and requests the advisor to deliberate in the light of purpose and information and reach a *decision*.¹⁵⁹ The advisor in giving said directions then states a set of factual propositions about how to get from point A to point B which implicitly if not explicitly states that this is the way one “ought “ to go. And so, if two individuals are involved in the practice of getting and giving directions and “[if] all of these factors are judged accurately, then one has reasons which completely justify this kind of 'ought'

159 Diggs (1960), page 304.

sentence.”¹⁶⁰

A similar case was made by John Searle in his article “How to Derive 'Ought' from 'Is'” about promises and then in general about “institutions,” “institutional facts,” and the difference between “constitutive principles” and “regulative principles.”¹⁶¹ Searle makes the case that, by definition, “[a]ll promises are (create, are undertakings of, are acceptances of) obligations, and [o]ne ought to keep (fulfill) one’s obligations.”¹⁶² Specifically, there is a “practice” or “institution” between/among people called promising to which involved parties agree. There is an “institutional fact” that promising means by definition that the promisor is intentionally involving himself with the promisee(s) so that the promisor has an obligation to the promisee(s). As Searle explains

The word “institution” sounds artificial here, so let us ask: what sorts of institutions are these? In order to answer that question I need to distinguish between two different kinds of rules or conventions. Some rules regulate antecedently existing forms of behavior. For example, the rules of polite table behavior regulate eating, but eating exists independently of these rules. Some rules, on the other hand, do not merely regulate but create or define new forms of behavior: the rules of chess, for example, do not merely regulate an activity called playing chess; they, as it were, create the possibility of or define that activity. The activity of playing chess is constituted by action in accordance with these rules. Chess has no existence apart from these rules. The distinction I am trying to make was foreshadowed by Kant’s distinction between regulative and constitutive principles, so let us adopt his terminology and describe our distinction as a distinction between regulative and constitutive rules. Regulative rules regulate activities whose existence is independent of the rules; constitutive rules constitute (and also regulate) forms of activity whose existence is logically dependent on the rules.

Now the institutions that I have been talking about are systems of constitutive rules. The institutions of marriage, money, and promising are like the institutions of baseball or chess in that they are systems of such constitutive rules or conventions. What I have called institutional facts are facts which presuppose such institutions.¹⁶³

160 Ibid, page 312.

161 For the original and groundbreaking philosophical analysis of “practices”, “institutions”, and “games”, see Ludwig Wittgenstein’s *Philosophical Investigations* (Wittgenstein, 1953). For the distinction between “institutional facts” and “brute facts”, see G. E. M. Anscombe’s article “Brute Facts” (Anscombe, 1958A). For an explanation of the distinction between “constitutive principles” and “regulative principles”, see John Rawls’s article “Two Concepts of Rules” (Rawls, 1955).

162 Searle (1964), pages 50.

163 Ibid, page 55.

Promising is an “institution” whereby the existence of the “institution” is indistinguishable from the institution itself. The fact that people make promises, by definition, demands that promises ought to be kept. This leads Searle to expand the exception to the rule called “Hume's Guillotine” into a full-fledged attack on Hume's Guillotine as a rule. All “institutions” defined by systems of “constitutive principles” would violate “Hume's Guillotine.” As a result, Hume's Guillotine cuts through little or nothing and cannot be seen as a rule insofar as it is violated by the “institutions” of marriage, money, games, sports, and the very institution of law itself within any given society.

Extending this discussion of “institutions” and “practices,” Alasdair MacIntyre applies this idea of factual propositions implying evaluative propositions directly to modern moral theories in general and to “emotivism” in particular as the outcome of the stalemate in modern moral theory, leaving subjectivism in its wake. MacIntyre defines a “practice”¹⁶⁴ as

Any coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realized in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended. Tic-tac-toe is not an example of a practice in this sense, nor is throwing a football with skill; but the game of football is and so is chess. Bricklaying is not a practice; architecture is. Planting turnips is not a practice; farming is. So are the inquiries of physics, chemistry, and biology, and so is the work of the historian, and so are painting and music.¹⁶⁵

MacIntyre then explains that “a practice involves standards of excellence and obedience

164 While up to now I have used the terms “practice” and “institution” more or less interchangeably, it is clear that while MacIntyre is following the Wittgensteinian train of thought, he is putting a finer more Aristotelian and later Thomistic point on the matter.

165 MacIntyre (1984), page 187.

to rules as well as the achievement of goods. To enter into a practice is to accept the authority of those standards and the inadequacy of my own performance as judged by them.”¹⁶⁶ Lastly, a “virtue is an acquired human quality the possession and exercise of which tends to enable us to achieve those goods which are internal to practices and the lack of which effectively prevents us from achieving any such goods.”¹⁶⁷ Human life, according to MacIntyre, is a system of nested practices, those practices involve “constitutive principles” which both define the practice and how to achieve excellence within the practice, that as practices, all practices involve extending the good life in general for human beings even when the practice is not being practiced, and that virtue involves achievement of excellence within the practice. MacIntyre is explaining to us that modern moral theory is a set of principles for how to behave without an explanation of what practices make human life worth living whereby the principles would have meaning and applications. Modern moral theory without a guiding ethical theory is like an archer with bow and quiver shooting aimlessly and without a target. For the sake of brevity, I will remark that Charles Taylor makes a similar case using the terminology of “frameworks” (Taylor, 1989) and “horizons of authenticity” (Taylor, 1992). But all of these sources for deriving the ethical “ought” from the factual “is” stem from the positions taken by Wittgenstein in his *Logical Investigations* about languages and their contexts within different “forms of life.” The question that remains for those considering Wittgenstein (and his legacy in ethical theory – some communitarianism of virtue¹⁶⁸), is

166 Ibid, page 190.

167 Ibid, page 191.

168 In the latest edition of *After Virtue*, Alasdair MacIntyre disavows the name “communitarianism” but if we punctuate that name with the seeking of the good life for humans through certain virtues, then he

whether he was a relativist or whether he thought there is an essential “form of life.” This would seem to be the implication when Wittgenstein writes that “the common behavior of mankind is the system of reference by means of which we interpret an unknown language.”¹⁶⁹ Taken from the perspective of the communitarian, this could imply that there is a basic human context under which we all operate which dictates how the good life should be lived, a “form of life” that Jonas was striving to discern.

A Second Reprieve: Heidegger’s Fundamental Ontology

In his fundamental ontology as explained in *Being and Time*, Martin Heidegger attempted to clarify, among other things that the history of philosophy and perhaps most importantly the history of modern philosophy is a failed project insofar as much of the classical philosophical positions have overlooked the most fundamental philosophical question of all, the question of Being.¹⁷⁰ Ontology, according to Heidegger has been a study of the composition and nature of objects that exist rather than a study of what it means to exist. The question of the meaning of all existence is prior to and more fundamental than the thought processes that drive the modern scientific outlook. For instance, Descartes might explain a library as an enormous extended thing, a building constructed out of certain materials with shelves and books organized on those shelves in categories, according to subject matter. Heidegger would be more interested in what it means to visit a library. The visitor to a library visits for a reason, be it researching a

may more readily accept the title (MacIntyre, 2007).

¹⁶⁹ Wittgenstein (1999), page 89.

¹⁷⁰ I attribute much of my understanding of *Being and Time* to the excellent running commentary by Michael Gelven (Gelven, 1989).

paper that one must write for a class, inquiring about a library card so that one may borrow books, or actually finding a book to take home to read. The clear and present understanding of a library is disclosed through how I actively involve myself in a library, by using a library. Heidegger explains that

In terms of the significance which is disclosed in understanding the world, concerned Being-alongside the ready-to-hand gives itself to understand whatever involvement that which is encountered can have. To say that “circumspection discovers” means that the ‘world’ which has already been understood comes to be interpreted. The ready-to-hand comes *explicitly* into the sight which understands. All preparing, putting to rights, repairing, improving, rounding-out are accomplished in the following way: we take apart in its “in-order-to” that which is circumspectively ready-to-hand, and we concern ourselves with it in accordance with what becomes visible through this process. That which has been circumspectively taken apart with regard to its “in-order-to,” and taken apart as such – that which is explicitly understood – has the structure of *something as something*.¹⁷¹

So actively involving myself in a library reveals what Heidegger referred to as the “as structure,” the disclosure of something in its purpose. A library exists for the purpose of housing books and other reference materials. The purpose of the library is to serve the human capacity and will to learn. This understanding that I have gained from the process of interpretation through involvement is developed out of the tripartite “fore-structure” of “fore-having,” “fore-sight,” and fore-conception.” Involving myself in a library, I have before me a building with shelves and books along with people using these resources. I too can use these resources and do. The library is a place of research for me. This is the “fore-having,” the developed relationship that I have to the library and all of its resources. In the library, I recognize the electronic catalogue as the part that allows me to map my path to what I need; it solves the problem of resource allocation or it tells me to go somewhere else if the resource that I need is unavailable. This is the “fore-sight,” the

171 Heidegger (1962), page 189.

insight into a part of the library that relates me to the whole experience of the library. Lastly, the “fore-conception” is the relation of the part to the whole which yields further understanding. The electronic catalogue exists as a compendium of the library, a brief snapshot of its contents which clarifies to me the library as a library. The catalogue aids me in the appropriation of the resources that I need even if it in fact indicates a shortcoming of the library that I am visiting. The library can only be interpreted as a storehouse of reference materials for the fulfillment of the human capacity and will to learn by actually visiting a library and involving oneself in searching out information. The “fore-structure” is the developing interpretation of the meaning of a library that evolves through use. The mature interpretation, the “as-structure” develops out of this “fore-structure” through use of the library, ultimately describing the purpose of the library. Revealed through the “fore-structure” and the “as-structure” is an interpretative understanding of a library informed predominantly by experience of the library in the process of using the library.

This explanation of understanding is instructive to us as Heidegger is explaining basic human action and involvement with the world pre-conceptually. We actively involve ourselves in the world with things that are “ready-to-hand.” We think of the world as a place of tools with certain use values without thinking of them as objects different from us. The world around us becomes extensions of our capacities. Heidegger compares this notion of use value and “readiness to hand” with another mode of involvement he calls being “present-at-hand.” This is a view of things as objects set off from myself as different from me which in some way become alien to me. Heidegger

explains that something being “present-at-hand” occurs to me when something breaks. In my example of the library, it might involve the library being closed for construction or perhaps the library not having the resource that I need. Heidegger explains that this view of the world and its instruments as “present-at-hand” is a secondary and derived way of understanding the world, the primary way being the “ready-to-hand” where I am actively involved. But the crux of the matter is that ontologically, philosophers and scientists have typically understood the world exactly in this secondary and derived way as present-at-hand, without conceiving the more primordial and meaningful “ready-to-hand” view of the world and its contents. Heidegger does not contend that one is better than the other but says that the whole picture of the world is not disclosed by the “present-at-hand.”¹⁷²

But what this analysis of our attitudes reveals about the world and our involvement in it pales in comparison to what it reveals about us. Heidegger states that “*the ‘essence’ of Dasein lies in its existence.*”¹⁷³ In the process of active involvement in the world (the world as “ready-to-hand”) and then also thinking about the world as something outside and other to me (the world as “present-at-hand”), what is revealed to me is the very essence of what it means to be human. To be human is to care. This is not to say that this knowledge is always present to us as we spend much of our existence involved in what Heidegger called the “they-self,” the everyday involvement with other people whereby I am oblivious to the nature of my own existence insofar as I am intertwined in my daily activities with others. So involved are human beings with each

172 For instance it would seem that anything like technological innovation would require the interpretation of the world as “present-at-hand” in order to understand how something works and how it might work better.

173 Heidegger (1962), page 67.

other, that we typically exist in a state Heidegger calls “fallenness,” a state of unawareness about my own Being. It is not only, but particularly, in the face of death that my humanity becomes clear to me and I can understand myself as “that entity which in its Being has its very Being as an issue, comports itself towards its Being as its ownmost possibility.”¹⁷⁴ It is Heidegger’s contention that it is in my “being-towards-death,” the confrontation that each individual person has with mortality, that I reveal my humanity as concerned with my own existence as bounded by time. According to Heidegger, time is the phenomenon central to all ontology as all Being is bounded by temporal constraints. It is for human beings that the constraint is most poignant as it is humans who are not only mortal but profoundly aware of their mortality and called to live authentically in the face of death by their consciousness of themselves.

Human consciousness of itself is temporally situated according to its relation to the past, the present, and the future. Authentic existence is the temporal awareness that a person has of himself as a being whose death is a real possibility. Inauthentic existence is to take the freedom to compose one’s life for granted, to be common or ordinary, and to never even consider being any different than everyone else; to be involved in the “they-self.” Temporal awareness is to be integrally involved in the process of one’s own life, to be acutely aware that the future consists of possibilities that should be guiding my present decisions, as focused through the past, which has made me who I am today. I can as a result project my possibilities into the future authentically. This is the recovery of the authentic self from the state of “fallenness” in the inauthentic “they-self.” I can also

174 Ibid, page 68.

project my possibilities inauthentically while in the mindset of the “they-self.” Either way I am projecting my possibilities. Heidegger’s fundamental ontology then makes the case that at every moment of life a human being cares and projects possibilities. From the individual human being emanates a projection of possibilities moving into the future, that the present decisions made ought to be focused toward making this projection authentic and that the current projection is propelled by a past is what has made the person up to this point. In Heidegger’s fundamental ontology we see an argument that from the fact that human beings exist emanates care for how that particular life is lived even, as is frequently the case, when that life is being lived in an inauthentic way. From the facts of human existence emanates values, and hence the challenge to “Hume’s Guillotine.” The important question, not only for interpretations of Heidegger but for this work on Jonas is what values emanate from Heidegger’s fundamental ontology.

Jonas’s Charge of Nihilism against Heidegger

The charge has been made against Heidegger that *Being and Time* and his work that follows is in some way espousing nihilism. It is important to make clear an important distinction between different uses of the word “nihilism.” Existential nihilism is the belief that life has no meaning. Moral nihilism is the belief that morality does not exist and that no action can be justified as right or wrong.¹⁷⁵ To use my distinction between ethical theory and moral theory from above, ethical nihilism is the belief that no defensible conception of the good life exists. With this distinction in mind, we can more

175 For accounts of moral nihilism, see J. L. Mackie (Mackie, 1977) and Richard Joyce (Joyce, 2001).

correctly ask the questions about Heidegger being an existential nihilist, about him being a moral nihilist, and about him being an ethical nihilist. In terms of understanding the work of Hans Jonas, this is a crucial question insofar as Jonas was a student of Heidegger's and Jonas's doctoral dissertation was an application of Heidegger's thought. More importantly, once Heidegger took up the mantle of the Nazi party in Germany, Jonas felt betrayed as a philosopher and as a Jewish son whose mother was executed in the Auschwitz concentration camp. In addition to trying to argue for a materialism that accounts for the values emanating from life as an ontological distinction, Jonas was also trying to transcend the subjectivity of the will that Heidegger espoused in such a way as to explain the ethical and moral restraints put on the human process of valuation. Under the auspices of Heidegger's association with the Nazi party, Jonas's accusation of nihilism against Heidegger is a significant part of what inspired Jonas's thought. But the first question that must be answered involves whether or not it is correct to label Heidegger a nihilist. Michael Gelven has remarked that

It is difficult to understand why so many contemporary theorists, especially among the followers of Leo Strauss, and to a lesser extent the movements in contemporary French philosophy following J. P. Sartre and Jacques Derrida, should make the outrageous claim that Heidegger espouses nihilism, or that his thinking "leads" to nihilism. Nothing could be further from the truth. ...The only consideration *not* allowed by such a beginning is that Being has no meaning. If Being has no meaning, how is it possible to carry out an inquiry into what it means to be? It is the very fact that Heidegger can and does carry out such an inquiry that ultimately refutes any possibility of nihilism.¹⁷⁶

Michael Gelven's point holds true against the charge of existential nihilism. Heidegger's fundamental ontology is an inquiry into the meaning of Being. In *Being and Time* that inquiry is carried out through an analysis of human being. The meaning of Being as

176 Gelven (1989), pages 13-14.

uncovered in the human being is to care about one's existence insofar as one is a temporal being with the ever present possibility of death. Given that human beings care about the lives they lead and the actions they take, the meaning to life is to live life in a "resolute" way so that one is truly the active and participating author of one's own existence. Self-consciousness is its own reward (I am elated when I can live with who I have become especially insofar as I have actively taken part in becoming what I am) and punishment (I am ashamed of who I become especially insofar as I have become what I have become without notice or interest, whereby it is attributable to the "they-self"). The meaning emanating from life is the freedom of authorship of one's life. So Heidegger is not espousing existential nihilism, as the meaning of life is care. What he is espousing is that the source of meaning is the human being. Meaning is not necessarily to be found in an external source but internal to humanity.

Yet the question remains as to whether Heidegger was espousing or whether his thought leads to ethical nihilism and/or moral nihilism. If the human life is spent caring and spent in various degrees of awareness of being the author of one's own existence, then this does not truly give one any guidance as to what values one ought to have. It does at every moment give me an understanding of what life I wish to project into the future given the past that I have spent and the current possibilities before me. It states that I will at every moment take account of what I value or have it accounted for me through the "they-self." Heidegger's fundamental ontology, which insofar as it is a fundamental ontology also involves a philosophical anthropology given that it is the

human being through which Being is disclosed¹⁷⁷, describes human beings as having the capacity to determine what life will be in the future through projection of possibilities. Insofar as values involve one's behavior toward oneself, good and evil are matters of individual taste and the projection of life that one projects. Insofar as such considerations of value involve other people, they would be considerations of the "they-self" and have nothing to do with authentic existence. For Heidegger, the very existence of the "they-self" as a significant way of being human and the fact that moral considerations most often involve other people, implies that ethical and moral considerations are or can be inauthentic and a drain on authenticity. The authentic way of being human always involves evaluating good and evil from the point of view of the individual in their self-creative process and good and evil are thus perspectival and subjective. The inauthentic way of being human always involves evaluating good and evil from the point of view of the "they-self" and must involve cooperation and compromise. Ethical and moral evaluation is always being preformed by human beings. Given that the possibility (if not the necessity) exists that some values are common to all human beings then Heidegger is espousing neither ethical nihilism nor moral nihilism. However, an implication of Heidegger's thought likely involves ethical and moral relativism as well as perspectivism.

Hans Jonas, however, made the case that Heidegger's fundamental ontology was a philosophical position that leads to nihilism. In the ninth chapter of *The Phenomenon of Life*, when making the case that existentialism is committed to nihilism, Jonas implicates Heidegger in nihilism as an existentialist even though Heidegger refused "to

177 Regardless of what Heidegger says about not being involved in philosophical anthropology, he indeed ends up with a philosophical anthropology in addition to his major project of fundamental ontology.

be called 'an existentialist'¹⁷⁸ because he reject[ed] the picture of a worldless subject projecting values *ex nihilo* onto a neutral medium of objects, and favor[ed] instead the view that persons are always involved in a world that is full of significance."¹⁷⁹ In the tenth chapter of the same, Jonas asks theologians, "don't you see what you are dealing with? Don't you sense, if not see, the profoundly pagan character of Heidegger's thought? Rightly pagan insofar as it is philosophy, though not every philosophy must be devoid of objective norms."¹⁸⁰ Jonas's objection to Heidegger is not that there are no norms or values but that there are no objective norms or values beyond what human beings grant subjectively through authenticity and inter-subjectively through the "they-self." The worrying implication for Jonas is, as Vogel writes, that if "nature harbors no goodness in its own right,... then nothing is intrinsically worthy of our care, and we are free to undo, remake, and destroy nature, even human nature, at our will. Heidegger's 'Care', Jonas charges, leaves us with nothing worth caring about."¹⁸¹ Jonas understood the existentialism that he ascribed to Heidegger as the "flip-side of materialism because a nature devoid, though free for the projection of values by humanity, does not solicit our care."¹⁸²

As explained above,¹⁸³ reductive materialism explains all of nature, including human nature as comprised of collections of matter moving through space according to a rigid determinism. In such explanations, the attempt is made to explain away all measure

178 Whether or not Heidegger was an existentialist is beyond the scope of this essay. It is clear that Jonas took him as one.

