Political Judgement in a Technological Age

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ABSTRACT

In this thesis, I examine the relationship between politics and technology, with an eye to exposing the weaknesses in both the philosophy of technology and the philosophical revival of *phronesis*. Part one considers the foundations of the relationship. First, through an exegetical analysis of ancient Greek texts from Sophocles, Thucydides, Plato, and Aristotle, I show that *techne* or technical knowledge and *phronesis* or political judgement are basic elements of the *polis*. This analysis makes clear that only in a *polis* under a leadership practicing good political judgement are human beings able to understand what products they need to live full and happy lives. Second, I show how the modern political thought of Machiavelli and especially Hobbes discredits and replaces the role of political judgement. Third, I consider Heidegger's conclusion that *phronesis* was the way to an authentic existence for the ancient Greeks and that we are unable to follow the same path because technology now enframes the planet and everything on it. Part two reviews different responses to Heidegger, concerns about the

dehumanizing influence of technology and the revival of phronesis. Chapter four focuses on the debate in the philosophy of technology between essentialism and constructivism. The essentialists argue that politics cannot guide technology because it is itself a product of technology. The constructivists argue that technology is a product of the reigning establishment and the only way to guide it toward egalitarian ends is through revolutionary or activist efforts. I offer a third way: rather than understanding politics as entirely the product of technology or technology entirely the product of politics, the essence of politics and technology are intertwined. In turn, rather than abandoning the Western tradition, it may be possible to recover or revive its lost or forgotten elements – namely, phronesis. But, I also show the problems with reviving phronesis in a liberal democratic context. Finally, I explain why and how we should practice a political judgement that guides technology to good ends and ensures that it contributes properly to human flourishing.

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Introduction

Technology has been described as the application of rationality to nature. Many scholars argue that this instrumentalization of reason runs roughshod over the nuance and variance of everyday life because it does not take into consideration the particularities of individual humans, cultures and communities. Some even conclude that technology is leading to a "dehumanization" or a devaluing of human life. While this may be true, I argue that it is not the essence or character of technology that leads to dehumanization but a failure of politics.

Instead of governing the influence of technology and directing it toward human goods, politics has been relegated to either administering to further technological advances or streamlining the integration of new technologies into society. We see this most clearly in the widespread agreement that technological research and development are only successful outside of the restraints and concerns of government. Political considerations, it is often argued, bias the objectivity of researchers, limit progress and impede new discoveries.

At first, it is hard to disagree with this logic. It seems misguided to allow just anyone to make judgements about the affect of technological innovations simply

because they hold a political office; the specialists and experts are more able to weigh the consequences of their work. But this conclusion reflects the undeniable failure of our politicians, scientists, and society in general to comprehend the significant and close relationship between politics and technology.

However, in August 2001, this "issue" made a brief but important appearance on the American political landscape. In his speech on the regulation of stem cell research, President George W. Bush weighed the benefits of this new area of experimentation against the risks it might pose to the American citizen and nation. Bush said:

. . . while we must devote enormous energy to conquering disease, it is equally important that we pay attention to the moral concerns raised by the new frontier of human embryo stem cell research. Even the most noble ends do not justify any means. . . My position on these issues is shaped by deeply held beliefs. I'm a strong supporter of science and technology, and believe they have the potential for incredible good – to improve lives, to save life, to conquer disease. Research offers hope that millions of our loved ones may be cured of a disease and rid of their suffering. . . And, like all Americans, I have great hope for cures. I also believe human life is a sacred gift from our Creator. I worry about a culture that devalues life, and believe as your President I have an important obligation to foster and encourage respect for life in America and throughout the world.

In this introduction, I would like to consider Bush's comments about stem cell research toward a deeper

understanding of the relationship between politics and technology. Clearly, this speech showed Bush walking a fine line between progress and tradition. At once, he applauded science and technology research but also suggested that it is a potential affront to his own Christian beliefs and the sacredness of human life. His final decision on whether to release federal funds for further work on stem cells reflected this sense of contradiction or equivocation. The possibility of curing diabetes, Alzheimer's, and Parkinson's, "to improve lives, to save life, to conquer disease" was enough for him to settle on what can at best be described as an ambiguous middle ground policy: supporting the research but only on existing stem cell lines, "where the life and death decision has already been made."¹

It is unclear whether Bush's judgement was the right one. As it is told, he remained unsettled on the issue for months. He took advice from a host of bioethicists, lawmakers, and even Pope John Paul II before announcing what has become the American line on the regulation of stem cell research. Considering his last advisor, his speech and the policy itself, his decision was not merely

¹He also announced funding for research on umbilical cord placenta, adult and animal stem cells "which do not involve the same moral dilemma."

wrought out of practical concerns but also involved spiritual and philosophical contemplation.

This may also explain why he appointed Professor Leon Kass to head up the new President's Council on Bioethics to monitor stem cell research. Kass is an interesting choice for a number of reasons. He is a surgeon, a biochemist, an ethicist, a scholar, a conservative, and a philosopher. He has experience in the fields of medicine, science, and technology as well as a grasp of the ethical issues that surround their application and practice – a rare combination of practical and philosophical knowledge.

The largest of his concerns was echoed in Bush's speech: contemporary technologies have a "dehumanizing" affect. This was the central point of his testimony in front of the American Bioethics Advisory Commission in 1997 on the related matter of human cloning:

You have been asked to give advice on nothing less than whether human procreation is going to remain human, whether children are going to be made rather than begotten, and whether it is a good thing, humanly speaking, to say yes to the road which leads (at best) to the dehumanized rationality of Brave New World. If I could persuade you of nothing else, it would be this: What we have here is not business as usual, to be fretted about for a while but finally to be given our seal of approval, not least because it appears to be inevitable. Rise to the occasion, address the subject in all its profundity, and advise as if the future of our humanity may hang in the balance.

He continued, "The President has given this Commission a glorious opportunity. In a truly unprecedented way, you can strike a blow for the human control of the technological project, for wisdom, prudence, and human dignity." Kass made an unequivocal plea to ban cloning not simply because it is unethical but also because it suggests the loss of "human control" of technology.²

His appointment to the President's council highlights Kass's belief that politics is a way to maintain that control of "the technological project." But, what is also apparent is that Kass understands that this effort to control is both complicated and under threat. For him, reason and common sense are not enough to direct technology and may even participate in its unhindered and malevolent growth – reason or "rationalization" is the ground for technological progress. Again, this concern is echoed in Bush's

²His concern is not limited to the controversies associated with cloning. For example, on organ transplants, Kass writes:

. . . we have made a start on a road that leads imperceptibly but surely toward a destination that none of us wants to reach . . . Yet the first step, overcoming reluctance, was defensible on benevolent and rational grounds: save life using organs no longer useful to their owners and otherwise lost to worms. Now, embarked on the journey, we cannot go back . . . there is neither a natural nor a rational place to stop (Kass 1992, 86).

He also raises similar concerns about other "techniques of prolonging life" such as respirators, cardiac pacemakers, artificial kidneys and genetic engineering in general (Kass 1976, 297-301).

comments: he both rationalizes the need for stem cell research (i.e. the curing of terrible disease) and derides the consequences of that rationalization (i.e. dehumanization or the devaluing of human life).

It is not without its irony that the term "dehumanization" has its contemporary origins in Marxist ideas of manual labourers becoming cogs in the machine of capitalism or industrial society.³ However, Kass and Bush are not using the term in this sense. They are not saying that the capitalist establishment or industrialists are oppressing and thus dehumanizing a certain class or group of citizens. Instead, Kass, and perhaps Bush as well, seem to think that technology is itself or by itself devaluing the quality of all human life. They do not accept that technology is simply a tool that is necessarily under the steadfast control of humans.

This is what Kass means when he explains that rather than a "bringing-forth" technology is "a setting upon, a challenging forth, a demanding made of nature" (1993, 3-4). Kass's distinction between "bringing-forth" and "challenging forth" originally comes from the German philosopher Martin Heidegger's 1954 essay "The Question Concerning Technology." In that essay, Heidegger draws a

³"Dehumanization" is also associated with existentialists and critical theorists such as Søren Kierkegaard, Arthur Schopenhauer, Jean-Paul Sartre, Frantz Fanon, Simone de Beauvoir, and Theodore Adorno.

distinction between ancient "techne"⁴ or crafts and contemporary technology. Where the craftsman "brings forth", works in partnership or cooperates with the natural characteristics of his materials to construct an artifact, such as a chair or a house, the technologist "challenges" or changes the structure of his materials to make them stronger, more flexible, longer lasting, etc.. For example, a doctor may bring forth the already available health of an individual through medicine whereas cloning, genetic engineering, and organ transplants challenge the natural bounds of the body creating a wholly new "artifact" with different characteristics.

It is worth exploring this distinction further. As Heidegger details, earlier human inventions did not permanently impose a new form onto nature. Under normal conditions, because the material of an artifact was still bound by natural characteristics, nature would always "shine through" the imposition of the artist, craftsman or technician.⁵ For instance, a carpenter imposes the

⁴Two points on the presentation of the ancient Greek: First, for the sake of the readability, Greek words are in phonetic or latinized form, rather than the Greek alphabet (unless quoted from a scholarly source). Second, for the same reason, these words are provided without accents. Both conventions have precedents in political philosophy and classics (e.g. Roochnik).