179 Vogel (1995), page 55.

180 Jonas (2001), page 248.

181 Vogel (1995), page 55.

182 Ibid, page 59.

183 See chapters 2 and 3 above.

of value in nature through mechanical explanation. This, according to Jonas, implies nihilism and in this diagnosis, he is likely correct with regard to reductive materialism implying existential nihilism, ethical nihilism, and moral nihilism. In Jonas's reading of Heidegger and existentialism in general, all value is determined by the free human will. One might say that, according to fundamental ontology, all willing is good willing, or at best, that the individual can involve himself in better and worse willing. Jonas read existentialism as an idealism of the will. He likely read Heidegger's statement that "*the essence of Dasein lies in its existence*," to mean that human beings have no essence except what they make of it in the process of existing. Alternatively, Heidegger likely meant that by experiencing life as involved in the world (ready-to-hand) and as other to the world (present-at-hand) the very nature of being human shines forth as care, meaning that while the content of human life and its valuation is variable, the context is the same, the context of caring. Lawrence Vogel has diagnosed the problem insofar as "Jonas traces Heidegger's susceptibility to Nazism to an ethical vacuum at the heart of fundamental ontology."¹⁸⁴ Jonas, as Heidegger's student, "disgustedly realized the latter's political lapse, his shameful rectoral address of 1933, was 'somehow set up in his thinking,' he gradually became aware of the 'questionability of existentialism as such... namely the nihilistic element that lies in it.'"¹⁸⁵ It is likely that in trying to reconcile Heidegger's fundamental ontology with Heidegger, the man who supported Nazism, that Jonas could not circumvent the idea that to be a Nazi one would have to see no intrinsic value to human life given the holocaust, especially given the fact that Jonas's own mother

184 Ibid, page 55.

185 Weise (2007), page 94-95.

was a victim of the Auschwitz death camp. In spite of this tragedy in Jonas's life and the turmoil it must have caused him psychologically to have embraced Heidegger's thought only to see Heidegger embrace Nazism, a point must be made about Nazism. Jonas makes the same misdiagnosis about Nazism - as embodying existential nihilism as well as ethical nihilism, and moral nihilism - as he did about Heidegger. Nazism saw value in human life, especially Aryan human life. They considered other peoples, especially the Jews as sub-human, evil, and therefore disposable. This cannot be considered nihilism.

However, from Jonas's perspective, existentialism would be the flip-side of materialism, adding to modern nihilism in the sense that humanity is alienated from further and more intrinsic valuation that is objective in nature. According to Jonas,

Heidegger had talked about existence as care, but he did so from an exclusively intellectual perspective. There was no mention of the primary physical reason for having to care, which is our corporeality, by which we – ourselves a part of nature, needy and vulnerable – are indissolubly connected to our environment, most basically through metabolism, the prerequisite of all life. Human beings must eat. This natural law of the body is as cardinal as the mortality accompanying it. But in *Being and Time* the body had been omitted and nature shunted aside as something merely present.¹⁸⁶

What is objective about all life is the physical existence as in need of sustenance and the accompanying striving, at every level of life, for sustenance and the continuation of life, both on the level of the individual and the species/type. Jonas misdiagnosed Heidegger's fundamental ontology as implying nihilism, when in fact it likely implies ethical relativism (a variable/individual conception of the good life), moral relativism (a variable conception of what actions are good and evil), and perspectivism (the individual

186 Jonas (2002), page 31.

disposition as determining individual values). If all life strives in some way then it has preservation as its goal and with a goal, the good can be defined. The good is life itself, its preservation and its promulgation.

CHAPTER 5 JONAS'S ETHICAL THEORY AND MORAL THEORY

In the epilogue of *The Phenomenon of Life*, Jonas writes

Ontology as the ground of ethics was the original tenet of philosophy. Their divorce, which is the divorce of the “objective” from the “subjective” realms, is the modern destiny. Their reunion can be effected, if at all, only from the “objective” end, that is to say, through a revision of the idea of nature. And it is becoming rather than abiding nature which would hold out any such promise. From the immanent direction of its total evolution there may be elicited a destination of man by whose terms the person, in the act of fulfilling himself, would at the same time realize a concern of universal substance. Hence would result a principle of ethics which is ultimately grounded neither in the autonomy of the self nor in the needs of the community, but in an objective assignment by the nature of things (what theology used to call *ordo creationis*) – such as could still be kept with by the last of the dying mankind in his final solitude. The fact that by cosmic scales man is but an atom is a quantitative irrelevancy: his inner width can make him an event of cosmic importance. The reflection of being in knowledge may be more than a human vent: it may be an event for being itself and affect its metaphysical condition. In Hegelian language: a “coming to itself” of original substance.¹⁸⁷

Richard Wolin writing about Jonas's work states that

One of the controversial features of Jonas’s attempt to provide an ethics appropriate to the age of modern technology is that his efforts fly in the face of the philosophical injunction against deriving “ought” from “is,” the adage that value judgments cannot be based on statements of fact. The “fact/value” distinction suggests that merely because things exist in a certain way does not mean that this was the way they were *meant* to be or that they should necessarily continue to be this way.¹⁸⁸

In these two quotations we find explained the way in which Hans Jonas took his position among the “philosophical rearguard” insofar as he denied and defied “Hume's Guillotine,” hoping that he would eventually witness the “philosophical vanguard” (Wolters, 2001) catching up. In what we have seen so far, in the work of MacIntyre (MacIntyre, 1959, 1984, and 1988), Diggs, (Diggs, 1960), Searle (Searle, 1964), and Taylor (Taylor, 1989 and 1992), some of Jonas's contemporaries were moving in a similar direction. But whereas MacIntyre, etc., were developing and transcending the

187 Jonas (2001), pages 283-284.

188 Wolin (2001), page 119.

ideas of Wittgenstein, Jonas was developing and in fact transcending the ideas of Heidegger through an Aristotelian analysis of biological phenomena. Just as Aristotle took an understanding of the human soul and derived from it a concept of the good life in intellectual and moral virtues, Jonas explained a new view of ethics based in the biological phenomenological understanding of human beings as the most highly evolved examples of “needful freedom,” beings capable of metabolism, movement, emotion, sensation, and image-making. These elements remain true and therefore essential to philosophical anthropology in spite of the theory of evolution and, if Jonas was correct, give an ontological foundation for what it means to be a human organism. In addition, just as Heidegger understood the human being as always acting within the context of care for one's own existence as temporally defined and delimited, Jonas uses this idea of the temporally contextualized human existence and through a generalization of care and intentionality at the level of all living things (as part and parcel of nature itself), Jonas develops an ethics where values derive from the very existence of life itself and most clearly and significantly from the existence of human beings.

To reiterate, if we take the traditional interpretation of “Hume's Guillotine,” factual statements neither entail nor infer evaluative statements. Jonas violates Hume's Guillotine by extrapolating values from the existence of living creatures in nature due to their potentialities and capacities. The proof that he gives could be summarized as follows from *The Phenomenon of Life*:

- 1) All living creatures have the capacity to metabolize.
- 2) All creatures that have the capacity to metabolize have the power to take matter from the surroundings and integrate substantial parts of it into the body that is performing the metabolizing.
- 3) All creatures that have the power to take matter from the surroundings and

integrate substantial parts of it into the body that is performing the metabolizing must perform this act of integration in order to stay alive.

4) Anything that must be done, ought to be done.

5) All creatures that have the power to take matter from the surroundings and integrate substantial parts of it into the body that is performing the metabolizing ought to perform this act of integration in order to stay alive.

6) Therefore, all living creatures ought to perform this act of integration in order to stay alive and that is in fact what living creatures do.

The above argument is an extrapolation of Jonas's argument in the third essay of *The Phenomenon of Life*, "Is God a Mathematician," but is indicative of his general conclusions. Existing within all living things is the capacity for, the drive toward, and the need for consumption. Therefore, given that this most basic need is there, from viruses up to and including blue whales, there is no way to escape the fact that metabolism is what John Searle calls a "constitutive principle" in the "institution" of life. It is a biological "institutional fact" that all living creatures, insofar as they are living, must metabolize sustenance in order to continue living and in fact do spend much of their energy in the process of achieving something to metabolize and then actually metabolizing it. The fact that there are living creatures, demands that those living creatures eat, and the evolution of living creatures has provided seemingly endless apparatuses among living creatures for the purpose of life's continuance in general.

Jonas admits

"Suggestions" of goals by chance occasion and the turns in direction they cause would probably apply more to single segments of the course than to its overall direction; and even the occurrence of the suggestive occasions could have been helped along already by the earlier goal-orientation – which then might indeed be surprised by the possibilities opening up in its wake. On this we can only speculate, not settle anything – especially regarding the "first" opportunity, with which "life" began. But even assuming the first beginning, the forming of organic macromolecules, to have been mere accident, not the fulfilling of preceding tendency (to me, a most unlikely assumption) – from there on, certainly tendency becomes even more apparent: and I mean not only a tendency for progressive evolution (which can rest as long as it pleases) but above all the tendency *to*

be, ceaselessly at work in each of its creations.¹⁸⁹

This certainly also defies the traditional position taken by naturalists that in nature form precedes function but as stated above,¹⁹⁰ except for the initial instances of life which one would naturally consider as accidental, every instance of life is an inherited wealth of capacities transmitted through genetics which have proven themselves in the test of time in progenitors. In this sense, most function precedes form, even in enhanced capacities that emerge among living creatures. Those capacities which have worked well enough in progenitors to allow for reproduction to take place are passed along; the successful function defines future form. Lastly, with regard to metabolism as a fact and a value, this may be an extrapolation that Searle, MacIntyre, and Taylor are unwilling to make with regard to other living creatures, it would seem that they would be hard pressed to deny this most basic of Wittgenstinian “practices” for human beings, what Jonas might call the context from which all other human values spring.¹⁹¹

With his explanation of metabolism, Jonas gives proof of values emanating from all living creatures simply by the fact of their being alive and being constituted in such a way that their very existence involves the striving to continue. Metabolism within all living creatures is the fact by which the value that “life is good and ought to continue” emanates.¹⁹² From this point about the “digestive organ” in *The Imperative of*

189 Jonas (1984 -A), page 74.

190 See chapter 2.

191 For a comparison of Taylor, MacIntyre, and Jonas with regard to the moral subject, see the monograph *Individui E Persona: L'identita Del Soggetto Morale in Taylor, MacIntyre E Jonas* by Paolo Nepi (Nepi, 2000).

192 One seeming contradiction to this is the suicidal tendency. But, the suicide attempt is often a veiled cry for help. When it is successful, tragic as it may be, it is not necessarily a general principle that life

Responsibility, Jonas argues that all of nature in its totality must itself be purposeful, insofar as it gave birth to purpose driven living creatures, each of which harbors the purpose of life's continuance within it. Given that all living creatures have within them the capacities to continue living, even for a short time, through metabolism, then these capacities will be used and life will continue both in the individual and in general. Life ought to continue given that in all instances it has the capacity to continue. All life is life situated in an integrated body with certain capacities for self-preservation. Jonas states that we "can regard the *capacity to have* any purposes at all as a good-in-itself, of which we grasp with intuitive certainty that it is infinitely superior to any purposelessness of being."¹⁹³ He makes this argument because of the inconsistencies of having to argue from the direction of life taking on meaning only at a certain point in evolutionary history at a significantly advanced stage.

Having already discounted Cartesian dualism in the evolutionary scheme and how God would have to intervene in evolutionary history to place subjectivity in living creatures, Jonas makes arguments against "emergence theory," which attempts to account for subjectivity and the free affective consciousness it involves, within the confines of evolution through an evolutionary leap. He discounts this strong form of emergence as logically incoherent with evolutionary theory insofar as the

Gradualism of transitions conflicts with the image of leaps. ...Most of all – and here comes the logical flaw – the emergence theory, when embracing this generic leap, buys self-consistency with ignoring the *causal* angle. If the new principle is to have *power* (an essential attribute of it, as we saw), then its supporting base – the simpler level – must comply with the evident condition that nothing can give birth to what is *entirely* alien to it

is bad but that "this life" is bad.
193 Jonas (1984 -A), page 80.

and runs counter to its immanent law, and thereby does violence to itself.¹⁹⁴

The theory of evolution works on miniscule and incremental developments over the course of multiple generations in its actions in order to innovate. Strong emergence, however, demands that something like causally efficacious consciousness come about as an immediate change of direction in evolution whereby something completely qualitatively different emerges. One must assume that Jonas leaves room, if he is not directly advocating for, a weak version of emergence, whereby a combination of inter-affective changes occurring slowly, over long periods of time, could come to develop into something novel over time.¹⁹⁵ Nonetheless, in the potentialities of nature's component elements and their various combinations, is the capacity for life. In all life there is intentional activity toward self-preservation and therefore nature itself must be seen as value driven insofar as life is promulgated in and through. Jonas makes it clear that

The principle of continuity requires us to concede an endless shading, in which "representational" subjectivity surely disappears somewhere (presumably in forms with no specific sense organ yet), but sensitivity and appetite as such probably nowhere. Even here, to be sure, we are still dealing with "subjectivity," but with one already so diffuse that the concept of an individual, focused subject gradually ceases to apply, and somewhere the series trails off into the complete absence of any such subject. Therefore also into the absence of aim and urge? Not necessarily. On the contrary: in the reverse direction, ascending from the bottom upward, it would be incomprehensible that subjective striving in its particularization should have emerged without striving whatever within the emergence itself. Something already kindred must have carried it upward out of the darkness into the greater light.¹⁹⁶

Therefore, nature itself is a value driven entity in and of itself insofar as life was a possibility that became actual and in every instance expresses the value that its own

194 Ibid, page 68.

195 For a solid compendium of the recent literature on philosophical and scientific emergence, see the recent volume edited by Mark Bedau and Paul Humphreys (Bedau and Humphreys, 2008).

196 Jonas (1984 -A), page 73.

continuance is good. So ethical theory must take into account not only human values but human values as emanating from nature which expresses itself throughout life's forms.

Returning to the nature of Jonas's ethical theory and moral theory, the most manifest experience of value comes in the four-fold experience of freedom of which human beings alone are capable through locomotion, the making of images, the experience of truth, and the "image of man."¹⁹⁷ Human beings have bodies and can move of their own volition to procure what they want and need. They can make images, remember, and recall those images through the activity of the imagination. They can evaluate those images stored up over the course of history and determine a body of knowledge that is true. Included among the set of truths is all of the knowledge of science and mathematics that human beings have acquired, knowledge of technological innovations and the capacity to fashion nature and natural objects to our liking, and even the knowledge of what human beings are and could be. Finally, and most importantly for ethics, human beings develop a compendium, over the course of human history describing what is true about human beings, thus creating the "image of man."

Human beings are historically preserved along with an account of the world in which they live. Contained within the "image of man" is a record of human trials and tribulations. Every detail of every human life is not retained within the "image of man," only those that have, whether positively or negatively, powerfully impacted humanity and history. But it is this "image of man" with which we must live. Human beings can rejoice in the facts that over the course of human history, some amazing obstacles have

¹⁹⁷ See chapter 3, above.

been overcome. The development of penicillin, a derivative of the mold *penicillium notatum* by Alexander Fleming in 1928, and other forms of mold that can effectively counteract the invasion of the human body by bacteria, has led to countless lives being saved and has allowed countless others to suffer less. Alternatively, human beings have also found countless ways of causing suffering and death for each other, none worse than the discovery of the capacity to harness the power of the uranium atom by splitting it.¹⁹⁸ Both of these human events and the discoveries of which they are expressions are developments with which we must live. As each of us moves into the future, we must be aware that human capacities for knowledge are extravagant and astounding and can be used for myriad acts of generosity and altruism as well as horrific acts of death and destruction. As we act, we are then called upon to do so with a sense of responsibility for and understanding of the ways that we coexist with the image that we project for ourselves.

With this compendium of human history that we carry with us, which over the last hundred years has become capable of extraordinary levels of detail due to telecommunications and computers (more technological innovations), human beings as individuals, as social entities, as nations, and as a species, move into the future with the knowledge of who human beings have been. Moving into the future, we can employ this knowledge of who human beings have been and adjust our behavior so as to bring about the good life or at bare minimum to prevent misery and suffering. Human beings care

198 While achieving the ending of an extremely costly war in terms of human life, the use of nuclear weapons achieved, beyond the shadow of a doubt, the most extraordinary cost of innocent civilian lives in the shortest amount of time in recorded history (well in excess of two hundred thousand people) and would seem very difficult, if not impossible, to reconcile with any ethical theory.

and are bound by the constraints of time, not only on the level of the individual human being as Heidegger thought but also in human social contexts. Projection of the “image of man” has extraordinary and powerful social import as well. Against Heidegger, Jonas explains that these social implications are anything but inauthentic for human beings. The individual, as social being, is an integral part of what makes human beings authentically human. The most important tenet of Jonas's ethical theory and moral theory, that through which he most profoundly exercises the ethical and moral relativism of Heidegger, is through the “image of man,” which allows not only for the individual to project a future that is meaningful but for all social arrangements of individual human beings to do the same.

According to Jonas, all human beings, as well as all living creatures, care about metabolic activity insofar as we are examples of “needful freedom” and the continuance of life is paramount to consumption. We are “needful” insofar as time is always running out and death immanent without nourishment. However, as human beings we care in much deeper and more profound ways given the limitations of time even on the species itself.¹⁹⁹ The immense power human beings wield in science and technology can be our greatest asset or our immanent defeat unless we take the responsibility to use the power well, to nature's advantage as well as our own: to project the best “image of man” for man and nature.

Jonas explains that from the human genome, issues human capacities and these capacities explain to a significant degree what humans beings can and must do in order to

199 Given evolutionary history and the fact that human beings have not always existed, the possibility that someday we will no longer exist is not only real but immanent given our power over nature.

live the good life. In the face of the theory of evolution which suggests that the nature of human beings may be in a constant state of flux, there are elements of what it is to be human, even as determined by the genome, that never change. It is out of these fixed foundations, which according to Jonas include metabolism, sensation, appetite, locomotion, and image making, that while overturning the Aristotelian understanding of fixed species, enables him to retain elements of his biologically based (as seen in Jonas's "immanent teleology" which is indistinguishable from Pittendrigh's and Mayr's concept "teleonomy") ethical theory. From these human capacities emanate a projection of the good life for human beings. What is more, given that all living creatures share in these capacities with humans, this concept of the good life for humans must be a good life for humans within a more broadly defined nature, one that offered the conditions for the emergence of human beings in the first place.

It is especially interesting then that Jonas remarks in his memoirs that

Although Aristotle didn't play much of a role in my thinking, it's undeniable that after my *Imperative of Responsibility* appeared some people told me, "There's an Aristotelian element in your thinking." I should add, purely anecdotally, that one of the first people to express support for my book when it came out in Germany in 1979 was Gadamer. He sent me quite a long letter, which began with the words, "Dear Herr Jonas, I am writing to identify myself as a grateful reader of your book." And elsewhere in the letter he writes, "Your work has made it clear to me that these days Aristotle has been becoming increasingly important for us." There's certainly some truth to that.... ...[T]here was little I could do to keep myself from being classified as a neo-Aristotelian.²⁰⁰

This of course begs the question how would Hans Jonas have classified himself? It doesn't seem possible that the man could have written *The Phenomenon of Life* where he actively invoked the Aristotelian conception of the soul as central to his ontological difference and philosophical anthropology and yet not understand his work as being neo-

200 Jonas (2008), page 204.

Aristotelian especially when he then uses this work to ground his ethical and moral theories. And that is the distinction that is important. His moral theory, the principle(s) guiding particular actions is clearly a Kantian deontology. It is the ethical theory of the good life that guides it and develops a new imperative aimed at the future, the neo-Aristotelian “imperative of responsibility.”

Jonas's contention is that given several facets of modern life, the traditional way moral theory is carried out must change. Here he takes into account the three step historical loss of the teleological understanding of the universe from antiquity,²⁰¹ the Baconian model for science as technological and utilitarian only, the attempt to reduce all of nature, including human beings, to mere mechanism by materialists, and lastly the overwhelming power that the Baconian model of science has yielded us. The tragedy is that

The very same movement which has put us in possession of the powers that have now to be regulated by norms – the movement of modern knowledge called science – has by a necessary complementarity eroded the foundations from which norms could be derived; it has destroyed the very idea of norm as such. Not, fortunately, the feeling for norms and even for particular norms. But this feeling becomes uncertain of itself when contradicted by alleged knowledge or at least denied all support by it.²⁰²

Jonas believed that the values that have gone astray or eroded have done so as a result of cultural and historical factors that have left us with opinion about and not foundations for values and that only by recovering what was incorrectly expunged from the record can we regain our value in ourselves and once again tell right from wrong. Jonas shows himself to be a deontological thinker – holding the value of the autonomy of the rational

201 See chapter 2 above.

202 Jonas (1984 -A), page 22.

agent and protection thereof as paramount to acting well. Despite his criticism about the “law of nature” formulation being vacuous, Jonas states that “Kant himself has redeemed the mere formality of his categorical imperative by a 'material' principle of conduct, ostensibly inferred from it but, in fact, added to it: respect for the dignity of persons as 'ends in themselves.’”²⁰³ Kant’s categorical imperative, especially the “humanity as ends” formulation and the “autonomy” formulation, come to bear much weight in Jonas's articles on applied ethics in terms of rights and duties that are explained as owed to human beings as human beings. In the article for *Daedalus*, “Philosophical Reflections on Experimenting with Human Subjects,” which is reprinted in *Philosophical Essays: From Ancient Creed to Technological Man*, Jonas analyzes the intentions of the physician who contemplates using a patient for medical research and the duties to patients under care as the criterion for whether that use is morally acceptable and declares that, intentions being private, we “have to live with the ambiguity, the treacherous impurity of everything human.”²⁰⁴ In experimenting with human subjects, Jonas concludes that physicians and researchers must preserve certain duties toward patients that respect the dignity of the individuals involved, that they never be used solely as a means to an end, and that their autonomy is respected through gaining informed consent or avoiding certain types of patients altogether (such as the comatose who cannot consent and patients who would be members of control groups). As we will see below, he also tempers the topic of human experimentation with the Aristotelian projection of the good life, but the principle guiding the determination of particular actions as right and wrong is

203 Ibid, page 89.

204 Jonas (1974), page 120.

the categorical imperative particularly in the second and third formulations.

Considering, again, my use of the distinction between ethical theory and moral theory, Jonas uses the Kantian imperative as his moral theory but sees it as in need of supplementation and incorrect in its focus. The overwhelming powers that humanity has unleashed demands what Jonas calls a “heuristics of fear,” a guiding plan for saving ourselves and nature from the destructive power of the atom unleashed in nuclear holocaust, for preventing the destruction of ourselves and nature through ecological devastation, and lastly saving ourselves from ourselves by taking care about how technology changes the “idea of man.” After invoking the Kantian categorical imperative as being competent in the past,²⁰⁵ Jonas states that we need to develop a new imperative which is future oriented in a way that more adequately accounts for the radically altered temporal scope of contemporary human action. He explains...

An imperative responding to the new type of human action and addressed to the new type of agency that operates it might run like this: “Act so that the effects of your action are compatible with the permanence of genuine human life; or expressed negatively: “Act so that the effects of your action are not destructive to the future possibility of such life”; or simply: “Do not compromise the conditions for an indefinite continuation of humanity on Earth”; or, again turned positive: “In your present choices, include the future wholeness of Man among the objects of your will.”²⁰⁶

This reformulated imperative demands that human action be conducive with the thriving of nature and the environment itself along with the thriving of human beings within nature. Human beings as a species need to be protected from our own power over nature and nature needs to be protected by us from us. Previously the

Presence of man in the world has been a first and unquestionable given, from which all

205 Jonas would still find fault with Kant for not defending the categorical imperative for the right reasons),

206 Ibid, page 11.

idea of obligation in human conduct started out. Now it has itself become an *object* of obligation: the obligation to ensure the very premise of all obligation, that is, the *foothold* for a moral universe in the physical world – the existence of mere *candidates* for a moral order.²⁰⁷

In a sense, considering nature as the condition for the possibility of the development of a creature with a conscience and capable of obligation, nature develops a conscience when human beings evolve. With the evolution of human beings as part of nature, not only can human beings recognize obligations to each other but also recognize obligations to the general preservation of ourselves and the conditions that allowed human beings to evolve: nature. With the enormity of our power, not only do human beings need protection from our own power but nature too needs protection from us. Therefore, Jonas's supplemental “imperative of responsibility” demands, the traditional Kantian demands that we respect humanity in our individual actions toward one another, but in addition that that human action be tempered to reflect a systematic preservation of future humanity as ends in themselves and that nature as the condition for the possibility of humanity be protected in its own right as good in itself. This is the projection of the good life and the statement of Jonas's ethical theory through the “imperative of responsibility” which guides the use of the traditional Kantian imperative. Individual human beings must use the Kantian imperative as a rule by which to aim at the good life once defined. As members in social organizations, especially the largest, societies, we must employ Jonas's “imperative of responsibility” and therefore regulate the use of technology carefully for the preservation of life and the advance of the good life. Supplementing the Kantian imperative is required insofar as our actions must respect the dignity of nature

207 Jonas (1984 -A), page 10.

and the dignity of those human beings yet to come who need to be treated as ends in themselves, given that the power to destroy nature and humankind is in our grasp.²⁰⁸ The focus of Kant's imperative is incorrect, according to Jonas, insofar as morality is not simply the consistency of reason with itself for its own sake. Jonas's position is that

What matters are things rather than states of my will. By engaging the will, the things become ends. Ends may sometimes be sublime – by *what* they are, and even certain acts and lives may be so; but not the formal rule of the will whose observance is for any chosen end, or act, the *condition* of being a moral one, or, more precisely, of not being an immoral one.²⁰⁹

Several points are worth noting in this passage. First, the categorical imperative does not draw its value from the consistency of reason with itself but from the objects at which it aims, namely human beings as dignified beings worthy of respect. We have a duty to ourselves and others out of a sense of self respect and serving our own ends and respect for other human beings in like manner.²¹⁰ So as important as rational consistency might be to humanity, to continue with Jonas's thought

The *law* as such can be neither the cause nor the object of reverence; but *Being* (or instances of it), disclosed to a sight not blocked by selfishness or dimmed by dullness, may well instill reverence – and can with this affection of our feeling come to the aid of the, otherwise powerless, moral law which bids us to honor the intrinsic claim of Being. ... Yet not even "reverence" is enough, for this emotional affirmation of the perceived dignity of the object, however vivid, can remain entirely passive. Only the added *feeling of responsibility*, which binds this subject to this object, will make us act on its behalf. We contend that it is this feeling, more than any other, which may generate a willingness to sustain the object's claim to existence by our action.²¹¹

Truly separating himself from Kant here, Jonas states that we get the sense of worth not

208 As Jonas says, destruction of nature can either occur quickly through nuclear holocaust or slowly through sheer plunder of the planet.

209 Jonas (1984 -A), pages 89.

210 It is worth noting that unlike Barbara Herman, Paul Guyer, and Allen Wood, Hans Jonas was criticizing Kant for failing to think teleologically rather than reading teleology into his categorical imperative.

211 Jonas (1984 -A), pages 89-90.

only because of reason and the capacity to project an image of ourselves as worthwhile but due to an emotional component which drives us to value things purposefully. Responsibility, then, comes about not only by a rational recognition of power over something but also due to an emotional attachment to that for which we are responsible. As a prime example,

Finally let us remember that the care of progeny . . . , so spontaneous that it needs no invoking the moral law, is the primordial case of the coincidence of objective responsibility and the subjective feeling of the same. Through it, nature has educated us in advance and prepared our feeling for all other kinds of responsibility not so buttressed by instinct.²¹²

The feeling of responsibility emanates quintessentially from the capacity to bear children. The capacity is within human beings to reproduce. Along with this capacity to reproduce and a rational capacity to integrate the understanding of ourselves as creatures who reproduce, there is instinctual emotional attachment built into human beings (and one would assume many other living creatures – especially mammals) that draws us to the responsibility of being parents and keeps our attention focused on our progeny. So an integral part of Jonas's account of ethics and morality is the human capacity for sexual reproduction, the power of creating life, the self-conscious awareness of ourselves as reproductive, and the instinctual, emotional, and rational response to caring for children.²¹³ For Jonas, the cry of the newborn is the prototype of all relationships of responsibility insofar as the parents are the direct cause of the child and a natural responsibility is created by this direct causal relationship and the helplessness of the child

212 Ibid, page 90.

213 As noted earlier, Jonas depends on the human capacity for reproduction as a foundational element in his ethical theory and yet makes no reference to the reproductive capacity as integral to philosophical anthropology in *The Phenomenon of Life*. I will deal with this problem in the sixth chapter.

in need. It is from this natural responsibility that all contractual responsibility derives its possibility. The natural responsibility is unquestionable and irrevocable responsibility and valid *a priori*, whereas any contractual responsibility is conditional and valid *a posteriori*. It is clear then that according to Jonas, “in moral (as distinct from legal) status, the natural is the stronger, if less defined, sort of responsibility, and what is more, it is the original from which any other responsibility ultimately derives its more or less contingent validity. That is to say, if there were no responsibility “by nature” there could be none “by contract.”²¹⁴ So the responsibility that human beings assume for progeny is the quintessential relationship of responsibility from which all other extensions of responsibility into larger communities derives their context though in significantly more mediated, collective ways.

Jonas ties this most basic relationship of responsibility, parental responsibility, to political responsibility, explaining that the relationship of ruler to citizen ought to resemble that of parent to child and that political responsibility ought to be modeled on the natural responsibility. The comparison between parental and political responsibility made by Jonas encompasses eight points. First, in being a parent and being a politician, the responsibility involved is toward other human beings. The parent must care for his children and the politician must care for his citizens. The good of those over who we have power must be sought. Secondly, in both relationships, those with relative power must ensure the conditions for the continued existence of those under their watch. The parent of a newborn is under great duress to care for the child involved, as everything

²¹⁴ Jonas (1984 -A), page 95.

must be done for the child in order for it to survive. A complete path with all of life's necessities must be provided. The politician similarly carries the burden of trying to secure the continued survival of the citizenry in his or her society through domestic policy decisions and the continued survival of the globe through international relations. With the power to wage war, to maintain the existence of human life in general and not be the cause of human extinction, the politician is in a position of guarding life and death, a situation especially prescient under the situation of nuclear proliferation. Thirdly, Jonas shows how both parents and politicians are like artists that shape other people. When parents raise children, they prepare their children for society and the world,²¹⁵ which means that they must endow children with certain knowledge and habits that will enable them to lead the good life among other people. Politicians, while they lead and represent a people, create the people in a certain image through the laws and policies that they make and enforce. Fourthly, both parent and politician are responsible for the total being of their charges. Parents are responsible for the habits of behavior that children get into and for the people who the children become, good or bad. Politicians influence who their citizens become by making and enforcing laws, by severity of punishment, and by the constitution they defend in the first place, if one exists. Fifthly, according to Jonas, there is an intertwining of the two types of responsibility. By being a good parent and instilling certain values in children, a parent makes a child capable of being a good citizen. Likewise, good politicians can make the job of parenting easier by creating

215 I give note to a family friend, Mrs. Luz Beck for this expression that so closely mirrors Jonas's meaning.

policies that support that values of parenting.²¹⁶ Much of this intertwining, for Jonas, involves education. Sixthly, both involve a sentiment of love for the subject. Parents must feel an attachment for their children and be moved to care for them out of this sentiment. Politicians, as members of the same community, must take on a sense of love for the community insofar as it must be maintained or improved under their watch. Seventhly, the parental responsibility is continuous into adulthood and so the care for the child must be continuous and carry through adulthood. In like manner, the watchful eye of the politician must always be opened to the never ending needs for policy maintenance even if the person in the position changes over time. Lastly, both parents and statesmen must be looking toward the future of their wards, to their continuance and to their successful continuance.²¹⁷ The Heideggerian element of care as temporal movement into the future as defined by the past and acted out in the present, is applied here to responsibility for others. To use Heideggerian terminology, it is not only the individual human being who must be resolute in being responsible for his own existence. Parents must be resolute in their care for their children's future and politicians must be resolute in their care for the future good of citizens and all humanity insofar as power extends so far. Jonas differs from Heidegger substantially by understanding human social existence as an authentic way of being.

It must be admitted that Jonas's extrapolation of the responsibility of parent over child only carries so far with regard to how politicians ought to lead citizens. In the best

216 An example of this would be public schooling as a political responsibility through taxation and meal programs in these schools.

217 Clearly Jonas is inspired by Aristotle and Hegel in understanding society as a natural arrangement and an extension of the family unit.

sense of being a politician, the first of Jonas's points of comparison must be true. The interest of the politician must be on the citizens and only the citizens. To the extent that the politician is also a citizen, then the politician may look after self-interest but only as an equal to other citizens. To the extent that politicians look after their own interests at the expense of the good of citizens they fail in the role of politician just as the parent who does likewise with their children. The rejoinder to this in both cases is the parent or politician who cares for themselves so as to continue doing well in their role. As an instance of this, the parent who works so much for the good of their child such that it becomes unhealthy actually hurts their child in the pursuit of helping them. Parents must care for themselves at least enough to continue being parents just as politicians must look after their well-being toward this end. Toward this end, the second of Jonas's points of comparison between parent and politician is also true but in a qualified sense. Parents must look toward the continued existence of their children into the future. Politicians with the special responsibility over a nation must take care to interact with others nations in such a way that the monstrous power of warfare is not the cause of extraordinary and undue death. Most importantly though, with the power through nuclear arms proliferation to utterly destroy life itself, special care must be taken on the international level of politics to ensure not only the preservation of one's nation as a people but the preservation of people and nature in general.

With regard to the third point of comparison, of the responsibility of the artist for the work of art, the parent of children is responsible along with teachers, religious leaders and friends for instilling values in the child and guiding them in the instruction of good

life. However, while politicians can attempt to shape how people live and use science and technology to help guide people toward well-being, politicians are not the primary source of shaping people's lives and when they are it tends to require much violence in order to accomplish this vision. The purges of Stalin in the name of installing socialism in the former Soviet Union are an example of such violence. The artistry of the politician, if it is to be considered a process of shaping the citizenry (and not more like a process of standing-guard), must not destroy the work of art in order to complete it. Therefore, the politician who acts like an artist likely more often than not is overstepping certain boundaries as adult citizens come with values already instilled. Where Jonas's third point about a politician is true only in a very qualified sense of being an artist, the fourth point of comparison is significantly incorrect especially in regard to nations where democracy holds sway. Politicians are only responsible for the total being of their citizens where citizens have no control over the course of their own lives. Parents are responsible for the total being of their children and this diminishes as children realize maturity, politicians who have this much control over their people would likely have to resort to violence in order to maintain their power and again destroying the work of art in order to perfect is contradictory.

Jonas is correct about the fifth point insofar as the intertwining of the roles of parent and politician complement each other. Government should be interested in helping parents when and where they can and likewise parents can help make their children into better citizens by instilling the value of law and order in their children. Toward this end, Jonas is correct as well about the sixth point of comparison. Parents should have deep

emotional sentiment and attachment for their children and it seems that nature provides for this. The sentiment and caring of a politician is something that needs to be instilled rather than something that comes perfectly naturally, as it does for most parents toward their children but Jonas has already told us that the relation of politician to citizen is artificial and can only be analogous to parenthood.

With regard the seventh point of comparison, continuity of responsibility, Jonas is correct but in a qualified sense, one that he understands and admits to. It is true that the parent must continuously care for the child but over time, what is required by the child in order to survive decreases to emotional attachment by the time the child reaches adulthood. In fact the success of being a parent may be best judged by the extent to which a child becomes self-sufficient. Parenthood has an endpoint at which independence is reached, in terms of responsibility. There is not endpoint to the leadership and responsibility of politicians. Certainly, political power changes hands generationally or periodically but the need for leadership of a nation never diminishes or goes away.

Lastly, Jonas is correct that parents and politicians are always concerned about the future of those over whom they have charge. The well-being of children and of citizens can never just be for the present but always looking into the future to avoid peril and provide stability over time. In Jonas's work it is the heuristic device of fear that must guide both parents and politicians to provide safety, security, and longevity to those for whom we are responsible.

With the extensive capacity of human power over nature through technological advance, political power can extend to the very limits of survival of the human species,

other species, and nature itself. Toward this end, using the “heuristics of fear,” Jonas warns that a “statesman ...must not gamble if he can avoid it, although sometimes he must.”²¹⁸ To act responsibly means acting in the way Aristotle described of the man of virtue insofar as “in the first place he must have knowledge, secondly he must choose the acts, and choose them for their own sakes, and thirdly his action must proceed from a firm and unchangeable character.”²¹⁹ Jonas’s responsible politician must, to the greatest extent possible and through excellent advising, be able to see into the future as far as possible, be knowledgeable of the consequences of actions taken for his nation and the world community and act for the preservation and betterment of all involved. The statesman must not gamble with humanity unless absolutely necessary insofar as the

Modern analysis of social and economic causalities is incomparably superior to all earlier knowledge thereof and permits extrapolations into the future which, uncertain as they are, set thinking about the future free from the mere analogies of the past and lead it beyond the iterative induction of experience (i.e., from precedent) into the deduction of the never been: thus from guessing to calculating the future.²²⁰

The responsible statesman is a person capable of the admission that “perhaps we cannot know what the *summum bonum* is, but we can surely know, when presented with it, what a *malum* is. We recognize evil even when we are ignorant of the good.”²²¹

The case was made above that the moral theory of Hans Jonas is a deontological moral theory that operates on Kant's second and third version of the categorical imperative, the “humanity as ends” formulation and the “autonomy” formulation. So the rules for acting involve a duty to respect human beings as ends in themselves and rational

218 Jonas (1984 -A), page 121.

219 Ross (2001), page 956.

220 Jonas (1984 -A), page 113.

221 Jonas (1974), page 99.

autonomous agents. This is to be augmented due to the rich and dangerously extensive capacity of human power with the “imperative of responsibility” which is meant to protect all human beings now, human beings not yet born and nature itself as purposive. But through this political responsibility, we can already find three virtues at work which give focus to the use of rules in terms of acting as a politician, a focus on the good life as Aristotle would have written it. The first of these virtues is responsibility itself. One cares for oneself. Insofar as one uses the power of reproduction and brings a family about, that family has a natural claim on the power over them to be cared for moving into the future. Though some deny this responsibility entirely or act it out disgracefully, the obligation is still there as displayed most clearly through the cry of the infant. One can do one’s part to contribute to the well-being of the society in which one lives by being politically informed and active. The politicians of the society can also act responsibly by creating law and policy that benefits their citizens and protects the world community concurrently. Being responsible implies being practically wise by caring for and nurturing that over which one has power. If it is to be considered an Aristotelian “Golden Mean” virtue, it would be the middle ground between being so careful about decision making that decision making halts and making decision carelessly and lackadaisically.

The imperative of responsibility also fosters the virtue and goal of humility through the “heuristics of fear.” Humility on the part of politicians and individuals is to use science and technology with an understanding of the consequences and to use it with the fear of one’s own end and the end of all of nature as the possible worst outcome. It becomes clear, according to Jonas that while

The new nature of our acting then calls for a new ethics of long-range responsibility coextensive with the range of our power, it calls in the name of that very responsibility also for a new kind of humility – a humility owed, not like the former humility to the smallness of our power, but to the excessive magnitude of it, which is the excess of our power to act over our power to foresee and our power to evaluate and to judge.²²²

The humility required for the modern age of advanced technology is one of wielding technology with sagacity and also realizing the limitation of that sagacity to see into the future toward all of the possible consequences. This humility recognizes both our limitations and our grandeur as human beings.