⁵See Trish Glazebrook's excellent essay, "From φύσις to Nature, τέχνη to Technology: Heidegger on Aristotle, Galileo, and Newton." The Southern Journal of Philosophy (2000), Vol. XXXVIII: 95-118, for a discussion of Heidegger's account of the relationship between nature and art.

form of a chair onto wood but once the chair is finished that wood still maintains its natural characteristics to wear and rot in the same way a dead tree rots and decomposes on the forest floor. In contrast, a growing list of contemporary technologies do not cooperate with nature but attempt to replace it. A nuclear engineer can manipulate the structure of natural elements to produce artificial elements. Plutonium, for example, is designed to never abide by or return to the characteristics of the uranium from which it was derived. The character of plutonium (i.e. its level of radioactivity) is always artificial. Likewise, the genetically altered or "begotten" human is designed to never return to the natural characteristics of the material from which it was derived (e.g. a sick or weak body), and thus, always is artificial.

Heidegger also points to a less obvious consequence of technologies which manipulate human nature in this way. He writes, "If humanity achieves this [cloning themselves], it will have exploded itself, i.e., its essence qua subjectivity, into thin air, into a region where the absolutely meaningless is valued as the one and only "meaning" and where preserving this value appears as the human "domination" of the globe" (1998, 197). In other words, when the unlimited ability "to make" artifacts becomes the singular *modus operandi* of

humanity, anything limiting that making, whether traditions, laws, or other values, must also be eliminated. Yes, by eliminating the limitations imposed by disease and anxiety we gain more freedom over how we live our lives. But, by the same logic, the limitations imposed by given conceptions of health and happiness must also be eliminated to facilitate that same freedom. Indeed, why should we be bound by human mortality or a particular emotion or state of being? According to Heidegger, everything, the planet and humans themselves, must be understood as "standing-reserve" (*Bestand*) or as nothing more than material to be molded. There can be no happiness, no standard, no final good, and no higher thing whatsoever to guide, direct or limit our making. Hence, the absolutely meaningless is valued as the one and only "meaning" because it does not impose anything, any limits upon us. In a later interview, Heidegger explains:

I think about what is developing today as biophysics, that in the foreseeable future, we will be in a position to make man in a certain way i.e., to construct him, purely in his organic being, according to the way we need him: skilled and unskilled, intelligent and . . . stupid. It will come to that! . . . So, above all, the misunderstanding that I am against technology is to be rejected. I see technology in its essence as a power which challenges man and, in opposition to which, he is not free any longer – that something is being announced here, namely a relationship of Being to man – and that this relationship, which is

concealed in the essence of technology, may come to light someday in its undisguised form. I do not know whether it is going to happen (1970, 43)!

The ability to make without limitation means that humanity must be either skilled or unskilled, intelligent or stupid, without any barriers or encumbrances. Even if we do not like this idea, Heidegger argues that it is our "fate". And, at times, Kass seems to agree with this sentiment. As he says, "we have made a start on a road that leads imperceptibly but surely toward a destination that none of us wants to reach" (see footnote #2).

Interestingly, Kass also recognizes, like Heidegger, that we did not start down this road with organ transplants or stem cell research but with our earliest inventions and crafts. He writes, "Nearly everyone in antiquity agreed that some form and degree of artfulness is indispensable for meeting human needs and for human living together. No arts, no cities, and if not cities, no true humanity. Rational animal, technical animal, political animal – it is all one package" (Kass 1993, 10). So, technology is irrevocably tied to humanity. Because of this tie, our efforts to make the technological project more humane may actually propel it forward. How can we understand the curing of disease through genetic engineering or the alleviation of pain through artificial implants otherwise? Thus, the move

from "bringing-forth" techne and "challenging-forth" technology is our "fate."

Still, if this is so, then why is Kass participating in a political process that has the "glorious opportunity to strike a blow for the human control of the technological project"? I think that while he accepts most of Heidegger's analysis, he also believes that there is still time to assert that which is of higher human virtue in the face of technology. Clearly, things such as stem cell research suggest that the power of technology to mediate our relationship to existence is increasing. Technology does *tend* to autonomy. But, what is also clear is that this power can be regulated. Politics, as a higher virtue, can and should judge which sciences and arts are needed in the city, and how they are to be used and developed. So, while stem cell research has clear benefits to the individual, while it may itself have some virtue, those benefits must be considered in the context of the greater goods of the political community. This is Kass's position and the reason why he advises politicians and leaders in the way he does. Overall, he advises that politics should guide technology rather than technology guiding politics.

Surprisingly, though, this perspective has been virtually shut out of the dominant and ongoing scholarly debate about technology. The most definitive account of

this debate comes from Andrew Feenberg. In his *Questioning Technology* (1999), he argues that we can think about technology in one of two ways: technology as autonomous or technology as a tool. The first option is described as "essentialism" and the second as "constructivism." The former option is steeped in Heidegger's idea that technology cannot be controlled or directed by humans because all of our institutions and even our ways thinking are themselves products of technology. The latter presents technology as stemming from reigning social, economic and political structures. Bad technologies that pollute, for example, come from the inequalities and injustices of society. Because the wealthy and powerful elites control the technological infrastructure, there is no impetus to develop technologies that are kinder and gentler to the average citizen. Feenberg himself promotes this second option and calls for new technologies that "respect the person," "create humane living spaces," and "mediate new social forms," (Feenberg 2000, 313). For him, talk of technology as autonomous is simply an excuse to maintain the status quo.

I argue that there is a third way to think about technology: we should practice a political judgement that restrains technology from dehumanization and ensures that it contributes properly to human flourishing. This is not

simply a different version of constructivism but a fundamentally different perspective. Kass explains:

Those who hold that the biggest obstacles to human happiness are material, arising from scarcity and the stinginess and violence of nature, from the indifference of the powers that be, or (within) from disease and death, look to the arts. On this view, the inventors and bringers of the arts are the true benefactors of mankind, and are revered like the gods . . . In contrast, those who hold that the biggest obstacles to human happiness are psychic and spiritual, arising from the turbulences of the human soul itself, look instead to law (or to piety or its equivalent) to tame and moderate the unruly and self-destroying passions of human beings (Kass 1993, 10-1).

Where constructivists look to the deficiencies of nature or society as inspiration for better technology, Kass and others look elsewhere – "not Prometheus but Lycurgus, not the builder of Babel but Moses." Furthermore, unlike Heidegger, Kass does not accept that we are fated to be enslaved or enveloped by technology. He presents good laws along with liberal education, family, friendship, civil society, active citizenship and political life in general as ways to avoid the "soft and dehumanized despotism of Brave New World" (1993, 22). The Feenberg dichotomy fails to recognize that technology is neither completely autonomous nor a simple tool.

In the five chapters that follow, I explore the role of political judgement in a technological age. I do not

attempt to provide a philosophical account of technology or develop a theory of political judgement. So, while relying on literature from both of these areas, I am not specifically concerned with the concept of technology, as are philosophers of technology, or protecting the particulars of culture and community, as are many of the phronesis revivalists. I am concerned with and do try to identify an interrelation or link between technology and political judgement within the larger context of political philosophy. As a whole, I attempt to show that political judgement has been and remains the only viable way to subsume or subordinate the dehumanizing potential of technology.

Preface to Part I

In some ways, the role of political judgement in a technological age has already been articulated in the attempted philosophical revival of the Aristotelian concept of "phronesis." Hannah Arendt, Hans-Georg Gadamer, and Alasdair MacIntyre are among those that look to phronesis as a way to tame, moderate, or even overcome scientific methods and technological thinking. Because it is based in the particular and experiential, they argue that phronesis offers a rampart to the dogmatism of technology.¹ But, can Aristotelian phronesis be revived in a technological age? Can phronesis as political judgement be practiced unbounded by the "enframing" essence of technology? Can phronesis as practiced by the ancients fit within a liberal democratic political community? In order to consider ideas about and questions of the revival of phronesis, a large portion of this thesis will be spent explaining and understanding the original articulation of phronesis, its relationship to techne, its modern discreditation and replacement with the new science, and its "concealed" relationship to

¹See also Habermas, 1979; R. Beiner, 1983; Brown, 1988; J. Weinberger, 1992; C. Mouffe, 1992; P. Steinberger, 1993; Dunne, 1993; I. Berlin, 1996; D. Howard, 1996; R. Ruderman, 1997; B. Flyvbjerg, 1997. Some of these works are considered in later chapters.

contemporary technology. Only then will the revival of phronesis be considered.

For now, the chapters of Part 1 introduce what I think are the three most important accounts of phronesis, its changing relationship to technical knowledge, and its place in politics. Aristotle, Hobbes, and Heidegger provide the key descriptions for understanding the origin and development of phronesis in the history of political philosophy. Whereas current presentations pose it in contrast to or as radically different from technology, chapter one shows phronesis to be a counterpart to techne. In fact, Aristotle realizes phronesis and techne are so similar, even intertwined, that there is a danger that they will be confused or that their positions will be reversed. Wanting to avoid this reversal, he explicates a hierarchy of virtues to assure that phronesis guides the products of techne rather than techne guiding the practice of phronesis. Chapter 2 shows that this hierarchy is reversed in modern thought. Rather than shortsighted human judgements, Hobbes offers the new science as a long term and reliable foundation for political life. For him, the products of techne should determine the practice of phronesis. Chapter 3 explains how technology bars any possible return or revival of phronesis. According to Heidegger, because technology has come to determine or "conceal" the essence of human

beings and the rest of the planet, a contemporary practice of phronesis is impossible.