A third virtue espoused and fostered through the “imperative of responsibility” is temperance. Current industrialized society, with its immense technological capabilities, often makes excesses in growth, development, and production seem moderate. The profound abundance of material goods in many places of the world garnered through technological mastery of agriculture, manufacture, and transport makes it easy to not only have more than you need but to have no capacity to differentiate between needs and wants, these wants being endless. Aristotle made the case that temperance, moderation with regards to the enjoyment of physical pleasures, is necessary for the good life of a man so as to have physical enjoyment not be a distraction to more extensive pleasures of the mind. Jonas made the case that in order for the good life to be achieved for all humans, (or as many as possible) as well as the preservation of the planet, implies a more adequate distribution of the world's assets and material good which means

Self-denial for the developed countries, as raising the standards for the undeveloped is (without reckless violation of those boundaries) only possible at the former's expense, namely, by regional shifts of productive and consumptive capacities away from their densest clustering at one extremity of the spectrum: the closing of the gap – any tangible

222 Jonas (1984 -A), page 22-23.

converging thereto – will have to fall somewhere *between* the present, yawning extremes.²²³

The virtue of temperance for the individual would likely mean exactly what it meant for Aristotle with a stronger economic understanding of its value: restriction of material possessions if not wealth in general. Rather than promoting excess, we would have to promote frugality and charity. On the level of societies, this means citizens of developed and affluent nations being less materialistic and accumulating less while giving more to those in need in one's own society and then beyond. Government would have to make a challenge to excess through redistribution of wealth and taxation on excess. The danger here is that if redistribution is too severe and there is no incentive to risk-taking then there will be less to spread to those who lack necessities. Politicians will have to change the landscape of economic conditions so that all people everywhere have their necessities met at least, though it is not clear that Jonas would go to the extreme of someone like Peter Singer who uses the benchmark of "marginal utility."²²⁴ Using the model of parenthood to gauge the power, responsibility, and success of political power, Jonas would surely require the biblical notion of charity; not only giving people food and necessities now but also the capacity to feed themselves into the future.²²⁵ Insofar as being responsible to those under your protection comes first, citizens must take first priority just as parents look after their own children first.

Having shown that Jonas's ethical theory is comprised of at least three virtues for

223 Ibid, page 161.

224 See Peter Singer's *Famine, Affluence, and Morality* (Singer, 1971).

225 This is surely a failing of the welfare system in the United States. It often provides necessities without the education to accompany, an education that would allow a person to make a livelihood for themselves so as to avoid financial insufficiency becoming a way of life.

politicians operating at the level of international relations and towards their own people, in which private citizens can also partake with regard to supporting society and leading their families, it becomes clear that Jonas was cultivating a version of communitarianism. His understanding of communitarianism would involve nests of human relations from the level of the family up to and including societies operating on the global level with other societies, which would likely be operating on the three principles central to communitarianism:

First, any claim about what is to be accepted as true can only be validated under conditions of cooperative enquiry. Second, common values validated by communities of co-operative enquirers should form the basis of mutual responsibilities to be undertaken by all members of those communities. Third, power relations at every level in society must be reformed so that all those affected by them can participate as equal citizens in determining how the power in question is to be exercised.²²⁶

Jonas's most important community would involve the collection of all societies in the world, operating within a collective understanding that all people are to be looked after and their needs met, that the human race is to be looked after in general and that nature is to be preserved as the setting and the condition for the possibility for all purposive behavior, human or otherwise. Finally the two most important restrictions in terms of the “image of man” and what that projection of human possibilities allows is the preservation of the environment through ecological science and the preservation of the human genome and its pool of possibilities.

226 Tam (1998), page 7.

CHAPTER 6 DEFENDING JONAS'S ONTOLOGY AND ETHICAL THEORY

Among the Vanguard

In my view, what I have told you about the multi-perspectivity of biological phenomena and the interwovenness of the different perspectives show that Hans Jonas' philosophy of biology is far from being an untimely or anachronistic enterprise, both with respect to its methodologies and its results. Wherever Hans Jonas really stood when, in 1991, he located himself in the rearguard of the philosophical troop or in the vanguard of a new orientation in philosophy, these days, his philosophical biology seems to be, or at least ought to be, right in the middle of the philosophical battlefield.²²⁷

This quote by Gereon Wolters in an article on Jonas's philosophical biology (Wolters, 2001) was instructive to me as I began preparations for writing this dissertation and it is under the auspices of which, I continue with this chapter which will defend Jonas's neo-Aristotelian philosophical anthropology and ethic. The criticisms that can be made of Jonas's works can be divided into two sets: those that one would consider from outside the framework of Jonas's thought with regard to philosophical problems that are as of yet not resolved (or perhaps cannot or even will never be resolved) and those that within the boundaries of Jonas's thought would make his thought more coherent. Those that involve criticism of Jonas's thought from outside the boundaries of his thought are: the accusation of essentialism, the accusation of using teleological conceptions in biology, the accusation of anthropomorphism, and the accusation of violating "Hume's Guillotine" – the distinction of facts from values. Those criticisms that issue from within the boundaries of Jonas's thought are: the accusation of anthropocentrism and the accusation that there is a missing explanation about human sexual reproduction in Jonas's

227 Wolters, page 97.

philosophical anthropology which prevents his philosophical anthropology from being coherent with his ethics. Some of these accusations have been addressed, if not fully refuted, in chapters 2, 3 and 4 and with regard to those I will recapitulate and embellish as necessary. As to those that I have not yet addressed, they will receive due attention. The main thrust of this chapter is an attempt to explain that Jonas's work takes a position as bridging a gap (which used to be a ravine) between continental phenomenology after Heidegger and the British analytical tradition. According to Gereon Wolters,

Analytic method in philosophy strives for an intersubjectivity and objectivity of its results in pretty much the same way as natural science. The price it has to pay for this is – as in science – a lack of comprehensiveness. On the other hand, phenomenology also has its price: for the gain of comprehensiveness, one has to pay the price of inferior intersubjectivity and objectivity.

To be sure, phenomenology is far from being arbitrary – it has its methods and its rules. Phenomenology is a discursive, argumentative enterprise and, thus, qualifies as philosophy. And phenomenology further arrives at results that are often widely shared. Yet, it is inferior to analytic philosophy in the following respect: the more interesting the results of a phenomenological approach, the less intersubjective and objective and the more relative to a particular culture they are.²²⁸

Jonas can be read by analytic philosophers as a reminder that the experience of the lived body, as a lived body, must be accounted for by science and philosophy of science. As some philosophers from among those ranks have realized by either granting reality to consciousness²²⁹ or understanding the explanatory power of consciousness as a concept,²³⁰ reductionism expels meaning as it simplifies explanation and therefore does not adequately explain. This is likely the most significant import of the phenomenological tradition: the understanding of lived experience by those experiencing

228 Ibid, page 95.

229 Thomas Nagel (Nagel, 1974) and John Searle (Searle, 1992) argue in this direction.

230 Daniel Dennett does this if he does not grant reality to consciousness with his “intentional stance” (Dennett, 1987, 1995, and 2003).

life. Jonas can be read by continental philosophers as a reminder that, no matter what experience one has as an individual based on sex, sexual preference, race, or creed, there are in fact elements of all possible human contexts that unite us in our humanity, regardless of context. This is to imply that while neither school of thought may find Jonas's methods completely satisfactory, both can learn something of the other side and see that the knowledge gained through the understanding of both can be more than the sum of the knowledge of each by itself.

The Charge of Essentialism

The question has been asked by Strachan Donnelley (Donnelley, 2002, 1nd 2001), as to whether Hans Jonas promulgates a version of essentialism. To be clear in answering this question, we must understand what essentialism is, how it relates to biology and philosophy, what forms it might take especially in biology and the philosophy of biology, whether Hans Jonas commits to any of these forms in his philosophical biology or philosophical anthropology, what would make it philosophically imprudent to do so, and how he might be defended against this charge if in fact he is guilty of said charge.

Essentialism, very generally, is a theory that claims that there are objects or entities that have essential features to them. This implies in no uncertain terms that the lack of any such features would keep the object or entity in question from being of a certain type. For instance, an essential feature of a written sentence would be words. Without at least one word, such as a verb commanding a certain action, there would be no

sentence. Punctuation would be another essential feature to a written sentence.

Essentialism can be a theoretical approach to many areas of study, from art to history and from ethics to sociology. However, there is likely no other area of study than biology, where the term essentialism has been used, where it has become such an anachronism to so many biologists and philosophers.

To be an anachronism means to be out of step with the time in which we live or to be too late for the sake of relevance. Clearly Plato was an essentialist and so was his greatest student, Aristotle but in a substantially different way. For our purposes, Aristotle's conception of the soul of living creatures is a version of essentialism. As explained above,²³¹ Aristotle understood that living creatures were members of species, natural kinds that were once and for all the same and defined according to certain characteristics present in the soul. The absence of any of these characteristics would disqualify the individual in question from membership and a defect in any of these qualities would imply that the individual was a defective member of the species. The soul of the living creature was the design or guideline whereby the creature would grow and develop into a member of a species and that if we take genetics seriously, Aristotle must have been explaining something like the genome of the living creature with its constitutive DNA with his concept of the soul, be it a rudimentary concept of genetics. But of course, Aristotle had this wrong and it was Darwin and evolutionary biologists since who have proved this time and again in significant detail.

Darwin's theory of evolution by natural selection would seem to imply that

231 See chapter 2 above.

species do not really exist in terms of being permanent kinds in the natural landscape. Each living creature is a gamble. Inheriting its genetic information from its progenitor(s), it is a combination of characteristics, a statistically random physical instantiation of these characteristics brought to life in an environment where its very existence is proof of the success of the genetics of its progenitor(s). It is a success story of its progenitors but not yet itself successful until it survives, thrives, and reproduces creatures that are like its self in its given environment. And while all living creatures inherit what they are to be from their progenitor(s), the genetic information, over time, changes or evolves through recombination and environmental stressors, so that the concept “species” is of nominal use and biological nominalism must be admitted. As Hans Jonas tells us “the picture is changed when it is admitted that species [are] only relatively stable, and that this stability represents only the temporary equilibrium among the forces which generally determine the structure as successful.”²³² The picture for biologists and philosophers certainly has changed. When laymen use the term species, we typically know what we mean: creatures that look a certain way and have certain physical capacities or characteristics. When we look around us and see other creatures that look like ourselves, human beings/*homo sapiens*, we call them human beings/*homo sapiens*. But that term is not so simple to use effectively or correctly when one takes the theory of evolution into account as living creatures and their DNA are constantly in a state of flux. As stated above,²³³ most any species concept one chooses (and there are several such concepts in competition for use in biology), is an attempt to find and explain the essential systematization of separations

232 Jonas (2001), note 6 - page 50.

233 See chapter 2 above.

among types of living creatures. So it would seem that biologists, when they are making an attempt to systematize according to species, they are not simply being pragmatic about the use of the term species and finding the simplest or most useful approach, they are seeking for the truth, the ideal or essential mode by which species are divided, if in fact they are divided in such a rigid fashion at all. This implies that there is another way that biologists can be essentialists, by looking for the essential way in which new varieties of living creatures emerge even if each of those varieties are examples of a “temporary equilibrium.” I will return to the issue of emergence below but, it must be clear that when biologists are trying to discover the essential nature of change rather than the essential natures of the types of living creatures which are changing, they are still seeking essences to life itself.

With regard to essentialism in the work of Hans Jonas, the question is asked by Strachan Donnelley, in his article comparing the ideas of Hans Jonas and eminent evolutionary biologist Ernst Mayr, “[h]as Jonas in fact fully dispensed with traditional essentialist concepts such as eternal forms or types, moral or otherwise?”²³⁴ Certainly Jonas was not entertaining anything like Aristotelian species that are eternal. In the above quotation Jonas explains his understanding of a species as being “a relatively stable.... temporary equilibrium.” So Jonas is not committed to the traditional form of essentialism as was Aristotle. But was he committed to the second variety that Marjorie Grene and David Depew so aptly describe (Grene and Depew, 2004) with regard to taxonomic systematization in general? The answer is a resounding yes, resounding

234 Donnelley (2001), page 159.

because if Grene and Depew are correct, then any biologist interested in systematization of species concepts is likewise committed.

By explaining an ontological distinction between matter that is alive and dead matter, Jonas is committing himself to a form of essentialism. The essential nature of integrated living matter, living creatures, is “needful freedom” and identity in difference as “needful freedom.” Jonas made the case that at every level of life there is some interest at work, that interest being the continuation of the individual life in question. As Jonas explains, in terms of the subjective experience of interest in life’s continuation

The principle of continuity requires us to concede an endless shading, in which “representational” subjectivity surely disappears somewhere (presumably in forms with no specific sense organ yet), but sensitivity and appetite as such probably nowhere. Even here, to be sure, we are still dealing with “subjectivity,” but with one already so diffuse that the concept of an individual, focused subject gradually ceases to apply, and somewhere the series trails off into the complete absence of any such subject. Therefore also into the absence of aim and urge? Not necessarily. On the contrary: in the reverse direction, ascending from the bottom upward, it would be incomprehensible that subjective striving in its particularization should have emerged without striving whatever within the emergence itself. Something already kindred must have carried it upward out of the darkness into the greater light.²³⁵

From this we can take it that Jonas understood living matter to be ontologically different from matter not involved in life, at least because of the interest that living creatures feel with regard to their own survival and the lengths they are willing to go to survive. Life has an essence in the very capacity to be interested in its continuance.²³⁶ Alongside this consideration of subjective interest and the use of the capacities that the living creature has to survive, is the ontological fact that living creatures have a physical identity in spite of the process of metabolism which over the course of a lifetime demands that the set of

235 Jonas (1984 -A), page 73.

236 This of course works at two levels, the level of the individual and the level of reproduction as I will explain below.

constituent particles of which the body is comprised is always different. This is most true and clear with human beings, Hume's skepticism notwithstanding. But to take this ontological difference seriously implied to Jonas that life emerges. But an important philosophical question concerns the definition and extent of emergence.²³⁷ Are new varieties of living creatures emergent? Is life itself an emergent property of matter? As Mark Bedau and Paul Humphreys explain with regard to emergence,

Emergent phenomena frequently are taken to be irreducible, to be unpredictable or unexplainable, to require novel concepts, and to be holistic. This list is almost certainly incomplete, and not all of these features are present in every account of emergence, but the cluster indicates how philosophers usually think of emergence.²³⁸

The details of current strains of emergence theory are beyond the scope of this work but it will be adequate to say that

Large parts of chemistry had been reduced to physics and that molecular biology, itself amenable to reduction to physical chemistry, held out the promise of reducing large parts of biology. The sparse view thus has encouraged a focus on consciousness and other exotic phenomena as the most appropriate candidates for emergence.²³⁹

Emergence has been so limited, to discussions about the reality and/or reducibility of consciousness, human or otherwise, because so much of biological explanation can be understood through chemical and physical foundational principles. But as a number of authors including Saul Kripke (Kripke, 1971), Thomas Nagel (Nagel, 1974), Frank Jackson (Jackson, 1982), and John Searle (Searle, 1992) have explained, consciousness cannot be explained or explained away by neurophysiological accounts of brain states.

237 Again, for an excellent set of introductory readings on emergence theory both by philosophers and scientists, see the recent anthology of readings by Mark Bedau and Paul Humphreys (Bedau and Humphreys, 2008).

238 Bedau and Humphreys (2008), page 9.

239 Ibid, page 12.

Such an explanation does not capture the reality of, for instance, the experience of being a bat experiencing the world through sonar (Nagel, 1974) or, more generally, the experience of pain (Kripke, 1971), (Jackson, 1982), and (Searle, 1992). One can conclude from these arguments that even if consciousness and the subjective experience of stimuli could be reduced to neurological functioning and Searle especially denies this possibility ontologically, such reductionist explanations would not affect the reality or truth of subjective experience. As I have shown,²⁴⁰ Hans Jonas was considering very similar arguments in *The Phenomenon of Life* with regard to the experience of living creatures as “needful freedom” that must metabolize. The consideration with regard to the pain of being hungry (in those types of creatures with some form of central nervous system) and with thoughts of impending death associated with starvation (in those types of creatures capable of such high levels of thought) are parts of the subjective experience of the living individual: physical and psychological pain especially as is clearly understood in human beings. Strict forms of emergence being what they are and including the criterion of irreducibility, there are scientists and philosophers who will disagree with Jonas’s use of the term emergence insofar as he is explaining life itself as an emergent property of matter. But by understanding that reduction does not imply loss of meaning as John Searle believes, we need not deny the reality of subjective experience or consciousness much less the meaning of being alive: “needful freedom.” Jonas was also explaining in general what Thomas Nagel explained about bats, that the closer a creature is to a creature like us, the more their subjective experience is like ours and that

240 See chapter 2, above.

subjective experiences register the same way in human beings in general. The human capacities that we have will assure that while we may have different life experiences, there will be objectivity with regard to how those experiences occur. So at least with regard to essentialism, we can put Hans Jonas among the vanguard if not for every aspect of his thoughts on emergence, then at least with regard to the emergence of human consciousness.

The Charge of Using Teleological Explanations in Biology

To be clear about the importance of this accusation, first we must understand the difference between teleological and mechanistic explanations. With the differences understood and being clear that Hans Jonas advocates teleological explanations in his philosophical biology, philosophical anthropology, and ethics, we can then explain whether or not this is a prudent course of argumentation and whether or not Hans Jonas was in fact leading the vanguard or not. A teleological explanation is an explanation that defines the existence of an object in terms of its function preceding its form as an architectural blueprint precedes the construction of a building. When a university plans a new lecture hall for its main campus, it has in mind accepting larger incoming classes. The influx of a larger student body demands more classroom space, given the classroom space that the university has at its disposal is at peak usage. A new building is understood to be essential to the success of the university and its mission to educate students. The university then secures funds for the project, hires an architect to design a blueprint according to how many classrooms the school projects needing, hires a

construction crew to carry out the blueprint by building the building, and opens the building for use by faculty and students. Plans in mind become a real artifact. The corresponding mechanistic explanation of the building would be the brick and mortar construction of the building, its electrification and the installation of its plumbing by human hands, employing knowledge of the materials. In terms of how the universe as a whole works, Aristotle's teleological explanation has God as the goal and aim of all motion in the universe: perfect rationality. The soul of a living creature is the purposeful plan by which an organism of a certain variety actualizes its potential and develops its characteristics over time. According to Aristotle, living creatures grow and develop according to a plan and move toward Godly rationality in doing so out of desire. This is Aristotle's cosmic teleology.

As I have argued above, Hans Jonas's thought is not wedded to a cosmic teleology.²⁴¹ He allows for the possibility that the cosmos is God-created rather than an accidental "Big Bang." His thought does not require a creative act by God in order for the universe to come about. Jonas's work does not require a God toward which all motion is compelled to follow. A "Big Bang" account of cosmology and the theory of evolution would cohere with Jonas's philosophical biology if, as I stated in the previous section, we take the concept of emergence seriously. What Jonas does, is to make room for the possibility of a creator in a very special sense given the "Big Bang" and the theory of evolution.

In the eleventh essay of *The Phenomenon of Life*, during an exposition of the

241 See chapter 2, above.

concept of immortality and its possible modern interpretations, Jonas explains that given the physical reality of the world and all of its ramifications, immortality of the soul of the human being is out of the question. The immortality that remains is that of the individual actions we commit. The method by which our actions become immortal is through God. Jonas develops what he calls a “myth” or “likely imagination” with regard to creation. Incorporating scientific biological reality, Jonas’s universe as created by God, is compatible with evolution insofar as

The ground of being, or the divine, chose to give itself over to the chance and risk and endless variety of becoming. And wholly so: entering into the adventure of space and time, the deity held back nothing of itself: no uncommitted or unimpaired part remained to direct, correct, and ultimately guarantee the devious working out of its destiny in creation. On this unconditional immanence the modern temper insists. It is its courage or despair, in any case its bitter honesty, to take our being-in-the-world seriously: to view the world as left to itself, its laws as brooking no interference, and the rigor of our belonging to it as not softened by extramundane providence. The same our myth postulates for God's being in the world. Not, however, in the sense of a pantheistic immanence: if world and God are simply the same, the world at each moment and in each state represents his fullness, and God can neither lose nor gain. Rather, in order that the world might be, and be for itself, God renounced his own being, divesting himself of his deity – to receive it back at the end from the odyssey weighted with the chance harvest of unforeseeable temporal experience: transfigured and possibly even disfigured by it. In such self-forfeiture of divine for the sake of unprejudiced becoming, no other foreknowledge can be admitted than that of *possibilities* which cosmic being offers in its own terms: to these, God committed his cause in effacing himself for the world.²⁴²

In Jonas’s “likely imagination,” God gives himself, every iota of his power, over in the creation of the physical universe in the manner of an experiment with regard to the physical. With every movement in the physical world, God’s experience grows. With the instantiation of life, God comes to life, and

Hence the necessity of death and new birth – supplies the tempered essence from which the Godhead reconstitutes itself. All this, evolution provides in the mere lavishness of its play and the sternness of its spur. Its creatures, by merely fulfilling themselves in pursuit of their lives, vindicate the divine venture. Even the suffering deepens the fullness of the symphony. Thus, this side of good and evil, God cannot lose in the great evolutionary

242 Jonas (2001), page 275.

game.²⁴³

And with the advent of human beings

Transcendence awakened to itself and henceforth accompanies his doings with the bated breath of suspense, hoping and beckoning, rejoicing and grieving, approving and frowning – and, I daresay, making itself felt to him even while not intervening in the dynamics of his worldly scene: for can it not be that by the reflection of its own state as it wavers with the record of man, the transcendent casts lights and shadow over the human landscape?

God literally encompasses all of physical reality according to Jonas. But God is not only physical reality. Jonas makes the case that his cosmogony is not pantheism in that God is a project in the making projecting from the beginning of physical reality all that could be and is to become. One would have to classify Jonas's cosmogony as a version of panentheism: that God is the material universe that we live in but is not only that. God is in a state of becoming.²⁴⁴

This concept of God developed first in the last chapter of *The Phenomenon of Life* is expounded upon in *Mortality and Morality: a Search for the Good after Auschwitz*. God is to be understood as: a being who suffers, a being who is in a state of becoming, a being who cares, a being who is endangered, and a being who is powerful but not all powerful. God suffers insofar as the universe and all living creatures in it embody God. When joy is felt, God feels it. When pain is felt, God feels it. God is born, lives, and dies with all living creatures. God is in a state of becoming insofar as God includes the material universe as part of himself. As the universe changes so does God. God cares insofar as God includes something like the historical record of all that occurs in the

243 Ibid, page 277.

244 For an explication of panentheism see the work of Charles Hartshorne especially *Man's Vision of God and the Logic of Theism* (Hartshorne, 1941).

world, including benevolence and radical evil so that God is interested in what becomes of himself. God is endangered insofar as there is the risk that the vicissitudes of material existence could include utter destruction. Lastly, Jonas makes the case that God must be limited in his power, giving up what extensive power he had in creation – the “Big Bang.” His arguments against God's omnipotence are twofold. First of all, logically, Jonas understood that “omnipotence is self-contradictory, self-destructive, indeed, senseless concept.”²⁴⁵ Power is a self limiting concept. To have power implies that one has power to control something. Having the power to control something implies the existence of something that can resist your power. The capacity to resist control implies power on the part of that which is other to oneself. Therefore omnipotence is impossible as it would imply no resistance possible on the part of that over which power exists. Jonas’s concept of God is therefore coherent in that God used all of the power he had in the instantiation of the material universe and so he can no longer control any part of universe he has become. He then adds a practical argument about God’s limited power. This argument states that given that radical evil exists in the world, God must be in a position that he cannot intervene in the world to stop evil from occurring, otherwise, for instance, there would have been no holocaust. Having expended all of his power in becoming the material universe, there is nothing left to intervene in the world as God has already completely intervened. God is and encompasses everything that occurs in the material universe.²⁴⁶

245 Jonas (1996), page 138.

246 There are many interesting avenues for research regarding Jonas’s concept of God in terms of its possible acceptance by the various organized religions, its comparison with Hartshorne’s panentheism, etc., all of which are beyond the scope of this work. My purpose in explicating it is to explain that this

Another question that remains from Strachan Donnelly with regard to Jonas's work is, given "his 'Nature Purposive,' has he fully abandoned cosmic teleology?"²⁴⁷ First, given that it was Jonas's stated purpose to explain that God is a possibility and that, explained in a certain way, a concept of God could be made coherent with the "Big Bang" and the theory of evolution, we may simply brush away this excursion Jonas took into cosmology and theology as completely unnecessary to his philosophical biology, philosophical anthropology, and his ethics. However, if we take it to be a part of a system of thought, then we must examine it to see if he evades cosmic teleology whether of Aristotle's or of another type.

In Aristotle's cosmic teleology, God is already complete and perfect reasoning and that after which everything strives through movement in an existing rational universe. God is the ultimate and final cause; purpose lies in Godly rational perfection. Aristotle is explaining a cosmology, an understanding of the how the universe works as a closed rational system. Jonas on the other hand is describing a cosmogony and a cosmology, insofar as he is explaining, through coherent speculation, how the material universe came about and consists of God. Aristotle explains no cosmogony; the universe has always been. He explains to us how it works: in a rational and orderly fashion. But it can be definitively stated that as an example of panentheism, Jonas is not defending a cosmic teleology like Aristotle's. In Jonas's works, God is in a process of development and movement in the material universe is not attempting to achieve Godly perfection through desire for such. Movement among material particles is not necessarily rational at

is nothing like an Aristotelian cosmic teleology.
247 Donnelly (2001), page 159.

all.²⁴⁸ Organization of matter into planets for instance would be the effects of entropy over time. Life would involve the correct combination of material particles such that life emerges as Jonas's concept of "needful freedom" initially. Evolution is the history of the vicissitudes of matter that has taken on life. God truly comes to life and develops. There is no perfection that the universe moves toward. The universe and all its parts are in a process of becoming and therefore ever changing. This is nothing like Aristotle's cosmic teleology. But is it a cosmic teleology at all?

If there is no end result that the material universe, as the embodiment of God, is working toward, then Jonas's God must be understood to do one of two things by becoming physical. God could be considered the quintessential experimental scientist who sacrifices himself in order to gain knowledge of what it means to be physical. In this case, God is the embodiment of the scientific spirit of gaining knowledge at all costs, even the cost of allowing himself to become a monstrosity. The other possibility would be that God is a gambler and that his excursion into physicality is a lark. Given the gravity of Jonas's tone and the attribution to God of goodness and intelligibility, in addition to significant power, it is likely that Jonas would appreciate the analogy of God to an experimental scientist but not the analogy of God to a gambler. Experimental scientist or gambler, neither know the outcome of their action but can only hypothesize about it. Without the clear goal but only that some goal be reached, namely knowledge, Jonas's cosmogony and cosmology involve no cosmic teleology.

With the understanding that Jonas's philosophical arguments do not involve him

248 Also, if we take quantum mechanics seriously, then the movement of any particle is only statistically probable and not at all certain.

in cosmic teleological arguments, even when we consider his speculative cosmogony, we can turn to an important distinction to be made with regard to Kant's *Critique of Judgment*. In the second part of this work, *Critique of the Teleological Judgment*, Kant explains why it is that we as human beings make teleological judgments with regard to nature as a whole, with regard to the elements and organisms in nature fitting together and with regard to the integrity of organisms. For my purposes with regard to Hans Jonas, Kant explains why we make teleological judgments with regard to organisms and what those judgments mean.²⁴⁹ According to Kant, an organism "exists as a natural purpose if it is although in a double sense both *cause and effect of itself*."²⁵⁰ Kant explains this in three ways. In terms of being cause and effect of itself, the organism, causes itself in terms of reproducing members of its species, causes itself in terms of sustaining itself through nutrition and growth, and causes itself in terms of its parts being definitively required by the whole and the whole being definitively required by the parts. Kant's analysis is of a tree but the same analysis can be carried out for any living creature. According to Kant, given that organisms are so substantially different than objects of art, the only way we can understand organisms is through teleological explanations. As Kant says,

The concept of a thing as in itself a natural purpose is therefore no constitutive concept of understanding or of reason, but it can serve as a regulative concept for the reflective judgment, to guide our investigation about objects of this kind by a distant analogy with our own causality according to purposes generally and in our meditations upon their ultimate ground. This latter use, however, is not in reference to the knowledge of nature or of its ground, but rather to our own practical faculty of reason, in analogy with which

249 For work on Kant's account of teleological explanations in biology, see the work of C. Zumbach (Zumbach, 1984), C. Frick (Frick, 1990), Peter McLaughlin (McLaughlin, 1990), Hannah Ginsborg (Ginsborg, 1997), and Paul Guyer (Guyer, 2003).

250 Kant (1951), page 217.

we considered the cause of that purposiveness.²⁵¹

From the above paragraph, Kant explains to us that there is no way that an organism can be understood using only mechanistic explanations because of the way that its capacities are so richly integrated into its preservation as a whole. The organism is such that it is significantly akin to an artifact in that it has parts that work together but, as Kant explains with the comparison of a watch to the aforementioned tree,

A watch wheel does not produce other wheels, still less does one watch produce other watches, utilizing (organizing) foreign material for that purpose; hence it does not replace of itself parts of which it has been deprived, nor does it make good what is lacking in a first formation by the addition of the missing parts, nor if it has gone out of order does it repair itself—all of which, on the contrary, we may expect from organized nature. An organized being is then not a mere machine, for that has merely *moving* power, but it possesses in itself *formative* power of a self-propagating kind which it communicates to its materials though they have it not of themselves; it organizes them, in fact, and this cannot be explained by the mere mechanical faculty of motion.²⁵²

The human mind, in trying to understand the organism, attempts to categorize it as one would any artifact but an artifact is the product of an artificer, the organism seems self-sufficiently self-producing. In reflection then, the mind conjures further teleological explanation whereby nature produces the organism as an artificer produces an artifact. In this way, nature itself takes on a role of artificer when

Beings in nature which, considered in themselves and apart from any relation to other things, can be thought as possible only as purposes of nature. Hence they first afford objective reality to the concept of a *purpose of nature*, as distinguished from a practical purpose; and so they give to the science of nature the basis for a teleology, *i.e.* a mode of judgment about natural Objects according to a special principle which otherwise we should in no way be justified in introducing (because we cannot see *a priori* the possibility of this kind of causality).²⁵³

251 Ibid, page 222.

252 Ibid, page 220-221.

253 Ibid, page 222.

Kant means us to understand that, having no clear conception of how, mechanistically, an individual organism could exist much less come about, the mind reflectively conceptualizes organisms as if they were artifacts even though this is only what Kant calls a regulative explanation. It is useful in terms of conceptualization of nature and its parts but nothing constitutive of nature or its parts. Written nearly seventy years prior to the first publication of Darwin's *Origin of Species*, Kant's words linger somewhat anachronistically in terms of how fully mechanistic an understanding of nature and its parts would develop and how diminished this regulative feature would be in some opinions. And yet the problem lingers in parts in terms of the explanation of consciousness and the experience of the subject and in the minds of more than Kantian thinkers.

Hans Jonas is not a Kantian thinker in this regard. First as explained above, Jonas took materialism seriously and understood bodies, causation, space, and time as real modes of existence whereby life comes to pass for organisms rather than as mental constructions the likes of which make experience possible. Kant's categories of time, space, causality, and substance are structures by which the mind creates experience in cooperation with an external world of things-in-themselves. According to Kant, I can only know my body insofar as it is an experience as formulated by the mind. Jonas turns Kantian phenomenology on its head by making the case that it is only through my existence as an embodied organism that feels the pain of hunger that I can know the meaning of time and only through the experience of solutions to that hunger outside of my body that I can understand space. I embody causation by moving my body through

space to the solutions to my hunger. Life is a process livable through a real body constituted of real parts which have real needs. Those needs must be met over the course of real lived time and achieved through existence in a real spatial world outside the organism. The Kantian distinctions between phenomenal and noumenal existence, objects of experience and objects which allow for experience to occur, leads in Jonas's mind to solipsism because as Jonas stated "without the self-transcendence of the ego in *action*, i.e., in its physical dealings with the environment and in the attendant vulnerability of its being, the closure of the mental order is logically unassailable, and solipsism can appear as rational discretion instead of as madness."²⁵⁴ To Jonas, Kantian phenomenal reality must lead to solipsism and as Jonas explains in a footnote, solipsism is madness in that the individual who claims the truth of solipsism claims the existence of another person by arguing for its truth. By assuming the reality of bodies, causation, space, and time, Jonas has cleared the path to make constitutive rather than regulative teleological arguments with regard to organisms especially given the idea of the emergence of consciousness and life from mechanistic nature. These constitutive teleological arguments are born out in the biological sciences in what are called "teleonomic processes."^{255 256}

The Charge of Anthropomorphism

Anthropomorphism generally is the attribution of a human quality, characteristic,

254 Jonas (2001), page 32.

255 Mayr (1991), page 67.

256 Explained above in Chapter2.

or function to an inanimate object, a non-human organism, to nature itself, or to a deity.²⁵⁷ The original problem with anthropomorphism comes about through the attribution of human qualities to deities, thereby creating a logical error in categorization. Deities are thought to be substantially different than human beings and therefore not comparable to them. The same accusation of logical error can be attributed to those who attribute human features to other varieties of organisms. But this is a true logical error only if human beings are substantially different from the other variety of creature to which we are compared. We might say that evolutionary biology clears the way for anthropomorphic judgments as applied to other organisms, given that life in a continuum and varieties of organisms are related through ancestral lineage. But, while evolutionary biology denies the logical error of anthropomorphism, it creates a new problem of application. With the work of Darwin, writes Emanuela Spada, “it became clearer not only that animals are not machines, but also that humans are animals. And it is exactly when we are ready to recognize that animals are neither machines nor humans that anthropocentrism becomes a much more complex problem.”²⁵⁸ Under the auspices of evolutionary biology it becomes acceptable to apply anthropomorphism insofar as humans are similar to other organisms. There are, however, difficult questions to answer with regard to what types of creatures are comparable to humans, what capacities are similar or the same, and to what extent humans are comparable to other organisms. Recalling the previous discussion from chapter 2, Thomas Nagel sums up this set of

257 For a fine compendium of recent work on the topic of anthropomorphism see the volume *Anthropomorphism, Anecdotes and Animals*, edited by Mitchell, Thompson, and Miles (Mitchell, et. Al., 1997).

258 Spada (1997), page 38.

problems in his classic article “What Is It Like to Be a Bat?” when he says that there

Is a sense in which phenomenological facts are objective: one person can know or say of another what the quality of the other’s experience is. They are subjective, however, in the sense that even this objective ascription of experience is possible only to someone sufficiently similar to the object of ascription to be able to adopt his point of view – to understand the ascription in the first person as well as the third, so to speak. The more different from oneself the other experiencer is, the less success one can expect with this enterprise. In our own case we occupy the relevant point of view, but we will have as much difficulty understanding our own experience properly if we approach it from another point of view as we could if we tried to understand the experience of another species without taking up its point of view.²⁵⁹

Nagel’s point is that in order to know what it is like to be a bat we would have to engage the world from a bat’s point of view. To the extent that we can imagine a bat’s point of view, we can know what it is like to be a bat. If we cannot adequately engage a bat’s point of view then we cannot know what it is like to be a bat. In his example, it is difficult, if not impossible, to know what it is like to be a bat insofar as human beings do not have a sense like sonar built into our brains/sensory capacities.

In *The Phenomenon of Life*, Hans Jonas anticipates the charge of anthropomorphism in the two appendices of essay 1, “On Life, Death, and the Body in the Theory of Being.” He connects the charge of teleology with the charge of anthropomorphism. First, with regard to

Final causes, we must observe that their rejection is a methodological principle guiding inquiry rather than a statement of ascertained fact issuing from inquiry. There is not first a record of persistent failure to detect them in nature – which would anyway not warrant the *axiom* that they can on principle not be expected there and must indeed on no account be sought for. The mere search for them was quite suddenly, with the inauguration of modern science, held to be at variance with the scientific attitude, deflecting the searcher from the quest for true causes. To repeat, the exclusion of teleology is not an inductive result but an a priori prohibition of modern science. This it can only be if teleology contradicts the very type of being presupposed in possible objects of natural science and thus also the concept of cause proper to such objects.

Yet it has never been argued that final cause is a far-fetched or abstruse or even

259 Nagel (1974), page 442.

“unnatural” concept – on the contrary, nothing is more cognate to the human mind and more familiar to the basic experience of man: and this was precisely what in the new scientific attitude counted against it. Our very proneness to final explanation makes it suspect.²⁶⁰

With regard to history of philosophy and science, Jonas has made the case that in the modern scientific world view, there is an axiom at work which strikes from the record all teleological explanations and that this is not discovered in experience but is an a priori certainty that is never explained but just assumed. This assumption about final causes is carried so far as to undermine the notion of causation itself leaving philosophy and science in a state of skepticism, and this mostly thanks to the work of David Hume.

Finally,

The struggle against teleology is a stage in the struggle against anthropomorphism which by itself is as old as Western science. The criticism that started with the Ionian rejection of mythological personification had now come, under the new stimulus of scientific dualism, to discover the taint in the much subtler form of Aristotelian finalism. But the argument once under way did not stop there: it overtook even the efficient causation in whose favor final causes had been ousted. According to Hume, the idea of force and necessary connection, alien to the record of things, arises from certain internal impressions of the mind regarding its own working: reading them into the record of things is therefore another case of that transference of traits from human self-experience into nature which had become anathema to objective science. ...Explanation has thus been forsaken for mere description, which, by attaching quantitative values to the positions and positional changes in extensity and letting these values stand for the entities themselves, becomes pure mathematical description. The search for motive springs has been as completely abandoned as that for substantial forms, that is, causal explanation has final explanation into limbo; and indeed the very idea of explanation has evaporated with the anti-anthropomorphic movement in epistemology.²⁶¹

And given that the interpretation of nature as teleological is a foisting of human characteristics upon elements of nature and nature itself, anthropomorphism is something like the logical error that is described above. Therefore the attempt to expunge teleology from the scientific record is just part of a larger undertaking to remove all human

260 Jonas (2001), pages 34-35.

261 Ibid, page 36.

characteristics and even human characterizations from the scientific record, which is tantamount to removing humanity from science. Jonas's response is that, as philosophers and scientists have taken Hume's lead in striking teleological explanations and anthropomorphic accounts from science, they have stricken too much from the record and therefore crippled the scientific endeavor to a third person account of scientific phenomena while leaving the first person account untapped. Jonas's point is that in the attempt to remove all teleological explanations and anthropomorphic accounts from science, we have missed purposes at work in organisms striving to survive and that this striving pervades among living creatures. This is where Nagel's explanation is very close to Jonas's and shows that he and Jonas were thinking along the same lines only that Jonas was doing it in his record of publication a number of years earlier.²⁶² Human beings experience the world in terms of purposes, our purposes. But many purposes are shared among all people and to some degree all life, such as hunger. There are objective types of experiences among human beings given that our needs and capacities (for Jonas – the capacity to formulate mental images and all of the associated strengths of the human mind, the capacity to move, to feel, to perceive, and to hunger) are the same. There is a general and irrefutable context to human life. When we apply these types of understanding to other organisms, we can approximate, through similar biological features their experiences by imagination and see ourselves as existing in similar contexts. As an example with regard to another species, given that chimpanzees can fashion tools and learn sign language, their experiences of the world might be said to be

262 Of course, John Searle is thinking along this line as well in terms of consciousness and arguing against reductionism.

rather similar to ours, having the same set of five senses, though they do not construct things nearly as extensively as we do. A bat's experience of the world is significantly different than ours due to sonar perceptions. But the very capacity to imagine what it is like to be a bat is what allows for all echo-location devices to be developed and to work. Sonar is an approximation by human beings of what it is like to be a bat without ever actually feeling what it is like to have sonar built into us. From the bat's perspective, sonar is the condition for the possibility of one form of perception, just as it is in the human use of sonar, the condition for the possibility of perceiving that which is not directly visible. Therefore, from a pragmatic point of view, understanding that bats find sonar suitable to their purposes and that humans have similar purposes, gives us technological prowess – the capacity to make sonar equipment.²⁶³ More importantly, from Jonas's perspective, the idea that other organisms act purposefully and that in some ways their purposes are similar to ours makes all living creatures more worthy of respect, preservation, and care, a set of facts which are forgotten if we take Hume, some philosophers, and some scientists at their word. Lastly, taking into account that philosophers like John Searle and Thomas Nagel (and perhaps even Daniel Dennett), take the subjective account of consciousness as real and worthy of consideration and study, allows us to see that Hans Jonas was at the vanguard and that at least some philosophers were doing their best to catch up.

263 This is not to imply that Jonas's thoughts with regard to ontology, philosophical anthropology, or ethics are solely pragmatic, though they may have pragmatic implications for humanity. Jonas was arguing that modern science and the theory of evolution, rather than denigrating life to that which is disposable at any whim, ought to understand all organisms - and nature itself as the condition for the possibility of organisms – as objects of awe and admiration.