Chapter 1: The Rise of Phronesis

The purpose of this first chapter, then, is to consider the place of both *techne* and *phronesis* in ancient political philosophy. While directed toward a consideration of Aristotle's conception of *phronesis*, I begin with the choral "ode to man" from Sophocles' *Antigone*, followed by Thucydides' *The History of the Peloponnesian War*, and Plato's dialogue, *Statesman*. The section on Aristotle focuses on Book VII of the *Politics* as well as some key passages from Book VI of the *Nichomachean Ethics*. I must say that I do not intend, in the small space of this chapter, to provide a complete exegesis and original theory of these four thinkers' views on *techne* and *phronesis*. My aim is to provide exegesis and analysis on specific works and passages to highlight different descriptions of and ideas about *techne* and *phronesis* in the ancient and classical world. Overall, I think each thinker indicates how *phronesis* might guard against the undesirable consequence of wholly technical rule.

But, before engaging these texts, I should define the ancient Greek words *techne* and *phronesis* more thoroughly because their meanings are neither clear nor univocal. Generally, "*techne*" is translated as "craft" (Irwin 1985/1999) or "art" (Ackrill 1973) but also

"knowledge" (Roochnik 1996).¹ Of these definitions, "knowledge" seems best. "Craft" places emphasis on the finished product of an artisan or craftsman where *techne* really implies the knowledge by which those products were created. And, while *techne* is an "art", there are other arts that do not relate to *techne*. However, just plain "knowledge" does not suffice because it applies to other terms such as *episteme*. While sometimes used interchangeably, *episteme* means "scientific knowledge" and *techne* means "technical knowledge."² Where *episteme* may be "knowledge for the sake of knowledge", *techne* is instrumental or oriented towards the deliberate production of something.³ Furthermore, not only are products wrought via *techne* different from things produced by nature (*physis*) but also from things produced by chance (*tuche*). So, I will translate *techne* as "technical knowledge" because it gives the specific sense of knowledge directed toward the production of something without confusing that knowledge with the product itself.

¹ *Techne* could also be translated as skill, expertise, profession, and science.

² It could also be said that "techne" denotes skill and "episteme" denotes specialized knowledge of necessary truths (NE VI).

³ Bloom notes that *techne* is "a discipline operating on the basis of principles that can be taught. It is, hence, not opposed to science but allied with it ... (Republic, Note 22, 443).

It might go without saying that there are many things that distinguish ancient *techne* from contemporary technology. The meager crafts of a blacksmith and a cobbler are not really comparable to the computers and genetic engineering of our technologists. Yet, beyond scope and size, it is difficult to see much of a difference between the two. While something could be made of the etymological meeting of *techne* and *logos* (reason) in the modern word technology,⁴ the Greek sense of *techne* already implies the application of reason. Aristotle, for example, defines *techne* in the *Ethics* as "a state of capacity to make, involving a true course of reasoning (*logos*)" (1140a10). Of course, we have already reviewed Heidegger's distinction between *techne* and technology as the difference between temporary and permanent imposition of form onto nature. Similar to Heidegger, George Grant suggests that the ancient Greeks limited the role of *techne* whereas technology is characterized by its complete lack of limitation (1986, esp. 11-13). Along the same lines, Stanley Rosen argues that *techne* is defensive whereas technology is offensive (1993, 73). Arthur Melzer proposes that rather than simply bringing something particular into being that would not have existed

⁴Mitcham points to Aristotle's use of the word *technologia* in *Rhetoric*. However, he admits that its meaning is considerably different from the modern word "technology."

otherwise, as with *techne*, technology seeks to control nature as a whole (1993, 299). Carl Mitcham describes *techne* as "fundamentally oriented toward particulars instead of toward the efficient production of many things of the same kind in order to make money" as is technology (1994, 123).⁵

However, we need only read Sophocles' ode to man to realize that ancient *techne* can strive to overcome the harshness of nature as a whole, seek mastery of the world, and control the "tireless," "unwearied" earth. Similarly, Thucydides account of the expansion of the Athenian empire shows that technical knowledge can be large in scale, offensive, vast in its effort to control and, at least in the production of ships and other weaponry, directed toward the efficient production of many things of the same kind in order to make money. The idea of complete technical control that we might only associate with contemporary technology is available in ancient conceptions of *techne*.

This said, both Sophocles and Thucydides portray these applications of *techne* as excessive, deviant, dangerous and in need of restraint. The real difference between ancient *techne* and technology is not fundamental but contextual. The ancients recognize that the

⁵See also William Lovitt's "*Techne* and Technology." *Philosophy Today* (Spring 1980).

unrestrained application of *techne* brings with it great peril and suffering. In turn, they present things such as divine law, natural disaster, ethics and virtue as taboos and limitations on its development. Most relevant to this thesis, though, is Aristotle's explanation of why politics must guide and direct the application of *techne* toward that which is good. For him, only in a *polis* or city under good political leadership are human beings entirely able to understand what products they need to live full and happy lives. More than any other restraint, politics is capable of guiding *techne* to good ends. Today, we are hesitant to restrain technology in any way, politically or otherwise, because it already seems to bring us so much good. Consequently, when it does move toward dangerous and harmful ends, we have little idea of how to respond. Again, our politics has been relegated to either administering to further technological advances or streamlining the integration of new technologies into society rather than guiding and directing technology to good ends. Again, it is not the overpowering character or essence of technology that leads to dehumanization but a failure of politics. Because we have no way to guide or direct the products of technical thinking and making, it seems to us unlimited, all-encompassing, out of control, autonomous and, therefore, different from ancient *techne*. I will have more to say about this in later chapters.

Defining *phronesis* is more difficult. First of all, in the four main texts we will be reviewing, there are four different descriptions of *phronesis*. In the ode to man, it implies knowledge imbued with tradition and natural law. Thucydides presents *phronesis* as the power to do precisely the right thing at precisely the right moment. Plato argues that it is the ability to choose the right way between excess and defect and Aristotle defines *phronesis* as the capacity to act with regard to human goods. Second, contemporary translators and commentators also disagree on how to portray *phronesis*. Irwin, for example, translates the term as intelligence (1985) and, later, as prudence (1999). But, intelligence is too broad and, as will be shown in chapter 2, the latinized *prudentia* means something quite different from the Greek *phronesis*. Practical wisdom, practical intelligence, and practical deliberation are also common translations. For the texts considered in this chapter, Rosen's "sound judgement" (1995) seems appropriate as does "good judgement." But, this is still not quite right. Ronald Beiner explains, "If I see what the situation requires, but am unable to bring myself to act in manner befitting my understanding, I possess judgment but not *phronesis*" (1983, 74). Simply having knowledge of the right thing to do is not enough. *Phronesis* is ultimately characterized by action. To be clear, an Athenian slave may "act" on

the orders of his master and still not have phronesis because he himself does not "see what the situation requires", choose or know the right thing to do. The slave labours while the person with phronesis or the *phronimos* engages in a reasoned practice (*praxis*). With this in mind, "prudent action", "public action" and "social practice" are possible translations as well as more creative interpretations such as reasonableness. The requirement of reason also differentiates phronesis from the action of animals and plants. Where animals have an instinct for action, they have no "reason" to act to that end or purpose. We can similarly say that a plant acts in the sense that a seed moves toward being a fully grown tree. Phronesis is different because it involves a reasoned understanding of the end or purpose for which an action is taken.

Here, we run into a rather thorny issue related to phronesis. If we have the capacity to both understand and act properly in a given situation, does this necessarily mean we have a clear grasp of the end of that action before it is taken? If the answer is yes, then this might mean that phronesis includes knowledge of universal or philosophical truths.⁶ If the answer is no, then

⁶For an excellent review of the nineteenth and twentieth century scholarly debates on the meaning of phronesis in Aristotle see Richard Bodéüs's *The Political Dimensions of Aristotle's Ethics* (esp. pp. 27-38).

phronesis is more akin to a "practical instinct" that happens to hit upon good ends. In either case, there is a danger of transforming phronesis into a contemplative virtue where it clearly is practical in its orientation or cutting it off from what the ancient Greeks considered the highest end of human life, philosophy (for examples of this second concern see Ruderman 1997, 414). I think that phronesis indicates the entire endeavor of "deliberating about" and "acting upon" and may include a limited knowledge of universal truths but only as they apply to practical or political matters rather than the cosmos as a whole. As will be shown below, this is clear when phronesis is understood as the practice of political science.