The Charge of Violating Hume's Guillotine

Recalling the discussion from chapter 4 with regard to the lack of entailment between factual statements and evaluative statements,²⁶⁴ David Hume in *A Treatise on Human Nature*, holds that value judgments are based on the influence of the passions. Considerations of human knowledge, whether in the form of “relations of ideas” or “matters of fact,” cannot affect moral decision making. Factual premises can neither entail nor infer moral conclusions, if we take the traditional interpretation of Hume. Hume's Guillotine and adherence to it in much value theory since has made it difficult to raise teleological considerations and be taken seriously among most value theorists. The preponderance of value theories after Hume are moral theories, versions of Kantian deontology, utilitarianism, or hybrids that attempt to take the best of both while shedding the weaknesses. As explained above,²⁶⁵ the Kantian legacy in moral theory is analogous to an archer with a quiver full of arrows but no bull's-eye at which to aim. The utilitarian legacy is analogous to the archer with several bull's-eyes at which to shoot but with no method of selection. If it is fair, as I think it is, to draw an analogy between value theory and archery, then only with an ethical theory that develops a concept of the “good life” and an accompanying moral theory, some set of principles guiding us in how to achieve the “good life,” can we have a robust theory of human action that can answer all possibilities with regard to human action without conflict or repulsive consequences. With the work of the late Wittgenstein and his followers as well as with the work of Heidegger, we can understand that as human beings, we always find ourselves in human

264 Much of chapter 4 is devoted to exactly this.

265 See chapter 3.

social contexts, whether as members of a family, a political party, a baseball team, etc. Given that we are involved in those contexts, our energies and efforts are aimed at achievements within those contexts through our very involvement. We care about the contexts within which we involve ourselves and about how we fare, whether we succeed or fail, within them.

Hans Jonas has made the case that there is a basic human context of “needful freedom” and the Aristotelian capacities of the soul, though an anachronism, are quite useful to describing a basic human context where human beings are historically focused beings with a capacity for self awareness, not just of themselves but of humanity through the “image of man.” Through this “image of man” we are given an historical record of human transgressions, understanding all along what human beings are capable of in terms of goodness – that which contributes to human well-being and preservation and evil – that which detracts from human well-being and preservation. This involves a projection of the human good as developmental over time and in regard to human beings as makers of their own images and destinies but grounded in the basic fact that all life, including human life, cares insofar as it struggles, and struggles insofar as it requires sustenance. All life is valuable insofar as from all life emanates value: the struggle to survive. Jonas gives us a way out of the seemingly endless efforts on the part of moral theories which simply fail to recognize that without a purpose driven way to win, no game can be played. Again, without a target, there is no archery or archer.

The Sum of Criticisms External to Jonas’s Work

With regard to the four criticisms considered above, the nexus of the four criticisms revolves around whether or not emergence is real. Jonas's essentialism, an essentialism that most basically differentiates collections of matter that are alive from those that are not, depends on whether or not there is an ontological difference between the two. Jonas's claim is that the ontological difference with regard to organisms is that any collection of matter that we would call an organism, one with organized parts that support an integrated systematic whole, expresses at some level an interest in its own survival and preservation over time through metabolism. Life emerges along with purposeful action. To live is to have purpose. All life is at some level driven by functional immanently teleological dynamics. The systems of an organism work together to keep the organism functioning according a plan governed by genetics. That plan is then passed along to progeny through reproduction. All organisms exist purposefully for their own preservation and the preservation of their kind. We can see in Jonas's thinking a direct extension of the thoughts of Heidegger. Jonas is guilty of anthropomorphism, explaining other varieties of organisms in terms of human characteristics, those of conscious, intentional activity. If a characteristic of human conscious life is to care, to be interested and self conscious in the sense of giving meaning to one's existence through being actively and thoughtfully living life, how else would we possibly interpret other types of organisms? Interpreting other living organisms struggling for sustenance is a study in translating what it must be like to be the other organism into the language of what it is like to be a human struggling for sustenance. The closer other organisms are to us in terms of genetics and functional capacities, the more likely their experiences of life

are to be similar to ours. Given that varieties of organisms emerge from common ancestry, we share in similar types of experience to the extent that we share in the same types of capacities. In our anthropomorphic analysis of chimpanzees we are likely to be doing a better job of interpretation than we could with regard to a bat. Given the capacity to fashion rudimentary tools, live in hierarchical/societal collectives, and learn sign language, chimpanzees would seem to have a degree of what Jonas called the image-making capacity. To Nagel's point once again, we do not have the first person account of sonar as a bat does. Building sonar equipment is as close as we can get. But the emergence of varieties of organisms from common ancestry would give us fair reason to extrapolate about their experiences based on ours. Lastly there is an essence to what it means to be alive and that has to do most basically with purposeful actions based in metabolism and reproduction (and for human beings sensation, appetite, locomotion, and image making). From biological facts, an ethical theory and a moral theory can be developed. The meaning of the first person biological account of life as "needful freedom" implies that given that all life is purposeful in its actions, the good emanates from it through genetics and human life is the variety of organism that can grasp this reality.

The Charge of Anthropocentrism

Anthropocentrism is the belief that human beings are the center of the universe in terms of stature, importance, consideration, and value. With this belief, human beings would be seen, as is the case in the Judeo-Christian tradition, in the philosophy of

Descartes, etc., as the greatest and most significant of God's creations insofar as we are made in the image and likeness of God, and therefore the world is ours to do with as we see fit. However, even in this setting where God seemingly presents human beings with the world, we would have to be seen as the stewards of the world. Given that we are God's greatest creations and given that the world is our home and source of life, we should care for nature and use it kindly for pragmatic reasons if not for the reason that it too is created by God and is therefore sacred. In *The Phenomenon of Life, The Imperative of Responsibility*, and several other essays, Jonas developed an ontology, a philosophical anthropology, an ethical theory and a moral theory that accounted for the good of humans and of nature. Insofar as human beings are the product of nature through evolution, we, like all other living creatures, are tied to our environment in terms of satisfying our needs, although humans, like few other living creatures, are so adaptable to so many environments because of what Jonas called the image making capacity – especially in science and technology.²⁶⁶ Nonetheless, we are tied to the Earth as the source of our sustenance and therefore, whether God exists or not, in Jonas's sense or any other, nature ought to be treated with respect. It is clear that Jonas was specifically trying to transcend the anthropocentric viewpoint in his criticism of previous ethics when he stated that in all previous accounts “ethical significance belonged to the direct dealing of man with man, including the dealing with himself: all traditional ethics is *anthropocentric*.”²⁶⁷ Given the power of humankind in the past, no thought need have

266 For instance, the extraordinarily rugged climate of Antarctica is populated throughout parts of the year for the purpose of scientific research. This is only possible due to the capacity to construct buildings and heat said buildings so that the humans who live there can escape the bitter cold.

267 Jonas (1984 -A), page 4.

been given to threatening the very existence of other types of organisms or to nature itself. Human beings could not threaten nature itself. Presently though, the extent of human power is such as to put the very continuance of nature itself, including any and all organisms present, in jeopardy, through nuclear annihilation or through some form of slower ecological collapse of the Earth's life-sustaining capacity. Whether we like it or not, an ethics for the future, according to Jonas, must take the values of nature into account, at least insofar as it is necessary to our continuance, if not for more ideal reasons. Ethics and morality must evolve as we do through our technological advance. So there is a purposive advantage in realizing that along with preserving humanity as creatures capable of awareness of purpose, nature must be preserved as well as the environment in which we thrive. Human beings like all other living creatures are tied to an environment. The imperative of responsibility must not simply look after the "permanence of genuine human life on earth," but look after the Earth as the condition for the possibility of such permanence. If we value ourselves, we must also value nature.²⁶⁸

As a starting point, Jonas was trying to avoid anthropocentrism with regard to the source of valuation. But despite this effort, authors such as Strachan Donnelley (Donneley, 2002 and 2001), Vittorio Hösle (Hösle, 2001), and Richard Bernstein (Bernstein, 1995) have accused Jonas of perpetuating exactly what he sought to transcend. Reasons for these accusations are to be found in *The Imperative of Responsibility*. He explains two commandments of political responsibility as follows:

268 René Dubos argues in a similar way in several of his books but perhaps most directly in *The God Within* (Dubos, 1972).

The possibility of there being responsibility in the world, which is bound to the existence of men, is of all objects of responsibility the first.

“Existence of a mankind” means simply that there live men on Earth; that they live well is the second commandment. ...Its immediate execution is entrusted to the instinct of procreation, and so it can normally remain hidden behind the particular commands of human virtue, which work out its wider meaning.²⁶⁹

The essence of the life of any organism is (at some level) to struggle and therefore to be interested in its own preservation. Evolutionary struggle has equipped all living things with capacities for the struggle of individual organisms and the struggle of the varieties of organisms. From the arising of the characteristics and capacities that make human beings what they are, life itself takes on the capacity to be not only conscious but self-conscious, not only evaluative but self-evaluative, and not only powerful enough to change the course of life itself through technological innovations but responsible enough to control such innovation and make the veritable choice between life and death in the grandest sense.²⁷⁰ Human beings can understand that all living creatures exist as creatures driven to their own preservation, implying some degree of intentionality being present. Human beings can understand themselves as being among the most evolved varieties of life if not the most evolved variety. And human beings can, through the theory of evolution, understand nature as the ultimate condition for the possibility of life, even if life itself is a random occurrence in the movement of matter. Without nature there would not be life. Without varieties of living creatures, there would be no competition among them for scarce resources. Without competition there would be no evolution by natural selection. Without evolution there would be no human beings. Nature is our creator and is to be

269 Jonas (1984 -A), pages 99-100.

270 This is in spite of what Jonas has to say about the inadequacy of the “Baconian Ideal” to control technology.

cared for. Nature is the condition for the possibility of human emergence and the condition for the possibility of our continuation into the future.

Human beings have never had difficulty in finding themselves valuable, as the history of value theory has attested. What Jonas was arguing for was an ethical theory and a moral theory that would recognize not only the value of human beings as centers of valuation but recognize nature as the condition for the possibility of life and valuation as such and the condition for its continuation. According to Jonas, humans have recognized and should recognize themselves as valuable and as sources of valuation. We must, however, also recognize the capacity for such valuation in other organisms and value nature as its source. This is not to be taken as mysticism but as valuation emerging from nature as a possible arrangement of matter. With regard to the duty toward the preservation of humankind and nature, Jonas states that

We can subsume both duties as one under the heading “responsibility toward man” without falling into a narrow anthropocentric view. Such narrowness in the name of man, which is already to sacrifice the rest of nature to his purported needs, can only result in the dehumanization of man, the atrophy of his essence even in the lucky case of biological survival. It therefore contradicts its professed goal, the very preservation of himself as sanctioned by the dignity of his essence. In the truly human aspect, nature retains her dignity, which confronts the arbitrariness of our might. Ourselves being among her children, we owe allegiance to the kindred total of her creations, of which the allegiance to our own existence is only the highest summit. This summit, rightly understood, comprises the rest under its obligation.

This wedding of the value of humanity with nature itself as the condition for the possibility of humanity makes complete evolutionary sense insofar as organisms flourish in and are always wedded to an environment even if it can be most any environment as is the case for human beings. Human well-being is completely interwoven with the well-being of nature not only as the condition for the possibility of humankind but also as the

condition for the possibility of the continuance of humankind. Nature and humankind are in a symbiotic and dynamic process of existing together as one and our capacity to care for nature must catch up to if not overtake our capacity to destroy nature. Given this evidence of Jonas specifically explaining valuation and importance being dispersed throughout nature, can Jonas accurately be accused of anthropocentrism?

Toward this question, Vittorio Hösle has wisely explained a difference between strong and weak anthropocentrism (Hösle, 2001). In strong anthropocentrism, “man ... is the only being with intrinsic value.”²⁷¹ In weak anthropocentrism, “man is the being with the highest intrinsic value, but not the only one who can claim such an intrinsic value.”²⁷² He then coins a term explaining that he “would like to call the position for which man is the source of all value claims anthropogenetic, and the non-anthropogenetic the negation of this position.”²⁷³ He then makes the claim that Jonas can be ranked as weakly anthropocentric but “deeply antianthropogenetic – the ultimate ground of norms is not the human will.”²⁷⁴ Hösle’s suggestion that Jonas is weakly anthropocentric is correct. Jonas did believe that human beings had the highest intrinsic value but given that humankind is so wedded to an environment (seemingly any environment it sees fit to engage including other planets, if for a brief time),²⁷⁵ nature must be given an equal source of value as the condition for the possibility of all organisms including human organisms as well as the condition for the possibility of their continuance. Hösle’s coining of the term anthropogeneticism for the purpose of describing Jonas as antianthropogenetic is also

271 Hösle (2001), page 37.

272 Ibid.

273 Ibid.

274 Ibid, page 38.

275 I will argue further for the weak anthropocentric position below.

correct. The human will is a source of valuation but certainly not the only source as intentional activity toward the preservation of life pervades life as a definition, starting with metabolism in Jonas's work.

One could make the case that humankind is naturally going to care for the interests of humankind first and foremost out of self love.²⁷⁶ But Richard Bernstein very legitimately states that Jonas

Bases his ethics of responsibility on the ontological self-affirmation of life. ...But Jonas seems to slide from this very generic sense of "organic life" to the much more specific sense of "human life" ...But it is never entirely clear what warrants the move from the imperative to preserve organic life to the more specific conclusion that the primary object is to preserve human existence.²⁷⁷

Jonas makes it clear that human beings are unique in the magnitude if not the types of capacities we have. Despite other species having certain image making characteristics, no other species has built a locomotive vehicle, harnessed the power of the fusion reaction, or cured a disease. But this might be an indication of a good reason why Jonas states that "the Aristotelian biological hierarchy of 'souls' is in a way restored under the form of genealogical sequence: the evolutionary 'later' largely coincides with the Aristotelian 'higher.'"²⁷⁸ Human capacities being what they are by coming so late in evolutionary history, human beings have among the most, if not the most advanced brains in terms of what Jonas called the capacity for image making. This would likely indicate in Jonas's work, that certain other organisms ought to be protected and preserved insofar

276 Although this is not even clear given the state of the environment due to pollution in some parts of the world.

277 Bernstein (1995), page 18.

278 Jonas (2001), page 57, note 11.

as they are creatures like us.²⁷⁹

It is safe to say then, that Hans Jonas believed human beings to be the most significant source of value and valuation alongside nature itself. This is because human beings can not only promote value through purposive activities but recognize the meaning of purpose and understand ourselves as always in a condition to promote purposes. Human beings are not only reflective but self-reflective and nature is the source of our capacities most directly through evolutionary progress. Whether or not it is appropriate to recognize progress in nature due to complexity as Jonas did, due to the capacity of human beings to survive in any environment²⁸⁰, it has been suggested by Ernst Mayr, that human beings are the most progressed creatures. Mayr states that

When discussing evolutionary progress one seems to be quite unable, since one is a member of the human species, to get away from criteria that would give man supremacy. However, there are two criteria of progressiveness that would seem to have a considerable amount of objective validity. One of these is parental care (promoted by internal fertilization), which provides the potential for transferring information nongenetically from one generation to the next. And the possession of such information is of course of considerable value in the struggle for existence. This information transfer generates at the same time a selection pressure in favor of an improved storage system for such remembered information, that is, an enlarged central nervous system. And, of course, the combination of postnatal care and an enlarged central nervous system is the basis of culture, which together with speech, sets humans quite aside from all other living organisms.²⁸¹

A similar argument is made by Theodosius Dobzhansky when he claims that “conclusive evidence of man's superior position is that he and he alone, has evolved the genotype which enables him to develop culture.... Unless mankind chooses to destroy itself by atomic explosions or similar means, it is more likely to endure than any other

279 It would seem that the organisms to begin with would be the great apes that have rudimentary capacities to fashion tools and that could be considered *homo faber* as Jonas refers to human beings.

280 Julian Huxley argues in this direction (Huxley, 1942).

281 Mayr (1991), page 63.

creature.”²⁸² In Mayr's and Dobzhansky's²⁸³ arguments, progress is akin to success and human beings, being capable of traversing the vicissitudes of the most rugged environments due to our mental capacities for storage and retrieval of information as well as our capacity to pass information along through language both spoken and written, are extraordinarily successful and therefore evidence of progress in evolution, giving credence to Jonas's weak anthropocentrism with regard to the human image making capacity.

The Missing Account of Sexual Reproduction

As described above,²⁸⁴ Hans Jonas's philosophical anthropology describes human beings most basically as the most highly evolved and complex examples of “needful freedom.” Human beings are “needful” insofar as the internal processes of metabolism and functioning in general demand sustenance for the continuance and preservation of life. In this way we are like all living creatures; we hunger and the denial of this hunger implies certain death. This requirement is the experience of time as the determination of life's immediate outcome: life or death. This experience of required sustenance carries us forward actively to consume said sustenance. We experience “freedom” insofar as our spatial existence in a body that sees, hears, smells, touches, tastes, suffers, enjoys, and moves can, among other things, acquire sustenance from that which is outside its boundaries. Many of these features we share with many other living

282 Dobzhansky (1955), pages 373-374.

283 A similar argument is made by Dobzhansky in *Mankind Evolving* (Dobzhansky, 1962).

284 See chapters 2 and 3.

creatures in the animal kingdom. But, according to Jonas, there is one feature that no other creature enjoys,²⁸⁵ the image-making capacity, which is at the basis of fashioning tools, art, science, language, technology, and ethical and moral evaluation. Jonas states that

The artifacts of animals have a direct physical use in the promotion of vital ends, such as nutrition, reproduction, hibernation. A representation, however, changes neither the environment nor the condition of the organism itself. An image-making creature, therefore, is one that indulges in the making of useless objects, or has ends in addition to the biological ones, or can serve the latter in ways remote from the direct usefulness of instrumental things. Whichever it is (and it may be all three), in the pictorial representation the object is appropriated in a new, nonpractical way, and the very fact that the interest in it can shift to its *eidōs* signifies a new object relation.²⁸⁶

According to Jonas, human beings can use mental representations to serve useless or seemingly useless purposes, purposes other than the biological ones, those purposes that are remote from the here and now, or perhaps all three. He leaves it an open question as to which of the three but let us assume for the sake of simplicity that all human purposes are biological purposes and that some of those purposes are remote from the here and now.²⁸⁷ It would be safe to say that biological purposes are those that pertain to the preservation of the individual, the group, or progeny in terms of length and overall quality of life. Then all purposes have something to do with either nutrition, protection from the environment, enjoyment, or reproduction in terms of the individual, the group, or progeny.

285 This point is debatable but can only be answered adequately by the zoologists. It would seem that the grief rituals of elephants would be an example of what Jonas was speaking of in humans, found in another species.

286 Jonas (2001), pages 158-159.

287 I find it somewhat difficult to imagine a purpose that is not in some way explainable in terms of making life longer and/or better for the individual, the group, or progeny. But examples might include cultural practices that had great instrumental value in the past but are preserved in the culture for the sake of preservation of that culture, such as the Jewish and Muslim tradition of abstinence from pork.

Particularly among our purposes and the capacities that precede these purposes, Jonas makes issue of our scientific and technological capacities with the “Baconian ideal” of mastery of nature for our good: the instrumental view of nature. These scientific and technological powers grow from our image-making capacity to retain and rearrange information according to our imagined purposes. Jonas makes the case in *The Imperative of Responsibility* that these scientific and technological capacities are significantly out of sync with our ethical and moral capacities and that as emanating from the same beings but be brought into alignment for the good of ourselves and nature itself as the condition for the possibility of our inception as a type of organism and our continuance into the future. Clearly,

Progress, so far, has been lopsided in that moral progress has not kept pace with intellectual, that is, scientific-technological, progress; and that, within the intellectual orbit itself, the knowledge of man, society, and history has fallen behind that of nature; and that both these gaps must be closed by a respective catching in the backward areas, so that man catches up as it were with himself and straightens out his hitherto uneven progress, during whose one-sided pursuit he has neglected the other side.²⁸⁸

According to Jonas, the human capacity to wield nature to our purposes has grown to the extent that organisms in general and nature as a whole are in danger of extinction. As the creatures with the power to wield nature and ourselves, which escalates daily, human beings are called upon by our own public image to control ourselves as we manipulate nature and ourselves, the “image of man never leaves him, however much he may wish at times to revert to the bliss of animality.”²⁸⁹ We are always called upon to live with the “image of man” and insofar as through our actions we contribute to this image, we can

288 Jonas (1984 -A), page 164.

289 Jonas (2001), page 186.

decide the characteristics which we desire the human countenance to have. All human beings share in the responsibility for our own moral countenance with respect to how we treat ourselves and nature and no people share in this more than do politicians.