This points to a final complication in finding a proper definition for phronesis. Aristotle sometimes uses phronesis as a term to describe good judgements in general and, other times, uses it specifically to describe good political judgements. This particular distinction is not readily available in Sophocles, Thucydides, or Plato. If, for example, phronesis applies to decisions made in the household, then it is a relatively common capacity found in all good household managers. If it is related only to decisions made in the political realm, then it is a particular and perhaps rare

capacity of a statesman. Aristotle seems to provide evidence for both conclusions.⁷

All of this noted, I will translate *phronesis* as good judgement but with the idea that these judgements necessarily include action. I will also introduce the main question of this chapter: Is good "statesmanship" or "statecraft" a reliable and rational procedure, readily taught and learned as is *techne* or does it stem from the broad experience, thinking on your feet, and ability for smart decision making that describe *phronesis*? The answer to this question is important because if politics is itself a *techne* then it cannot be a restraint on the technical. However, if politics is *phronesis* then it may be able to subordinate *techne* while still ensuring the use of technical knowledge for human goods.

To find an answer to this question we need to consider the place of both *techne* and *phronesis* in the ancient *polis* or city. All four thinkers describe technical innovation as a way to make our lives more predictable, manageable and stable. House building, weaving, and shoemaking all overcome contingency and

⁷Resolving this difference is secondary to the other concerns of this chapter. However, in chapter 5, the difference between "common" and "rare" *phronesis* rears its head. As will be discussed, if *phronesis* is common then it can easily fit within a democratic context. However, if it is a rare capacity then it may not be amiable to contemporary society as we know it.

allow us to steer the course of our daily lives. Unlike most activities and events of the ancient world, things guided by *techne* are dependable, under control, easily taught and learned. Most everything else is beyond human understanding and control and, instead, is reigned over by chance.

In the works considered below, the *polis* is described as a centre for technical innovation. Despite this, it also seems that politics itself cannot be engaged in the same manner as is a craft. Where a craftsman can claim an expertise in his art, a statesman can make no such claim. Because a statesman deals with larger and more complicated matters, he can never know with certainty what will happen next or how the city or its citizens might react. War, famine, plague and natural disasters of all kinds are constant reminders that life in the city is not straightforward and predictable like the business of shoemaking. Even if a statesman was somehow able to come to manage these events, the nuances of human behaviour would still remain beyond his control. In turn, it does not make sense to be ruled over by cobblers and blacksmiths. *Techne* is simply too standardized for the subtlety, intricacy, and general quality of political life.

Still, the first three thinkers explore the possible advantages of what Plato calls "kingly *techne*." Technical

rule, they theorize, might allow for control, stability and dependability giving a political leader the ability to direct and mold a city and its citizens as a blacksmith forges an artifact. But, they also recognize that this rule is destined to fail. Sophocles warns that divine justice and natural law are the true foundations for city life, Thucydides makes it clear that no man can control fortune forever, and Plato recognizes that the citizenry are simply unable to accept the total rule of one man no matter how great his expertise. There is no such thing as a craftsman-king.

In response to the same concern, Aristotle articulates a human alternative to both the unpredictability of a city ruled by chance (*tuche*) and the danger of a city ruled by technical knowledge (*techne*). In Book VI of *Nicomachean Ethics*, Aristotle describes *phronesis* as the intellectual virtue associated with a good politician. Rather than an expert, the *phronimos* or man of good judgement has a general knowledge of his city and makes good decisions when required. As it is described, *phronesis* is not opposed to or in conflict with *techne* but limits, restrains or, better put, guides its role in the city.

Aristotle argues that the foundation for good political practice remains at the volition of individual citizens and that it is not a product of *techne*. By their

nature as human beings, the citizenry is compelled to political life and obliged to obey the city's laws. If this were not so then the coercive element of law enforcement or the technical aspect of rule would not simply be a tool of the statesman but the principal characteristic of the *polis*. What is more, if *techne* were to control all of the desires and thoughts of the citizenry, then the city, its laws, and even technical knowledge itself would reflect artifice rather than human nature.

So, I begin my analysis of the four texts by focusing on the human effort to control nature, chance, and contingency through technical innovation.

Sophocles

"When he weaves in the laws of the land, and the justice of the gods that binds his oaths together he and his city rise high — but the city casts out that man who weds himself to inhumanity thanks to reckless daring."⁸

⁸Translated by Robert Fagles. David Grene translates line 368 as "If he honors the laws of earth, and the justice of the gods he has confirmed by oath, . . ." Here, instead of "weaves" (*pareiron*), there is "honors" (*gerairon*). Richard Jebb argues that "weaves" is the proper word. He suggests that the similar *gerairon* came to replace the original *pareiron*. Also see Lloyd-Jones, H. and Wilson, N. G., *Sophoclea: Studies on the Text of Sophocles*. Oxford: Oxford University Press, 1990.

This is the warning from the choral ode to man (332-375). The chorus sings of a city dominated by technical knowledge and its terrible consequences. They describe a place of constant destruction and creation – always innovating and driving forward, made by man but inhospitable and inhumane. Strangely, only when man "weaves" divine and natural law into its texture, will the city foster human health, virtue, and happiness. It is as though the chorus imagines a godlike craftsman interlacing the different elements of the city – the warp of tradition and the woof of the arts.⁹ But, who is this weaver?

The ode introduces weaving as remedy for the equivocal, paradoxical and amoral character of man's technical achievements. He progresses out of nature, is freed from the harshness of the elements, only to be subsumed by his own innovation. As will be shown below, the first three passages of the ode are a history of the technical evolution of man: i) inanimate nature is conquered; ii) animals are captured and trained to serve; and iii) society is ordered and cities are built. At each stage, man's control of nature expands. But, the fourth

⁹It may be an invocation of the goddess Athena. She is the patron of the domestic arts including weaving and the protecting divinity of Athens.

and last passage marks an unexpected turn. Now, technical achievement is described as beyond expectation. *Techne* is revealed to be outside of human control – it produces things "beyond our hopes."

Stage 1: inanimate nature is conquered

The first line of the ode describes man as *deinos* or wonderful: "Wonders are many, and none is more wonderful than man."¹⁰ But, this really does not express the playwright's intent. James Nichols highlights the multiple meanings of *deinos* in his translation, "Many are the thing that are *deinos* [terrible, awesome, uncanny, clever], and nothing is more so than man" (1993, 30).¹¹ Being *deinos*, then, is not really praiseworthy but rather an expression of a certain power or capacity. The chorus portrays man as the most dreadful, clever, and resourceful thing in all of the world.¹² He is different. He stands out from the rest of the world.

¹⁰David Grene translates the first line very similarly: "Many are the wonders, none is more wonderful than what is man."

¹¹*Deinos* comes from the root *deos*, meaning fear.

¹²Depending upon the context *deinos* can be any one or all of these things. For example, in Book 12 of Homer's *Odyssey*, *deinos* suggests something dreadful: "[235] For on one side lay Scylla and on the other divine Charybdis terribly [*deinon*] sucked down the salt water of the sea. Verily whenever she belched it forth, like a cauldron on a great fire she would seethe and bubble in utter turmoil, and high over head the spray would fall on the tops of both the cliffs." In Plato's *Apology*, *deinos* implies cleverness. Socrates is described by

The remainder of the passage describes how "wonderful" man expands his power and masters nature. First, "[t]his power spans the sea, even when it surges white before the gales of the south-wind, and makes a path under swells that threaten to engulf him."¹³ Man then "wears away" three characteristics of the earth: the eldest (*hupertatan*), the immortal (*aphthitos*); and unwearied (*akamatos*).¹⁴ *Hupertatan* implies both age and place or position. So, the ode describes how man destroys the old or given order to create something new that he leads and controls. *Aphthitos* literally means against "phthino," against decay. Man begins the degeneration of the earth. A similarly literal translation of *akamatos* gives us "without a sense of toil." By itself, *kamatos* implies sickness, pain, or tiredness and *kamno* means "to work." To overcome *akamatos* man works and toils (*kamnos*).

his accusers as being *deinos legein*, "terribly clever at speaking." And, in Herodotus' *The Histories* (ed. A. D. Godley), it suggests resourcefulness: "5.23. [2] Sire, what is this that you have done? You have permitted a clever and cunning [*denoi*] Greek to build a city in Thrace, where there are abundant forests for ship-building, much wood for oars, mines of silver, and many people both Greek and foreign dwelling around, who, when they have a champion to lead them, will carry out all his orders by day or by night."

¹³As Jebb notes, Sophocles is thinking of the Aegean, where the prevailing winds were from the N. or N.W. in spring and summer, while stormy south winds were associated with winter. The line indicates that human cleverness originated in a specific even isolated region and spreads to foreign lands across the sea.

¹⁴Most translations of the ancient Greek are made with the help of Liddell's and Scott's *Intermediate Greek Lexicon*.

He wears away (*apotruetai*) the soil as in *gen apotruesthai*, to vex constantly the earth by working it.

By the end of the first stage we are told that the development of agriculture has come at a great cost: the toppling of the natural order and the degeneration of the earth. And, as we will see, this difficult give and take is the invariable result of all technical achievements.

Stage 2: animals are captured and trained to serve.

Man's conquests over the animals can be divided into two groups: i) those of which the primary aim is to kill or to capture — man uses nets for fowling (*ornithon*), hunting (*theron*), and fishing (*pontou phusin*); ii) those conquests which aim at reducing wild animals to man's service.¹⁵

In the first set of conquests, there is a new definition of man. He is not just *phrades*, shrewd, but has *periphrades*, an all around shrewdness. We might relate the "all around" nature of man's thoughtfulness, to Nichols' discussion of *panourgia* meaning criminal or rogue. Literally meaning the temperament to do everything, *panourgia* suggests that when a citizen recognizes no limits, conventions, or laws he is a

¹⁵See Sir Richard Jebb's *Commentary*.

criminal. In a similar sense, the first conquests characterize human thoughtfulness as unbounded.

This carries onto the second set of conquests and a third definition of man. He is master or conqueror (*kratei*). Now, he is not simply the hunter of animals, but their master. Importantly, this mastery is achieved with *mechanai*, devices. *Mechanais* is from *mechos* which is "means, expedient or remedy" but also an instrument or machine for lifting weights. The devices, then, imply strength or, better yet, a remedy for inherent weakness. This is clear in his use of the yoke to tame *akmeta tauron*, the untiring mountain bull. Where before he was fearful or at the mercy of the bull, he now controls it. In this second stage, man becomes dependent on devices and mechanisms to maintain his control of beasts. Thus, the themes introduced in the first stage continue – the "untiring" is taken hold of, controlled, strapped down.

Stage 3: society is ordered and cities are built

Next, man teaches himself speech and has *astunomous orgas*, "the temperament to build and rule cities." Aristotle describes a similar relationship between language and the development of cities, "... language serves to declare. . . what is just and unjust . . . and it is association in [a common perception] of these

things which makes . . . a *polis* (Pol II, ii, 11-12). But, the emphasis in the ode is different than in Aristotle's presentation. Rather than a natural impulse, the ode presents the temperament to build and rule cities as wrought out of man's dire situation: he is subject to the cold frost of winter and the lashing of rain. Hence, the city is not part of a natural progression or expression but an escape (*pheugein*).

For this, man is all-inventive (*pantoporos*). This new description fits well considering that *poros* refers to an artificial passage over a river, a bridge. So, the city is a bridge going everywhere (*pan*), an artificial escape. This interpretation is justified as the next line begins with the word *aporos* meaning without passage, as in when man does not have resources he can do very little. The one thing that man is unable to do, no matter what his resources, is *Haida pheuxin*, escape death. Inventiveness is clearly associated with escape: man can escape most of nature but not his own death.

Still, he delays death. He has escaped from disease or plague (*nosos*) with medicine. The last line of the third stage explains that these diseases were before *amechanon*, without device or resource for their remedy. We could take this to mean that man's devices (*mechanon*) overcome *amechanon* in same way his work (*kamno*) overcame the "without work" (*akamatos*) earth or the way the yoke

"tires" the untiring mountain bull in the first half of the ode. Now, human life itself is dependent on devices and medicines.

Stage 4: technical achievement beyond expectation

At this point, the history of technical achievements has concluded. In the fourth stage, man is cunning (*sophos*) in his craft (*mechanoen*). With his ingenuity, intelligence, and understanding he devises arts (*technai*) of a measure above or beyond (*huper*) expectation (*elipida*). For the first time it is suggested that technical knowledge (*techne*) is not necessarily under the steadfast control of humans. Instead, *techne* can produce either the bad or the good, the base or the noble, destruction or greatness. As the first three stages describe, man destroys the existing barriers to his activity: the earth, the beasts, the elements, and disease. Now, his inventiveness has almost no limit.

The chorus suggests a solution. Weaving natural law and divine justice into the texture of the city restores a limit or a boundary to human innovation while still allowing for an escape from the harshness of the natural elements. But, it seems odd that a weaver is called upon to repair damage done by earlier craftsmen. How is the weaver different from the sailor, farmer, hunter, and

city builder mentioned in the first three passages of the ode?

The last lines of this passage provide something of an answer. The chorus hopes that good judgement (*phroneo*) will never be same (*ison*) as the thoughts of these craftsman. They do not want their judgement clouded by technical knowledge (*techne*) or, in a more general sense, technical knowledge should never be the same thing as or equal to (*ison*) good judgement. So, rather than *techne*, the weaver has *phronesis*. This is the character of our weaver rather than the cleverness, inventiveness, and cunning of the earlier craftsman. It remains unclear whether this is a new skill that man must learn or an old skill he must develop. The danger, however, is clear: when good judgement is understood as technical knowledge, man is set for destruction – by his own hand, natural disaster, or the wrath of the gods.

This is also the lesson of the play. Creon, the new king of Thebes, conceives of the city as a refuge from nature (189) and the citizenry as malleable matter to be molded as he sees fit (293, 476-478, 569). Antigone, however, is portrayed as a force of nature (423-425, 712-717, 825-830), unwilling or unable to conform to his rigid rule. While the audience takes Antigone as the heroine and her uncle Creon as the villain, the ode to man cautions that neither of these extremes make for a

good city or a good life. To say the least, this is a lesson taught at a great price: lives lost and forever ruined.¹⁶

The theme of *hubris* is common in many ancient works. The stories of Achilles, King Midas, Oedipus and many others remind us that there are tragic limits to human knowledge and activity. While the characters in these plays and epics dream and strive to win control of their fates, they eventually learn that human beings are wrapped up in the enigmatic and unpredictable character of the natural world. In *Antigone*, we are warned that the leader of a city cannot or, perhaps, should not have a perfect technical knowledge or control in the same way, for example, a blacksmith or cobbler has of his craft. But, at the same time, it is also suggested that this leader should not simply give himself over to the to and fro, strife and destruction of the natural elements. He must understand that the city requires elements of both the artificial and the natural.

¹⁶Creon believed he could individually guide his city through its civil strife but his overconfidence resulted in calamity and sorrow (see especially *Antigone*, 1257-1300).

Thucydides

Thucydides' *The History of the Peloponnesian War* is an excellent illustration of what happens to a city ruled by technical knowledge: Athens is stretched beyond all limits, expands into an empire, only to meet with near annihilation. As the ode to man warns, the very innovation that brings mastery is also the seed of destruction and the exhilaration of technical control clouds the judgement of the Athenian *polis*.

Consider that in Book I politics is described as *techne*. In their speech to the Spartans, the Corinthians explain:

And it is just as true in politics as it is in any art or craft: new methods must drive out old ones. When a city can live in peace and quiet, no doubt the old-established ways are best: but when one is constantly being faced by new problems, one has also to be capable of approaching them in an original way (1.71).

Here, they are trying to convince the Spartans that, in the same way a craftsman must develop and adopt new methods to improve the quality and efficiency of his craft, their political leadership must find new methods to run their city and empire. They also warn that, if they fail to keep up with technical innovations, Sparta will be eclipsed and taken by a foreign power, Athens. They counsel, "An Athenian is always an innovator, quick

to form a resolution and quick at carrying it out," whereas you, the Spartans, ". . . are good at keeping things as they are . . ." (1.70-1). So, "new methods must drive out old ones" and Spartan tradition must be sacrificed in order to match or exceed Athenian innovation.

The dichotomy of innovation and tradition is repeated by Pericles in his reply to a Spartan ultimatum. Presenting Athens' superior naval ability, Pericles says of the Spartans, "They are farmers not sailors..." (1.142). Where the Spartans are bound to the land, the Athenians can move about freely.¹⁷ Taken altogether, we might understand Book I as a description of two extremes: the Athenians are innovators like Creon and the Spartans are traditionalists like Antigone. Just as in Sophocles' play, Thucydides' history is about how these two sides conflict.

Yet, in the same book, the Corinthians also explain, ". . . war is certainly not one of those things which follow a fixed pattern; instead it usually makes its own conditions in which one has to adapt oneself to changing

¹⁷We learn even more about the origins of the innovative "sailing" character of the Athenians from Hemocrates the Syracusan. He argues that "Athenian naval experience . . . was not something born in the Athenians, nor would it last for ever; in fact the Athenians were more landsmen than the Syracusans and had only taken to the sea when forced to do so by the Persians" (Thucydides 7. 21). According to this account, Athenian character is wrought from the earlier war with Persia. They were "landsmen" by nature but circumstances demanded that they change.

situations" (1.122). At first, we might take this to mean that war demands innovation, new skills, contrivances, and arts while old thinking, ways, and traditions must be altered or left behind. If this is the case, the innovative, sailing Athenians are far better equipped to win the war than the traditional, farming Spartans. But things do not turn out this way. Because it does not follow a "fixed pattern" and "makes its own conditions", one can only have success in war for so long. Because they understood the world only through technical knowledge, the Athenians tried to control all of the contingencies and chances of war and failed.

Even though the conflict between Athens and Sparta is clearly its main subject, the movement of nature or the play of chance is the undercurrent of Thucydides' account. In a sense, nature is the third major combatant of the war. For example, the conflict between Athens and Sparta, we are told, brings with it "unprecedented suffering for Hellas." Not only are cities captured and lives lost but there is also a great increase in natural disasters. And, while destruction and death are predictable outcomes of all military conflict, there is no clear explanation for the increase in violent thunder storms, earthquakes, tidal waves, and plagues that hit Greece. It is almost as if these catastrophes are the way

nature responds to the technical innovation of the warring parties.