Political responsibility, according to Jonas, is therefore to face the responsibility of holding the fate of the world in one's hands and to make decisions that preserve humanity (as the most significant and complex expression of valuation in nature), preserve the good life for humanity (making the "image of man" into the most beautiful countenance possible given our capacities), and preserve nature as our progenitor. To use the anthropomorphic analogy, with the emergence of humanity, "Mother Nature" allows her progeny a say in how nature progresses. With humanity, nature's products come of age. With this coming of age, comes the responsibility to preserve what at every instance in life's vicissitudes demands said preservation: action toward survival, at many levels conscious action toward survival, and at the human level at least, self-conscious long-term action toward survival. With his "imperative of responsibility," Jonas postulates that

We are, strictly speaking, not responsible to future human individuals but to the *idea* of Man, which is such that it demands the presence of its embodiment in the world. ...it entails that such a presence *ought* to be and be watched over, thus making that presence a duty for us who can endanger it. It is this ontological imperative, emanating from the idea of Man, by telling us why there should be men, also tells us *how* they should be. ... It follows that the first principle of an "ethic of futurity," committing to the future of man as such, does not itself lie *within* ethics as a doctrine of action (within which thereafter all duties toward future beings belong) but within *metaphysics* as a doctrine of being, of which the idea of Man is a part.²⁹⁰

Political responsibility, in a sense, is to share in the responsibilities of "Mother Nature" as parent. But this is an enormous point of contention for the coherence of Jonas's ethical

290 Jonas (1984-B), pages 50-51.

and moral theory. Given that his ethical and moral theories are ontologically based, valuation must issue from the nature of man and therefore, insofar as human beings are a product of nature, from nature itself. His philosophical anthropology must be capable of accounting for the parental responsibility of politicians when it has taken no account of parenting on the biological level.

It was Leon Kass, who by his own report (Kass, 2001 and 1995), first brought this problem to Jonas's attention, after Kass's student, Jeff Weiss, brought it up in a class, sometime in 1970. By Kass's account, Jonas responded to this criticism by stating that

This was the most serious and powerful objection anyone had yet raised against his account. He explained the omission in two ways. First, reproduction and sociality are not indispensable functions of life from an individual animal qua living thing: a sterile and celibate being, and even the last member of his species living on a deserted island, is nonetheless very much alive. ...But Hans's second reason was more important. I paraphrase: When I was writing this book I was still too much in the grip of the teachings of Heidegger and his view of life as (mainly) a lonely project over-against-death. Were he to rewrite the book, he said, he would make the necessary qualifications and corrections.

Having never rewritten *The Phenomenon of Life*, we can assume that while Jonas took this criticism seriously, he did not feel it necessary to include in a new edition of the book, an essay on sexual reproduction and familial responsibility, as part of his philosophical biology or philosophical anthropology. However, in a subsequent essay that appears in *Philosophical essays: From Ancient Creed to Technological Man*, "Socio-Economic Knowledge and Ignorance of Goals," Jonas explains that it is primarily due to metabolism *and* reproduction that human beings have developed the social science called economics, insofar as responsibility goes beyond one's own life. Human beings are not individuals who are radically alone and responsible only for ourselves and our own

continuance. We are responsible for our own progeny and so “there would be no economic life to speak of without care for the offspring. The needs of terminal individuals could be attended to in a makeshift manner.”²⁹¹ But, human beings are beings that desire not just metabolic sustenance but also sexual gratification. And while not all forms of sexual gratification produce offspring,²⁹² one purpose, if not the main evolutionary purpose, of sexual gratification is the production of progeny. Jonas was correct in his assessment of Kass’s criticism, that even a “sterile and celibate being” is still alive. But that does not mean that sexual reproduction as a means of continuing the species is not a crucial part of human life and that sexuality, whether as reproductive or otherwise, has a major impact on what human beings are. As explained above,²⁹³ Jonas understood that the science of biology needs to recognize the duality of genetic material and somatic organism and that evolution and life itself is an intertwined relationship of both. Jonas makes the case in “Socio-Economic Knowledge and Ignorance of Goals” that “responsibility,” deriving from the fundamental *fact* of reproduction, is as *constitutive* of the economic sphere as is (by general admission) “*self-interest*” or “*need*,” deriving from the fundamental fact of metabolism; and that therefore it is as *normative* to the economist for the evaluation of economic behavior and the critique of economic goals as “*need*” is usually agreed to be.²⁹⁴ The crux of the article in question is to find a proper role for economics and to show that given that economics as a social science has ontological roots in the necessities of the human organism, economics ought to be

291 Jonas, (1974), page 92.

292 For human beings, this would include masturbation, cunnilingus, fellatio, and the technological means of inhibiting reproduction known as birth control devices, to name but a few such practices.

293 See chapter 2, above.

294 Jonas (1974), pages 93-94.

wielded with care and responsibility and that risk should be minimized as the purpose is to serve needs that are individual, familial, and societal. But herein we find at least an outline of the missing account of sexuality that, most likely, Leon Kass and his student, Jeff Weiss, helped Jonas to produce. An edited version of this article would fit perfectly between essays 8 and 9 of the current edition of *The Phenomenon of Life*, under the title “Economic Man: Sexual Reproduction and Care for One’s Own.”²⁹⁵

Human beings are not solely individualists by nature. We are born and nurtured within a family unit. We grow into maturity and adulthood, individuating ourselves over a long period of time and many repeat the cycle by becoming familial creatures again insofar as we heed the sexual desire and procreate with its use. In this Jonas is following Hegel in the explanation of society as a massive extension of the family unit and of political responsibility as a massive extension of familial responsibility. As Jonas states in *The Imperative of Responsibility*,

The newborn unites in himself the self-accrediting force of being already there and the demanding impotence of being-not-yet; the unconditional end-in-itself of everything alive and the still-have-to-come of the faculties for securing this end. This need-to-become is an in-between, a suspension of helpless being over not-being, which must be bridged by another causality. The radical insufficiency of the begotten as such carries with it the mandate to the begetters to avert its sinking back into nothing and to tend to its further becoming. The pledge thereto was implicit in the act of generation. Its observance (even by others) becomes an ineluctable duty toward a being now existing in its own authentic right and in total dependence on such observance.²⁹⁶

Metabolism, as the ontological difference, demands that each human being care for itself,

295 Given that *The Phenomenon of Life* is a collection of essays published over the course of several years and loosely brought together, if one were to edit together a compendium of Jonas’s philosophical anthropology, this could be done not only without violence to his ideas but much to the betterment of the coherence of his thought. As the primary example, the tenth essay of *The Phenomenon of Life* is simply out of place in a book otherwise devoted to the combined themes of philosophical biology and philosophical anthropology.

296 Jonas (1984 –A), page 134.

through satisfying metabolic need; responsibility for the preservation of the self. The ontological fact of sexual reproduction and the helplessness of the newborn demands of each human parent the care for the child, at least through feeding it (and clearly much more in terms of educating it to do things for itself); responsibility for the preservation of that for which you are responsible. Political responsibility insofar as it is similar to familial responsibility²⁹⁷ demands care for those over whom one is responsible. The argument about the demand of the newborn to be cared for, the ontological demand of another person, has an important point to show with regard to ethical and moral choice. Against the seeming choice of morality being based purely in emotions as utilitarians and the emotivists following Hume seemed to think and morality being based solely in reason as Kant and deontologists since have thought, Jonas was making a plea for a form of holism with regard to ethics and morality. He stated that

A theory of responsibility, as any ethical theory must deal both with the rational ground of obligation, that is, the validating principle behind the claim to a binding "ought," and with the psychological ground of its moving the will, that is, of an agent's letting it determine his course of action. This is to say that ethics has an objective side and a subjective side, the one having to do with reason, the other with emotion. Sometimes the one, sometimes the other has been more in the center of ethical theory, and traditionally the problem of validation, that is, the objective side, has posed the greater challenge to philosophers. But the two sides are mutually complementary and both are integral to ethics itself.²⁹⁸

It is only by an integrated thought process that is both rational and emotional, that human beings can and do behave ethically and morally. Reason and emotion intertwine to make humans moral beings. Care of the newborn makes no rational sense insofar as the difficulties it brings to life. Newborns are utterly helpless and require everything to be

297 As explained above in chapter 3.

298 Jonas (1984 –A), page 85.

done for them. Jonas's point is that it is only through the emotional attachment of the parent for its child that humans are social, ethical, and moral beings.²⁹⁹

We can conclude then that while Jonas did not completely rework *The Phenomenon of Life*, to meet the criticisms of Kass and Weiss, he did in fact take the criticism seriously and provided a gap, be it a modest one, between his philosophical anthropology in *The Phenomenon of Life* and his ethical and moral theories in *The Imperative of Responsibility* in the article "Socio-Economic Knowledge and Ignorance of Goals."

²⁹⁹ This argument about valuation being an integrated process of emotion and reason is akin to Hubert Dreyfus's argument about the differences between human thought processes and digital computers (Dreyfus, 1992). The case that Dreyfus makes is that, ultimately, "artificial intelligence" is an oxymoron, at least on the traditional way of programming a computer using functions to deal with individual pieces of data. The human mind is an integrated and developing analog processor that has capacities that simply do not allow such division into simple parts. Jonas is making this point with regard to ethical and moral capacity.

CONCLUSION

I have argued throughout this dissertation for the persisting relevance and fruitfulness of Jonas's thought, especially its Aristotelian dimensions. Jonas's thought is instructive to the philosophy of science and the philosophy of mind with regard to the irreducibility of scientific explanation to physical explanation of efficient causes and the irreducibility of the mind to mechanical operations of the brain. As Jonas argued, we can equate Aristotle's notion of the soul to the genetic structure of an organism insofar as both explain the idea pervading in the living creature which determines what shape the organism will take, what capacities it will have, and to a great extent what it can possibly be over the course of a lifetime. In like manner, we must also take Aristotle's conception of explanation seriously in terms of using teleological explanations to understand organisms. That set of instructions which projects the development of the organism in terms of its anatomy, physiology, and morphology also deems its existence as a striving, struggling being aimed at its own continuance and the continuance of its kind. To understand organisms without their intentional, conscious, purposeful striving in pursuit of continuance is to miss the essence of life itself. Jonas proposed a version of materialism with enough clarity to see that life cannot be fully understood as simply mechanical efficient causes and that Ockham's razor should not cut away the meaning of life as "needful freedom."

Many philosophers are still concerned with the concept of emergence in the philosophy of mind, still arguing about whether or not something substantially and qualitatively different can evolve from simple parts. This, however, seems little more

than a revision of a chapter that philosophers of mind have been re-reading for quite some time about reductive as opposed to non-reductive versions of materialism. If, as Jonas argued, life and consciousness are emergent on matter and produce qualitative and substantial difference in collections of matter, then life as organized by and emanating from an extensive evolutionary history by natural selection is understandable and only fully understandable in terms of teleonomic explanations, functional and purpose-driven explanations. Organisms live in and through their capacities in a permanent state of being situated according to those capacities and therefore though rudimentary, Aristotle's understanding of the capacities of human beings can still shed light on the phenomenon of life and especially of human life even without cosmic teleology at work.

Given that all life emanates from a common source in random arrangements of matter moving through space and that varieties of creatures are extremely similar based on emanating from more recent common ancestors, to employ anthropomorphic explanations is not only important but necessary. Human beings can only extrapolate based on their own reference point and the extrapolation does become less and less accurate as we consider creatures that are less and less like ourselves. However, if Jonas was correct, then all living creatures strive for continuance even if the feeling of that striving differs among varieties of organism. It is the extravagant human capacity to imagine the life of other organisms and use these images that indicates the human designation among the, if not as the, greatest of nature's organisms. Jonas's philosophical anthropology describes the foundation of human nature, that, in spite of the truth of the theory of evolution, claims that certain capacities have always been constituent of human

beings and that regardless of the minor accumulations of iterative changes in particular human beings, certain capacities will always remain human in a state of stable equilibrium.

With the extraordinary capacities of humankind detailed, Jonas can only be seen as one philosopher among others thinking the same way; that from human existence emanates interest in and striving for the good life. The basic human context is as a being that strives for sustenance on the individual level and for continuance on the level of organic type. However, the capacity of human organisms to make images, to reveal and retain truth, and to retain an historically developed and accurate “image of man,” implies that not only does the ethical “ought” issue from the biological human “is,” but that humans are aware of their striving and can take control of this striving through technology. But given hubris with regard to our capacities, the power to employ nature to our whims has exceeded the ability of humans to come to grips with the implied responsibility to care for nature as well as ourselves. Humanity should not be so short-sighted as to think that it is the only source of valuation. Nature as issuing humanity forth not only has produced creatures that express values long before us, it is through humanity that human beings as part of nature are nature’s self-awareness. We must attend to nature as we attend to ourselves insofar as nature brought us forth. And so, just as human beings are progeny of nature, cared for and brought into existence through evolutionary history, we must take up the mantle to care for our own progeny biological, sociological, and political. Responsibility for those over which we have power, entails painstaking effort to achieve the best for all involved and that must start with health and well-being. In

Aristotle's ethics, the biological capacities of the human soul project onto human understanding through practical reasoning, an image of the good life that human beings can choose through principled action. For Jonas, our very existence as human beings, within a nature capable of bringing us forth, demands recognition of the good life as emanating from the human genome and taking responsibility for ourselves and nature. In light of the failure of principle-based moral theories, Jonas argued for an ethical theory - based in biology to complement the Kantian moral theory of duty. As knowledge in the biological sciences increases over time, a better understanding of the good life for human beings should be accomplished. With the completion of the human genome project and the capacity to apply the knowledge to specific genetic traits, a much more complete projection of human capacities and well-being is a matter of medical science coming into its own.

At the heart of happiness and the good life is first and foremost physical well-being. The human being must be maintained in a state so as to carry out the tasks of its own preservation and the preservation of those for whom it is responsible. Human beings who live a fairly solitary existence with few relatives or friends have interests and aspirations just as the person does who has an enormous social network. What is different is that the more social networks that one is involved in, the more responsibility one has to more people. This is most true and beyond the capacity of doubt with regard to parents and their relationship to their children. When a person has children, one is under the responsibility ethically and morally, according to Jonas, to care for those progeny, giving them the best opportunity at the good life as possible. This includes educating them and

setting good examples for them as to how to live well. On the surface, this would seem to indicate that people who do not know how to live well themselves, should be prevented or at least discouraged from procreating insofar as they are not likely be very good at teaching their children to live well.³⁰⁰ But Jonas's ethical theory would likely demand, in light of the prodigious human sexual urge, government intervention such as a required course of study on parenting for all students of secondary education as a needed addition to sex education in middle school. It does seem incredibly short-sighted to require education and licensing in order to drive a car but not the same for parenting when the responsibility for another human life carries such greater responsibility.

Toward educating people more effectively, Jonas's thoughts on parental and government responsibility would also indicate that along with the traditional studies of reading, writing, and arithmetic, a strong education in anatomy, physiology, health, and hygiene would be an integral part in achieving the good life. This also imparts to people from a young age that their bodies are to be cared for and respected, habits which can lead to a lifetime of avoiding some of the illnesses that plague modern industrial societies due to excess.

Medical science is perhaps the science with the most regard for teleological concern as it is focused on maintaining/improving human quality and quantity of life. At the center of its concerns are considerations of health and disease. Toward the improvement of life and education of people so that they can take an active role in the

300 What criteria for parenthood this could mean and the possibility of its enforcement, is beyond the scope of this work but one would think that as an example, substance abusers, especially women who will carry children and inflict addiction on the child to be born through shared blood supply, should be discouraged from procreating at least until their addiction is under control.

achievement of the good life, the concept of health held by the field of medicine must incorporate the ideas not only of functional capacities and the willed aspirations of patients,³⁰¹ but also an understanding of these capacities have a long history of development and demand an understanding of the succession of goal direction in the historical lineage of the creatures that have them.³⁰² This is the theory of health that Jonas would have written if he had been so motivated, one that attempts to understand that in spite of the similarities that makes human beings the same, that there are differences to be clarified based on historical genetic environmental lineage. This could help account for the problem of human beings being too transportable. All genetic lineages evolve in an environment and are therefore prone to the vicissitudes of that environment. Given that human beings are often found in different environments than their ancestors evolved in, genetic investigation could prescribe a healthy, or at least healthier, diet for individuals. All humans have to eat in order to survive. What they should eat may be of vital importance in the avoidance of disease. The example of the burgeoning epidemic of type two diabetes among younger and younger people is clear enough evidence that people are either not clear on how to feed themselves or not able to do so adequately in the climate of excess. Whether or not such an ideal diet could be developed for individuals based on lineage may be problematic insofar as genetic lineages might be significantly mixed and interspersed but better diet for people could likely be developed based on genetic predisposal than is currently readily available. In the free market economy, where

301 This is the strength of “embedded instrumentalist” accounts of health given by Kenneth Richman (Richman, 2004), Lennart Nordenfelt (Nordenfelt, 1993), Ingmar Pörn (Pörn, 1993), and Caroline Whitbeck (Whitbeck, 1981).

302 This is the strength of “etiological” models of health given by Robert Cummins (Cummins, 1993) and Ruth Millikan (Millikan, 1984).

governments restrain themselves from controlling to a greater extent what people can and do eat, in the name of economic success, citizens are left as less well nourished, more debilitated, and in greater need of pharmaceuticals to cure ailments that might have been prevented in the first place.³⁰³ Political responsibility has to be more focused on the good of all citizens so that citizens can refocus on their own good and not simply on economic superiority.

³⁰³ I leave aside here, the possibility of a conspiracy whereby we are not only sold the sickness of a diet of processed food with poor nutritional value but also sold the supposed cure in the form of pharmaceuticals.

BIBLIOGRAPHY

- Anscombe, G. E. M. "Modern Moral Philosophy." *Philosophy*, 33(124), (1958): 1-19.
- Anscombe, G. E. M. "On Brute facts." *Analysis* 18 (1958): 69-72.
- Atkinson, R. F. "Hume on "Is' and "Ought": A Reply to Mr. MacIntyre." *The Philosophical Review*, 70(2), (1961): 231-238.
- Austad, Steven N. *Why We Age: What Science Is Discovering about the Body's Journey Through Life*. New York: John Wiley and Sons, Inc, 1997.
- Ayer, A. J. *Language, Truth, and Logic*. Oxford: V. Gollancz, ltd., 1936.
- Barnes, Jonathan. *Aristotle*. Oxford: Oxford University Press, 1982.
- Bedau, Mark A. and Paul Humphreys, eds. *Emergence: Contemporary Readings in Philosophy and Science*. Massachusetts: The M.I.T. Press, 2008.
- Becchi, P. "Technology, Medicine, and Ethics in Hans Jonas." *Graduate Faculty Philosophy Journal*, 23(2), (2002): 155-182.
- Beckner, Morton. *The Biological Way of Thought*. New York, Columbia University Press, 1959.
- Bernstein, Richard. "Rethinking Responsibility." *Hastings Center Report*, 25(7), (1995): 13-21.
- Black, Max. "The Gap between "Is" and "Should"." *The Philosophical Review*, 73(2), (1964): 165-181.
- Broadie, Sarah. *Ethics with Aristotle*. Oxford: Oxford University Press, 1991.
- Caplan, A.L. et. al. (Eds.). *Concepts of Health and Disease: Interdisciplinary Perspectives*. Massachusetts: Addison-Wesley Publishing Company, 1981.
- Cassell, Eric J. "The Conflict Between the Desire to Know and the Need to Care for the Patient" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 57-72.
- Castaneda, Hector-Neri. "On the Conceptual Autonomy of Morality." *Noûs*,

7(1), (1973): 67-77.