When the Peloponnesians are unable to overcome the innovative defences of the Plataeans, they try burning down the city and "produced such a conflagration as had never been seen before, or at any rate greater than any fire produced by human agency . . ." comparable to one of the "great forest fires on the mountains which have broken out spontaneously . . ." (2.77). But, despite the size and power of their effort, "a thunderstorm with a heavy fall of rain" puts the fire out. An even more remarkable example is the series of huge earthquakes that turn back the Peloponnesians from an invasion of Attica. A tidal wave is triggered "which covered part of the city and left some of it still under water when the wave retreated, so that what was once land is now sea" (3.89). In turn, the farming Spartans must become sailors. Here, nature forces a reversal of the characters of the two factions.¹⁸ The best example of the movement of nature or play of chance in relation to the war is the plague at Athens: "At the beginning the doctors were quite incapable of treating the disease because of their

¹⁸A similar scene is described in the next book: "It was indeed a strange alteration in the ordinary run of things for Athenians to be fighting a battle on land - and Spartan land too - against Spartans attacking from the sea, and for Spartans to be trying to make a naval landing on their own shores, now hostile to them, against Athenian opposition" (4.12).

ignorance of the right methods . . . Nor was any other human art or science of any help at all" (2.47). The experts, the doctors, are unable to stop the disease and are themselves struck down. The citizenry then turns back to traditional methods of "prayers made in the temples, consultation of oracles, and so forth" but these are described as "equally useless" (2.47). The plague is described as "beyond the capacity of human nature to endure" (2.50) and "so overwhelming that men, not knowing what would happen next to them, became indifferent to every rule of religion or of law" (2.52). It may have been the very innovative, mobile, "sailing" nature of the Athenians that brought the plague to them in the first place: "The plague originated, so they say, in Ethiopia in upper Egypt . . . In the city of Athens it appeared suddenly, and the first cases were among the population of Piraeus . . ." (2.48) Piraeus is the port city from which all Athenian trade and commerce centres. The disease, like the wealth of the city, came from foreign shores.

These three examples highlight how the war drove both the Athenians and Spartans to greater and greater technical heights. In each case, the unprecedented increase in human technical prowess is matched by the inexplicable and unprecedented increase of nature's power. So, when in Book VI, the newly named commander,

Alcibiades, asserts, "Remember, too, that the city, like everything else, will wear out of its own accord if it remains at rest, and its skill in everything will grow out of date; but in conflict it will constantly be gaining new experience . . ." (6.18)¹⁹ he is partly right. Yes, cities and men "wear out" on their own accord. But, as shown above, technical innovation does not change this certainty. Instead, the lesson is that the greater attempt to control nature, the greater the destruction. After all, the Sicilian Expedition that Alcibiades promotes in this same speech demanded all of the skills, equipment, and know-how of Athens but also led to the collapse of their empire.

The Athenians came to believe that *techne* could solve all of their problems. Rather than listening to Alcibiades, they could have listened to the other commander chosen to lead the expedition, Nicias. As he says, " . . . this is no time for running risks or for grasping at a new empire before we have secured the one we already have" (6.10). As an experienced commander, he saw the larger danger to the empire rather than the particular gains Sicily offered. He even points out that

¹⁹In fact, this is how the Athenians describe themselves, "When a man or a city exercises absolute power the logical course is the course of self-interest, and ties of blood exist only when they can be relied upon; one must choose one's friends and enemies according to the circumstances on each particular occasion" (6. 85).

Alcibiades does not have the experience to understand what is at stake, "this is an important matter, and not the sort of thing that can be decided upon and acted upon by a young man in an hurry" (6.12). His warning goes unheeded. In a last effort to convince the citizens of their great error, Nicias decides to change tactics. He argues, "To deal with a power of this kind we shall need something more than a fleet with an inconsiderable army . . . we must start, then, with a force that is large enough for its task" (6.12). Thucydides notes that, in making this point, Nicias hoped the Athenians would be "put off by the scale of the armament required" (6.24). But, the idea of more ships, soldiers, and weapons actually excites them even more and his plan backfires.

At this point, the warning from the ode to man bears out. The Athenians believed that with *techne* they could navigate all of the contingencies of the war. But, in the end, this belief blinded them to the better judgements of their political leadership. The hierarchy of *phronesis* and *techne* was reversed with destructive results.

Plato

Alcibiades simply demanded too much of Athens. A city that is in a constant state of innovation, never at rest, demands the same of its institutions and citizenry.

In turn, there can be neither enduring law nor familial ties and traditions. The city and its citizenry must conform to an ever changing set of circumstances and conditions. If they fail to conform, they will be eclipsed or destroyed by a more resourceful enemy. Alcibiades suggested that man must now tame the city as he did the mountain bull. He must be a shepherd to the citizenry, herding them to ever greater and greener pastures. But, where he failed and led Athens to disaster, perhaps another leader could succeed.

This may also be a conclusion of Plato's consideration of "kingly techne." Kingly techne is considered in *Laws* (875a), *Euthydemus* (291b-d),²⁰ and *Protagoras* (322c-e). It also is a topic in other dialogues including *Apology*, *Laches*, *Charmides*, *Euthyphro*, *Ion*, *Hippias Minor*, *Gorgias* and is a prominent subject in *Republic*. But, only in *Statesman* is it the principal and explicit theme. There, it is described as "the science of government, which is among the greatest of all sciences and the most difficult to acquire" (292).²¹

²⁰"When we reached the kingly art, and were examining it to see if we had here what provides and produces happiness, at this point we were involved in a labyrinth . . ." In the same dialogue Socrates also describes a man "sitting alone at the helm of state, steering all and ruling all, and making all useful."

²¹The Jowett translation only includes numbered margins without letters.

The dialogue begins with a consideration of whether the statesman "should be ranked among those who have science" (258). To answer this question the interlocutors attempt a series of comparisons between the statesman and craftsman. If politics can be compared to carpentry, shepherding, weaving and/or medicine, then the citizenry can be treated like wood, sheep, wool or disease. Just as craftsmen transform these basic materials into their crafts, the statesman can transform land and people into a city.

The first comparison is to a foreman of carpenters. Like a foreman, the statesman assigns "workmen their appropriate task until they have completed the work" (260). However, this is soon disputed. Unlike a foreman that commands a crew of carpenters, a statesman "has a nobler function, which is the management and control of living beings" (261). That is to say, the relationship between the statesman and the city is more like that of a carpenter and wood than a foreman and his workers.

So, rather than a foreman, the statesman is a shepherd. His is "the art of man-herding" or "the art of rearing man collectively" (267). But, this too falls short. Unlike the shepherd, the "herdsmen of humanity" must contend with the contentions and declarations of his flock (268). Humans are not simply sheep willing to follow their leader without question or, for that matter,

wood willing to be constructed without opposition. Quite differently, humans take care of themselves and may even think that they are better rulers than the incumbent carpenter or shepherd.²²

A better comparison is made between kingly *techne* and the art of weaving wool (279). As described, weaving is "the art of protection against winter cold, which fabricates woolen defences . . . " (280) and the working of wool into "a web by the regular intertexture of warp and woof" (283). The statesman weaves together the disparate characters of individuals, families, and different villages producing a cohesive whole.²³ But, how does the weaver control what the foreman and the shepherd could not?

Instead of stressing the control and manipulation of materials, weaving is said to hinge on the measurement between "excess and defect" (284). The ability of the weaver to judge where this standard lies is the same judgement required in the royal science of weaving the

²²For example, at 289 the Stranger identifies "slaves and ministers" as "real aspirants for the throne, who are the rivals of the king in the formation of the political web." Furthermore, just because one rules over men does not mean they have "kingly *techne*" or, put differently, just because a ruler resembles a shepherd does not mean they govern scientifically. For example, tyrants rule over men but know little of political science (276).

²³*Techne* is derived from the Indo-European root "tek," meaning "to fit together the woodwork of a woven house" (Porkorny, s.v. "techne").

political web. Here, good judgement or phronesis is the quality of the weaving statesman. Whatever the circumstances, he will be able to direct the city and the citizens toward what is right and proper.

While the interlocutors are fairly settled that the best statesman is also a weaver, they are not sure whether this type of leader actually exists. At the very least, they know that the weaving they describe cannot be practiced by just anyone. To the possibility that fifty men out of a city of a thousand could attain it, the Young Socrates responds, "In that case political science would certainly be the easiest of all sciences; there could not be found in a city of that number as many really first-rate draught-players" (292).

Also, it remains unclear to them how human complexity, unpredictability and independent thinking of the citizenry is overcome through weaving. Simply interlacing these threads does not guarantee that the city will stay together. If assembled, it would soon be unraveled by a disparity of opinions and disagreements. Politics must not only bring the different strands of the city together but also keep them from unraveling. For this reason, weaving and the weaver are not enough and another comparison is required.

As is decided, the statesman must remedy or transform the vices of the citizenry in the same way a

doctor heals patients. As long as he "does them good and heals and saves them" (293), a doctor may practice on a patient against his will or inflict pain during treatment. The implication is that the statesman can use power or coercion to overcome the obstinate character, disparate opinions and disagreements of the citizenry. It does not matter if he has loyal subjects or whether they agree with his methods as long as he cures them of their vices, directs them towards the good, the fine, the beautiful, and "acts according to the rules of wisdom and justice." In this way, the doctor does what the foreman, the shepherd, and even the weaver could not.

The dialogue ends with a description of how this combination of weaving and medicine, the "greatest of all sciences," is applied. We are introduced to an "orderly class" of men who might remind us of the Spartans. After all, the Spartans were similarly "always ready to lead a peaceful life, doing their own business . . . ready to find some way of keeping the peace with foreign States." However, unlike the Spartans, these men "are at the mercy of their enemies" and "pass imperceptibly from the condition of freemen into that of slaves" (307). Remember, Thucydides' history is an account of how the Spartans changed their nature and defeated the Athenians. The war forced them to become more Athenian and less Spartan. In a similar way, the balance of technical rule

and natural law struck at the end of *Antigone* came only through great tragedy. What if there was a better way than war or tragedy to combine the characters of these two peoples, creating a peaceful union?

Kingly *techne* may be this better way – it "blends and weaves together; taking on the one hand those whose nature tend rather to courage, which is the stronger element and may regarded as the warp, and on the other hand those which incline to order and gentleness . . . the woof – these, which are naturally opposed, she seeks to bind and weave together . . ." (309). The restrained Spartans were accused of complacency and the innovative Athenians of intemperance. These deficiencies brought them to the war. As Thucydides concludes, "What made war inevitable was the growth of Athenian power and the fear which this caused in Sparta" (1. 23). In *Statesman* we are told that, by weaving the temperate with the courageous, vices can be transformed into virtues (310). Where Sophocles writes a tragedy and Thucydides describes a war, Plato writes of a skilled weaving and curing, ". . . in this single work, the whole process of royal weaving is comprised – never to allow temperate natures to be separated from the brave, but to weave them together, like the warp and the woof . . . and out of them forming one smooth and even web . . ." (310). This cures each side of its deficiencies. And, as the dialogue closes, we

are told that when the royal science blends these natures together the city is safe and its citizens are happy.

Still, there are many things about kingly techne that remain unclear: 1) whether kingly techne is the same as all other techne; 2) how the statesman limits the scope of his craft; and 3) whether kingly techne is techne at all.

1) According to the Stranger, "no art whatsoever can lay down a rule which will last for all time" (294). In turn, the art of politics is not obliged by any law because ". . . the law does not perfectly comprehend what is noblest and most just for all and therefore cannot enforce what is best. The differences of men and actions, and the endless irregular movements of human things, do not admit of any universal and simple rule" and because the law is "an obstinate and ignorant tyrant, who will not allow anything to become contrary to his appointment, or any question to be asked -- not even in sudden changes of circumstances, when something happens to be better than what he commanded for some one" (294).

In fact, there are enduring truths or laws to the art of carpentry and the other arts that never change. For example, when making a mortise and tendon joint, the mortise should always be made of green wood and the

tendon from dry wood. As the mortise dries it will tighten around the tendon making for a strong and reliable union between the two pieces. Because the nature of wood does not change, this rule is as true now as it was in Socrates' day. We are hard pressed to find similar rules of politics because the nature of humans is far less predictable than the nature of wood. As the Stranger says of the legislator, "how can he sit at every man's side all through his life, prescribing for him the exact particulars of his duty?" (295). The activity of humans and, for that matter, the activity of cities change and, therefore, constantly needs new rules or remedies to go by. So, the statesman's craft is unlike all of the other crafts because he does not really understand his materials.

2) In the examples of weaving and medicine, *techne* and *phronesis* are not differentiated. We might be reminded of the warning at the end of the ode to man: technical knowledge (*mechanoen technas*, the cunning required for crafts) is opposed to wise and prudent thinking (*phronesis*) and should never be the same (*ison*). But, in *Statesman* *phronesis* is described as particular kind of *techne*: the knowledge of the mean between the excess and defect of a craft.

This is a very different idea from the limitless techne describe in *Antigone* and the innovative techne described by Alcibiades in *The History of the Peloponnesian War*. In *Statesman*, phronesis fills in the place of the non-human limitations to technical innovation mentioned in these earlier works. This techne is not bound by the will of the gods or natural disaster but something within humans themselves, their own better judgements. No tradition, no morality, no natural law should limit the statesman's decree.

Where it might be possible for the weaver or even the doctor to have such an expertise that they understand the full spectrum of excesses and defects that apply to their crafts, we are told that the statesman cannot grasp all of the contingencies that apply to the city. So, if the statesman is not an expert, by what blueprint or standard does he make his judgements? How does he limit the boundaries of his rule? In what way is the statesman different from tyrannical Creon or lawless Alcibiades?

For Creon and Alcibiades, politics is an instrument for some other end (e.g. power or wealth). This may also be true for the weaver and doctor. As technicians, they do not engage in their craft just for the sake of practice but to make some product. What is this product?

3) There are two conclusions which we can come to about kingly techne. It is either an ongoing practice that has no clear product in which case it is not techne at all; or it is a process of making that eventually produces something. The latter conclusion would require that the craftsman-king alter the nature of the citizenry to conform to a more manageable character or mold. Indeed, it may be that politics is about the technical transformation of the citizenry through the arts of weaving and medicine. Politics produces both a defence and cure for some inherent weakness and sickness in the citizenry. The arts "heal and save them." There is some suggestion that through the regulation of marriage and proper interbreeding (i.e. weaving) a better human could be produced (310). But, it also seems Plato recognizes that this is very difficult and lengthy process if not an impossible one.

Whereas all of the arts are directed toward bringing something into being (i.e. houses, wool, blankets, or health), it remains to be seen if the kingly art actually produces anything. Theoretically, it is suppose to bring the city justice and the citizens virtue. But, as we learn, the statesman is not actually allowed to practice his craft. Instead, the city takes up what the Stranger

calls the "second best" rule of law.²⁴ His fellow citizens do not allow the statesman to rule over the city as a carpenter rules over wood, a weaver over wool, or a doctor over a patient. Differently, the reverse is true and he is forced to obey the city. The Stranger admits, in the city "[n]o citizen should do anything contrary to the laws, and any infringement of them should be punished with death and the most extreme penalties; and this is very right and good when regarded as the second best thing. . . ." (297). So, because kingly techne is never allowed expression or articulation, it does not produce anything and is not an art.

It is not at all clear whether Plato is advocating kingly techne, warning against it, or doing something entirely different. According to Leo Strauss, the mediocrity of the general citizenry prohibits the expression of kingly techne. He explains that the product of the kingly art is to the benefit of the body politic (1987, 74) and that "The Kingly art is one of the arts directly concerned with making men whole or entire"

²⁴But, because "the State is not like a beehive" (301), there is no leader who the citizenry recognizes as naturally superior. Therefore, we only have laws to fill in for the absence of a truly wise king. Those states which are not lead by "kingly techne" are then mere imitators and actors, second best to the real thing or even worse: "not Statesmen but partisans, -- upholders of the most monstrous idols, and themselves idols. . ." (303). And, it seems, this description applies to every state except for those constructed in speech.

(1987, 77). The statesman is subject to the "second best" rule of law because the unwise do not trust him. Stanley Rosen explains that for Plato "The city, . . . particularly the healthy city, does not exist by nature. It must be produced by a theoretico-productive art whose paradigms include weaving and medicine" (1993, 73). According to Rosen, Plato depicts the statesman as possessing a "kingly techne that produces and sustains both citizens and the city." However, similar to Strauss, he concludes that "there is no such thing as a technical rule of human life . . ." (1995, 170), that "politics is intrinsically nontechnical" and "The paradigm of the art of politics is not an art, and it is inaccessible to the polis or state" (1995, 171).

David Roochnik writes, "For if arete (virtue) were to become the province of a *technites* (craftsman), then dependable, rational procedures would become available to determine how an excellent life could be achieved. On such a view, arete could be reliably taught, and human life would be rendered stable and 'manageable'" (1990, 3).²⁵ He also writes, ". . . the goal of these dialogues is nontechnical knowledge. . . . if moral knowledge were a techne, then insuperable difficulties would result, and

²⁵Also see J. Gould. *The Development of Plato's Ethics*. New York: Russell, 1955; T. Irwin. *Plato's Moral Theory*. Oxford: Clarendon Press, 1977 and; M. Nussbaum. *Fragility of Goodness*. Cambridge: Cambridge University Press, 1986 for similar interpretations.

moral knowledge would become impossible; since it is not impossible, it is not a *techne*" (1990, 6). He explains that expert carpenters, house-builders, shoemakers, and all other craftsmen including weavers and doctors have a knowledge of the "why" and "how" of their craft. A house builder knows why he builds houses (i.e. to provide shelter) and how he does it (i.e. the type of material to use and the method by which that material is measured and assembled). By this account, the kingly art requires a knowledge of why cities are built and how they are built. For this reason, Roochnik concludes that kingly *techne* runs into "insuperable difficulties" or is simply too complicated for humans to learn. Where Strauss and Rosen place emphasis on the deficiencies of the city and its citizens, Roochnik stresses the inability of the rulers of the city to possess this type of expertise.