Cummins, Robert. "Functional Analysis." In *Nature's Purposes: Analysis of Function and Design in Biology*, edited by Colin Allen, Marc Behoff, and George Lauder. Cambridge, MA: MIT Press, (1993), pages 169-196.

Darwin, Charles. *The Origin of Species By Means of Natural Selection or the Preservation of Favored Races in the Struggle for Life*. New York: Bantam Books, 1999.

Dawkins, Richard. *The Blind Watchmaker*. New York: W. W. Norton & Company, Inc., 1996.

deLaguna, Grace A. "The Role of Teleonomy in Evolution." *Philosophy of Science*, 29 (1962): 117-131.

Delbrück, Max. "Aristotle-totle-totle" in *Of Microbes and Life*, edited by Jacques Monod and Ernest Borok. New York, Columbia University Press, (1971), pages 50-55.

Dennett, Daniel. *Darwin's Dangerous Idea: Evolution and the Meanings of Life*. New York: Simon & Schuster, 1995.

Dennett, Daniel. *Freedom Evolves*. New York: Viking, 2003.

Dennett, Daniel. *The Intentional Stance*. Cambridge: M.I.T Press, 1987.

Diggs, B. J. "A Technical Ought." *Mind*, 69(275), (1960): 301-317.

Dobzhansky, Theodosius. *Evolution, Genetics, and Man*. New York: John Wiley and Sons, 1955.

Dobzhansky, Theodosius. *Mankind Evolving*. New Haven: Yale University Press, 1962.

Donnelley, Strachan. "Bioethical Troubles: Animal Individuals and Human Organisms," *Hastings Center Report*, 25(7), (1995): 21-29.

Donnelley, Strachan. "Natural Responsibilities: Philosophy, Biology, and Ethics in Ernst Mayr and Hans Jonas." *Hastings Center Report*, 32(4), (2002): 36-43.

Donnelley, Strachan. "Philosophy, Evolutionary Biology, and Ethics: Ernst Mayr and Hans Jonas." *Graduate Faculty Philosophy Journal*, 23(1), (2001): 147-163.

Donnelley, Strachan. "Whitehead and Hans Jonas: Organism, Causality and Perception." *International Philosophical Quarterly*, 19, (1979): 301-315.

Donnelley, Strachan. "Whitehead and Jonas: On Biological Organisms and Real Individuals" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 155-176.

Dreyfus, Hubert L., *What Computers Still Can't Do: A Critique of Artificial Intelligence*. Massachusetts: The M.I.T. Press, 1992.

Dubos, René. *A God Within*. New York: Charles Scribner's Sons, 1972.

Dubos, René. *Man Adapting*. New Haven: Yale University Press, 1965.

Dubos, René. *So Human an Animal*. New York: Charles Scribner's Sons, 1968.

Dubos, René. *The Mirage of Health: Utopias, Progress, and Biological Change*. Garden City, N. Y.: Anchor Books, 1959.

Engelhardt, Jr., H. Tristram. *The Foundations of Bioethics*. New York: Oxford University Press, 1996.

Fleischacker, Samuel, ed. *Heidegger's Jewish Followers: Essays on Hannah Arendt, Leo Strauss, Hans Jonas, and Emmanuel Levinas*. Pittsburgh: Duquesne University Press, 2008.

Flew, Antony. "On the Interpretation of Hume." *Philosophy*, 38(144), (1963): 178-182.

Fricke, C. "Explaining the Inexplicable: The Hypotheses of the Faculty of Reflective Judgment in Kant's Third Critique." *Nous* (24) 1990: pages 45-62.

Gelven, Michael. *A Commentary on Heidegger's Being and Time*. Illinois: Northern Illinois University Press, 1989.

Ghiselin, Michael. "A Radical Solution to the Species Problem." *Systematic Zoology*. 23, (1974): 536-544.

Ginsborg, Hannah. "Kant on Aesthetic and Biological Purposiveness" in *Reclaiming the History of Ethics: Essays for John Rawls*, edited by A. Reath, Et. Al. Cambridge: Cambridge University Press, (1997), pages 329-360.

Gottleff, Allan. "Aristotle's Conception of Final Causality." *Review of Metaphysics*, 30, (1976): pages 226-254.

Grene, Marjorie. "Individuals and Their Kinds: Aristotelian Foundations of Biology" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 121-136.

Grene, Marjorie and David Depew. *Philosophy of Biology: An Episodic History*. Cambridge: Cambridge University Press, 2004.

Grene, Marjorie. *The Understanding of Nature: Essays in the Philosophy of Biology*. Boston: Reidel Publishing Company, 1974.

Guyer, Paul. *Kant's Critique of the Power of Judgment: Critical Essays*. Maryland: Rowman and Littlefield, 2003.

Guyer, Paul, ed. *Kant's Groundwork for the Metaphysics of Moral: Critical Essays*. Maryland: Rowman and Littlefield, 1998.

Hardie, R.P. and R. K. Gaye, Trans. "Physics" by Aristotle, in *Basic Works of Aristotle* edited by Richard McKeon. New York: Random House, (2001), 213-394.

Hare, R. M. *The Language of Morals*. Oxford: Oxford University Press, 1952.

Hartshorne, Charles. *Man's Vision of God and the Logic of Theism*. Chicago: Willett, Clark, & Co., 1941.

Hartshorne, Charles. "The Organism According to Process Philosophy" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 137-154.

Hegel, G. W. F. *Elements of the Philosophy of Right*, edited by Allen Wood and translated by H. B. Nisbet. Cambridge: Cambridge University Press, 1995.

Heidegger, Martin. *Being and Time*, translated by John Macquarrie and Edward Robinson. New York: Harper and Row, 1962.

Hennig, Willi. *Phylogenetic Systematics*. Illinois: University of Illinois Press, 1979.

Herman, Barbara. *The Practice of Moral Judgement*. Massachusetts: Harvard University Press, 1993.

Hodgson, D. H. *Consequences of Utilitarianism: A Study in Normative Ethics and Legal Theory*. Oxford: Clarendon Press, 1967.

Hösle, V. "Ontology and Ethics in Hans Jonas." *Graduate Faculty Philosophy*

Journal, 23(1), (2001): 31-50.

Hudson, W. D. "Hume on Is and Ought." *The Philosophical Quarterly*, 14(56), (1964): 246-252.

Hull, David. "A Matter of Individuality." *Philosophy of Science*. 45, (1978): 335-360.

Hull, David. "Are Species Really Individuals?" *Systematic Zoology*. 25, (1976): 174-191.

Hume, David. *A Treatise of Human Nature*, edited by David Fate Norton and Mary J. Norton. Oxford: Oxford University Press, 2000.

Hunter, Geoffrey. "Hume on Is and Ought." *Philosophy*, 37(140), (1962): 148-152.

Huxley, Julian. *Evolution: The Modern Synthesis*. London: Allen and Unwin, 1942.

Irwin, Terence. *Aristotle's First Principles*. Oxford: Oxford University Press, 1988.

Jonas, Hans. "The Burden and Blessing of Mortality." *Hastings Center Report*, 22(1), (1992): 34-40.

Jonas, Hans. "Freedom of Scientific Inquiry and the Public Interest." *Hastings Center Report*, 6, (1976): 15-17.

Jonas, Hans. *The Imperative of Responsibility In Search of an Ethics for the Technological Age*. Chicago: University of Chicago Press, 1984.

Jonas, Hans. *Memoirs* edited by Christian Weise. Massachusetts: Brandeis University Press, 2008.

Jonas, Hans. *Mortality and Morality: A Search for the Good after Auschwitz*. Evanston: Northwestern University Press, 1996.

Jonas, Hans. "Ontological Grounding of a Political Ethics: On the metaphysics of Commitment to the Future of Man." *Graduate Faculty Philosophy Journal*, 10 (1984): 47-62.

Jonas, Hans. *Philosophical Essays: From Ancient Creed to Technological Man*.

New Jersey: Prentice Hall, Inc., 1974.

Jonas, Hans. *The Phenomenon of Life: Toward a Philosophical Biology*. Illinois: Northwestern University Press, 2001.

Jonas, Hans. "The Right to Die," *Hastings Center Report*, 8, (1979): 31-36.

Jonas, Hans. "Toward a Philosophy of Technology," *Hastings Center Report*, 9, (1979): 34-43.

Jonas, Hans. "Wissenschaft as Personal Experience," *Hastings Center Report*, 32(4), (2002): 27-35.

Joyce, Richard. *The Myth of Morality*, Cambridge: Cambridge University Press, 2001.

Kane, Robert. *The Significance of Free Will*. Oxford: Oxford University Press, 1996.

Kant, Immanuel. *Critique of Judgment*, trans. by J. H. Bernard. New York: Hafner Publishing Company, 1951.

Kant, Immanuel. *Grounding for the Metaphysics of Morals*, trans. by James W. Ellington. Indianapolis: Hackett Publishing Co., 1993.

Kass, Leon. "Appreciating the Phenomenon of Life," *Hastings Center Report*, 25(7), (1995): 3-12.

Kass, Leon. "Appreciating the Phenomenon of Life," *Graduate Faculty Philosophy Journal*, 23(1), (2001): 51-70.

Kass, Leon. "Regarding the End of Medicine and the Pursuit of Health" in *The Concepts of Health and Disease: Interdisciplinary Perspectives*, edited by Arthur L. Caplan, Et. Al. London: Addison-Wesley Publishing Company, (1981), pages 3-30.

Kass, Leon. "Teleology and Darwin's *The Origin of Species*: Beyond Chance and Necessity" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 97-120.

Kirkwood, Tom. *The Time of Our Lives: The Science of Human Aging*. Oxford: Oxford University Press, 1999.

Kolakowski, Leszek. *The Alienation of Reason*, trans. by Norbert Guterman. New York: Doubleday and Company, Inc., 1968.

Lennox, James G. *Aristotle's Philosophy of Biology : Studies in the Origins of Life Science*. Cambridge: Cambridge University Press, 2001.

Levy, David J. *The Integrity of Thinking*. Missouri: University of Missouri Press, 2002.

MacBeth, Murray. "Is' and 'Ought' in Context: MacIntyre's Mistake." *Hume Studies*, XVIII(1), (1992): 41-50.

MacIntyre, Alasdair. *After Virtue*. Notre Dame, Indiana: University of Notre Dame Press, 1984.

MacIntyre, Alasdair. *After Virtue*. Notre Dame, Indiana: University of Notre Dame Press, 2007.

MacIntyre, Alasdair. *A Short History of Ethics: a History of Moral Philosophy from the Homeric Age to the Twentieth Century*. Notre Dame, Indiana: University of Notre Dame Press, 1998.

MacIntyre, Alasdair. "Hume on "Is" and "Ought"" *The Philosophical Review*, 68(4), (1959): 451-468.

MacIntyre, Alasdair. *Whose Justice? Which Rationality?*. Notre Dame, Indiana: University of Notre Dame Press, 1988.

Mackie, J. L. *Ethics: Inventing Right and Wrong*. New York: Penguin, 1977.

Marx, Karl. *Grundrisse*, translated by Martin Nicolaus. London: Penguin Books, 1973.

Mayo, Bernard. *Ethics and the Moral Life*, New York: Palgrave Macmillan Ltd., 1958.

Mayr, Ernst. "Cause and Effect in Biology" in *Cause and Effect* edited by Daniel Lerner. New York: The Free Press, (1965), pages 33-50.

Mayr, Ernst. *One Long Argument: Charles Darwin and the Genesis of Modern Evolutionary Thought*. Cambridge, Mass.: Harvard University Press, 1991.

Mayr, Ernst. *Population, Species, and Evolution: An Abridgement of Animals, Species, and Evolution*. Cambridge, Mass.: Harvard University Press, 1970.

Mayr, Ernst. "Teleological and Teleonomic, a New Analysis." *Boston Studies in*

the Philosophy of Science. 14, (1974): 91-117.

McArthur, J. W., & Baillie, W. H. T. "Metabolic Activity and Duration of Life. II. Metabolic Rates and Their Relation to Longevity in *Daphnia magna*," *Journal of Experimental Zoology* 53 (1929): 243-286.

McLaughlin, Peter. *Kant's Critique of Teleology in Biological Explanation*. New York: Edwin Mellon Press, 1990.

Mill, John Stuart. *Utilitarianism*, edited by George Sher. Indianapolis: Hackett Publishing Company, Inc.: 2001.

Millikan, Ruth Garrett. *Language, Thought, and Other Biological Categories: New Foundations for Realism*. Cambridge, MA: MIT Press, 1984.

Mitchell, Robert W. Nicholas S. Thompson and H. Lyn Miles, eds. *Anthropomorphism, Anecdotes and Animals*. New York: State University of New York Press, 1997.

Mohanty, Jitendra Nath. "Intentionality and the Mind/Body Problem" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 283-300.

Monod, Jacques. *Chance and Necessity: An Essay on the Natural Philosophy of Modern Biology*. New York: Alfred A. Knopf, 1971.

Moore, G. E. *Principia Ethics*. Cambridge: Cambridge University Press, 1903.

Moore, M. *Placing Blame: A General Theory of the Criminal Law*. Oxford: Oxford University Press, 1997.

Nagel, Ernst. "Functional Explanations in Biology." *The Journal of Philosophy*, 74, (1977): 280-301.

Nagel, Ernst. "Goal-Directed Processes in Biology." *The Journal of Philosophy*, 74(5), (1977): 261-279.

Nagel, Thomas. "What Is it Like to Be a Bat?." *The Philosophical Review*, (1974): 435-50.

Nepi, Paolo. *Individui E Persona: L'identita Del Soggetto Morale in Taylor, MacIntyre E Jonas*. Italy: Studium, 2000.

Nikulin, D. "Reconsidering Responsibility: Hans Jonas's Imperative for a New Ethics." *Graduate Faculty Philosophy Journal*, 23(1), (2001): 99-118.

Nordenfelt, Lennart. "Two Concepts of Rules." *Theoretical Medicine* 14, (1993): 277-285.

Nowell-Smith, P. H. *Ethics*. London: Penguin Books, 1954.

Nussbaum, Martha. *Aristotle's De Motu Animalium: Text with Translation, Commentary, and Interpretive Essays*. Princeton, N.J. : Princeton University Press, 1978.

Pittendrigh, Colin S., "Adaptation, Natural Selection, and Behavior," in *Behavior and Evolution* edited by Anne Roe and George Gaylord Simpson. New Haven: Yale University Press, (1958), 390-416.

Platt, Arthur. Trans. "De Generatione Animalium" by Aristotle, in *The Works of Aristotle* edited by J. A. Smith and W. D. Ross. Oxford: Oxford University Press, (1912), 715a – 789b.

Pörn, Ingmar. "Health and Adaptedness." *Theoretical Medicine* 14, (1993): 295-303.

Prior, A. N. *Logic and the Basis of Ethics*. Oxford: Oxford University Press, 1949.

Rachels, James. *The Elements of Moral Philosophy*. New York: McGraw-Hill, 1993.

Rawls, John. *A Theory of Justice*. Massachusetts: Harvard University Press, 1971.

Rawls, John. *Lectures on the History of Moral Philosophy*. Massachusetts: Harvard University Press, 2000.

Rawls, John. "Two Concepts of Rules." *The Philosophical Review*, 64(1), (1955): 3-32.

Richman, Kenneth A. *Ethics and the Metaphysics of Medicine: Reflections on Health and Beneficence*. Cambridge, MA: MIT Press, 2004.

Rosenblueth, Arturo, Norbert Wiener, and Julian Bigelow. "Behavior, Purpose, and Teology." *Philosophy of Science*, 10, (1943): 18-24.

Ross, W. D., Trans. "Nicomachean Ethics" by Aristotle, in *Basic Works of Aristotle* edited by Richard McKeon. New York: Random House, (2001), 927-1112.

Ross, W. D. *The Right and the Good*. Oxford: Oxford University Press, 1930.

Scott-Taggart, M. J. "MacIntyre's Hume." *The Philosophical Review*, 70(2), (1961): 239-244.

Searle, John R. "How to Derive "Ought" from "Is".*" The Philosophical Review*, 73(1), (1964): 43-58.

Searle, John R. *The Rediscovery of the Mind*. Massachusetts: The M.I.T. Press, 1992.

Singer, Peter. "Famine, Affluence, and Morality." *Philosophy and Public Affairs*, 32, (1972): 229-243.

Smith, J. A., Trans. "De Anima" by Aristotle, in *Basic Works of Aristotle* edited by Richard McKeon. New York: Random House, (2001), 533-640.

Smith, James Ward. "Concerning Hume's Intentions." *The Philosophical Review*, 69(1), (1960): 63-77.

Sober, Elliott. *From a Biological Point of View*. Cambridge: Cambridge University Press, 1994.

Sober, Elliott. *The Nature of Selection: Evolutionary Theory in Philosophical Focus*. Cambridge, Mass.: MIT Press, 1984.

Sorabji, Richard. *Necessity, Cause and Blame: Perspectives on Aristotle's Theory*. Ithaca, New York: Cornell University Press, 1980.

Spada, Emanuela Cenami, "Amorphism, Mechanomorphism, Anthropomorphism," in *Anthropomorphism, Anecdotes and Animals* edited by Robert W. Mitchell, Nicholas S. Thompson and H. Lyn Miles. New York: State University of New York Press, (1997), 37-49.

Spicker, Stuart F. *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, 1978.

Spinelli, Emidio. "Hans Jonas: Freedom and Determinism in the Ancient World." *Graduate Faculty Philosophy Journal*, 23(1), (2001): 71-84.

Stark, Andrew. *The Limits of Medicine*. Cambridge, Mass.: Cambridge

University Press, 2006.

Stevenson, C. L. *Ethics and Language*. New Haven: Yale University Press, 1944.

Stove, David C. "On Hume's Is-Ought Thesis." *Hume Studies*, IV(2), (1978): 64-72.

Tam, Henry. *Communitarianism: A New Agenda for Politics and Citizenship*. New York: New York University Press, 1998.

Taylor, Charles. *Sources of the Self: the Making of the Modern Identity*. Cambridge, Mass.: Harvard University Press, 1989.

Taylor, Charles. *The Ethics of Authenticity*. Cambridge, Mass.: Harvard University Press, 1992.

Tirosh-Samuelson, Hava and Christian Weise, eds. *The Legacy of Hans Jonas: Judaism and the Phenomenon of Life*. Boston: Brill Academic Publishers, 2008.

Vogel, Lawrence. "Hans Jonas's Diagnosis of Nihilism: The Case of Heidegger." *International Journal of Philosophical Studies*, 3(1), (1995): 55-72.

Webster, Stephen. *Thinking about Biology*. Cambridge, Mass.: Cambridge University Press, 2003.

Weise, Christian. *The Life and Thought of Hans Jonas: Jewish Dimensions*. Massachusetts: Brandeis University Press, 2007.

Whitbeck, Caroline. "A Theory of Health." In *Concepts of Health and Disease: Interdisciplinary Perspectives*, edited by Arthur L. Caplan, H. Tristram Engelhardt Jr., and James J. McCartney. Reading, MA: Addison-Wesley (1981), pages 611-626.

Wittgenstein, Ludwig. *Philosophical Investigations*, translated by G. E. M. Anscombe. Oxford: Blackwell Publishers, 1999.

Wolin, Richard. *Heidegger's Children: Hannah Arendt, Karl Lowith, Hans Jonas, and Herbert Marcuse*. New Jersey: Princeton University Press, 2001.

Wolters, G. "Hans Jonas's Philosophical Biology." *Graduate Faculty Philosophy Journal*, 23(1), (2001): 85-98.

Wood, Allen. *Kant's Ethical Thought*. New York: Cambridge University Press,

1999.

Wright, Larry. *Teleological Explanations: an Etiological Analysis of Goals and Functions*. Berkeley: University of California Press, 1976.

Yalden-Thomson, D. C. "Hume's View of 'Is-Ought'." *Philosophy*, 53(203), (1978): 89-93.

Zaner, Richard M. "Ontology and the Body: A Reflection" in *Organism, Medicine, and Metaphysics: Essays in Honor of Hans Jonas on His 75th Birthday*. Boston: Reidel Publishing, (1978), pages 265-282.

Zumbach, C. *The Transcendent Science*. The Hague: Martinus Nijhoff, 1984.