Still, Roochnik recognizes that not all technical knowledge requires the same level of precision. He divides *techne* into *techne*₁ and *techne*₂. *Techne*₁ refers to the basic expertise of carpenters and weavers. *Techne*₂, also described as stochastic *techne*, refers to the more complex expertise of a doctor. Where the former can have a more or less precise or exacting knowledge of their craft, the latter group cannot possibly comprehend the sheer variability of their practice. As Roochnik explains, the doctor must treat each patient differently

based upon his assessment of their character and severity of ailment, there are no "hard and fast rules on how to speak to patients" (1996, 53). Joseph Dunne suggests a similar division, ". . .some *technai*, by setting for themselves an end which can be attained through a circumscribed process within their direct control, make themselves invulnerable to chance; others, however, are involved in areas where, since they are circumscribed by no fixed limit (*peras*), the play of chance is simply ineliminable. Being subject to chance, these latter *technai* cannot aspire to the same kind of mastery that obtains in the others" (1996, 256). *Techne*₂ is a far more ambiguous knowledge than *technē*₁ and, by this, is far more difficult to learn.

The bifurcation of *techne* is partly based upon the fact that human relationships, like that between a doctor and a patient, proceed in an unpredictable manner as opposed to the predictable relationship a house builder has with his materials. Returning to the analysis of the *Statesman*, the metaphors of weaving and medicine may actually describe two different elements of the city. On the one hand, the city requires certain dependable, reliable and simple procedures. Otherwise, the citizenry could never assume any stability – city life might swing from crisis to crisis (e.g. insurrection, sedition, hunger, poverty, etc.). The weaver as a precise craftsman

ensures that the city will continue to produce the same product: the city as a woven artifact made up of the different temperaments of the citizenry. On the other hand, the city also needs a degree of flexibility that would allow for change, novelty, new thinking and ideas. The doctor can provide his medicine when the citizenry are too sick to know they need it. Arguably, this comes in the form of new legislation that will secure proper behaviour. So, despite the fact that Roochnik concludes that Plato is advocating nontechnical knowledge, his argument does not exclude kingly techne but only suggests that it is very difficult to attain. He leaves the door open for a future kingly techne.

For Martha Nussbaum, the question is not whether political techne is possible but how we can allow it into the city without it completely transforming our humanness. She writes, "Techne is a deliberate application of human intelligence to some part of the world, yielding some control over chance (*tuche*); it is concerned with the management of need and with prediction and control concerning future contingencies" (1986, 95). Nussbaum also asks, " . . . how much luck do these Greek thinkers believe we can humanly live with? How much should we live with, in order to live the life that is best and most valuable for a human being" (1986, 4)? If we are completely ruled by techne, we lose all connection

to the natural order of the cosmos in lieu of the prescribed order of technical control. She writes:

In a time of deep need, feeling that our very survival is at stake, we may turn ourselves over to a new art. Sometimes this art will simply do what we ask of it, providing efficient instrumental means to the ends that we already have. Sometimes, however . . . the art will so deeply transform ways of life that we will feel that it has created a new type of creature. If, then, we contemplate curing our current ethical diseases by a new art, we must imagine, as well, and with the utmost care, the life that we will live with this new art and the aims and ends that go with it. For we may not want a radical solution, if its cost will be to be no longer human. This would hardly count as saving our lives (1986, 106).

Without some "cure" human life would be harsh and at the mercy of the natural elements. But, with too much medicine, human life will lose all connection to nature. Even though she has her reservations, Nussbaum allows for an application of kingly techne (albeit a wary application).²⁶

²⁶For Plato, the potential for relativism in the technically regulated city is avoided as long as the expert in charge has an understanding of what is good or the "middle way". With a clear vision of the mean between excess and defect, a technical ruler could impose decrees that would be to the benefit of everyone. So, even though the individual citizen will not understand why they must behave in a particular way, following these regulations will result in their own betterment. Put differently, rather than coming to comprehend their own purpose in life, a purpose will be imposed on them from an external source.

But, if the citizenry have no clear understanding of what is good, how is the expert in charge able to have this knowledge? In a number of places, Plato suggests that a group of citizens with the proper intellectual capacity should be exposed to a segregated philosophical education (esp. Plato's discussion of "the Guardians" in *Republic*). They will be in the unique position to contemplate the good and, in turn, become future rulers. Plato also suggests that it

Aristotle

The question at the end of *Statesman* is whether politics produces something (a means to an end [i.e. a better or different city or being]) or is a practice without a product. Aristotle thinks politics is the architectonic or master art that is both productive and practical (NE 1094a).²⁷ In producing the *polis*, habituating and educating the citizenry to good practice, punishing bad behaviour and producing new laws on occasion, politics is a generational circle of

might be possible that any citizen could be temporarily freed from the conventions of city life if they are exposed to philosophical discourse. This might remind us of Socrates' own consideration of "how a city can take philosophy in hand without being destroyed" (*Republic*, 497d). On the one hand, because the citizenry necessarily have an inferior understanding of what is good and proper they will not allow for the rule of a superior philosopher-king. On the other hand, a philosopher-king must change the citizenry to an extraordinary degree before they will abide by his rule. Beyond mere education, the philosophical ruler sees to the interbreeding of different temperaments to create the best citizen. So, philosophy is either ostracized from the political community or changes it so radically that it ceases to be political at all.

²⁷Aristotle begins the *Ethics* with this very point: "But a certain difference is found among ends; some are activities, others are products apart from the activities that produce them" (1094a2-4). There is a distinction between two ends as well as two arts: one that is concerned with practice (*praxis*) and the other concerned with making (*poiesis*). But, both types of arts are included under the rubric of the master arts (*architektonikon*) (1094a14-16). And, as is soon revealed, the most authoritative or architectonic art is politics (1094a27-28). Therefore, politics is both productive and practical.

Note on citing Aristotle: for all works except for *Politics* numerals and letters have been used. However, when indicating a general idea from a chapter or book, the book and/or chapter are listed. For *Politics*, book, chapter and section(s) are listed.

production, growth, and reproduction. According to Aristotle, the key element in the function of this circle is the *phronimos*. He presents the man of good judgement as a statesman who first inherits and then passes down the "genetic material" of the *polis*. Not only is he an ethical exemplar who directs the citizenry to good and proper practices but he also corrects their mutations as well as evolving them to new conditions. He leads by example and by force, by *phronesis* and *techne*.

There are two ways the *phronimos* perpetuates the generational circle. First, because human beings are not born with an ethical or political instinct, they must conform to the particular conventions and practices or *ethos* of their community. Likewise, because conditions change within particular cities, laws and practices must also change rather than remain static. New friends, new enemies, and even natural fluctuations demand the intermittent amendment of city laws and even constitutions. For Aristotle, politics is not aimed at producing a perfect and unchanging city. But, with all of this particularity and change, it may be difficult for the citizenry to always know what is right and proper. In these circumstances, they can turn to the man of good judgement because he is distinguished by his ability to make good choices. In this way, he helps ensure that the *polis* properly reflects its people and its place.

But, Aristotle takes this relativist consideration only so far. Along with particularity and change, he still thinks that there are some things common to all political communities. The second way the *phronimos* perpetuates the generational circle is ensuring that, upon each new generation and general variation, the fundamental tenets of political life are either present or instituted. In turn, he needs an understanding of the *polis* beyond the mere conventions of city life. He needs to understand the purpose of politics as a whole. According to Aristotle, this is achieved through his study of political science.

In what is the last section of this chapter, I will detail the three arcs the make up this circle (production, growth, and reproduction) and the two ways of the *phronimos* by working through Book VII of the *Politics* with reference to Book VI of the *Ethics*.

i) Production:

At the beginning of Book VII of the *Politics*, Aristotle explains that in order to live a good life we require a store of external goods (Pol. VII, i, 13). Some of these goods are provided by nature, by chance or are "given". Craftsmen must produce other goods. In the

Ethics, the craftsman is described as "contriving and considering how something may come into being which is capable of either being or not being . . ." (NE 1140a11-12). Where chance or fortune may provide certain goods, the craftsman is able to bring products into being that would not have existed otherwise.

The *polis* may be one of his products. After all, the city did not sprout from ground like a tree, form from beeswax as do beehives or come into being due to chance. Even though he explains that the *polis* is by nature (Pol I. ii, §8), early in Book I of the *Politics* Aristotle explains that the origin of the city is in "the man who first constructed such an association" (I, ii, §15). This indicates that the city, at least the first city, was purposefully constructed or produced. And, as a product, a craftsman who had a technical knowledge of city building must have made it. Therefore, the city did not come into existence by nature or by chance but was produced by technical means.

However, while Aristotle is clear that in order to live in the city one requires the products of *techne*,²⁸ he also describes the craftsman as playing an important but ultimately subordinate role toward that end. He writes ". . . it is for the sake of the soul that these other

²⁸Remember, Aristotle defines *techne* as "a state of capacity to make, involving a true course of reasoning" (NE 1140a10).

things are desirable, and should accordingly be desired by every man of good sense – not the soul for the sake of them" (Pol. VII, i, 9). The craftsman produces external goods for health and comfort but not the *polis* itself. For Aristotle, a city is not really a product but is defined or constituted by citizens practicing politics.

Yet, later in Book VII when city building is taken up again in a discussion of the ideal state, the *polis* is not described as a practice but a product and the craftsman seems to be vaulted into the highest of positions. Aristotle writes, "Like other producers, the statesman and the law-maker must have their proper materials, and they must have them in a condition which is suited to their needs" (VII, iv, 3). Now, the statesman is a "producer" comparable to a weaver or shipwright. The only difference is that, rather than wool or wood, his proper materials (*choregia*) are territory and population. Aristotle's use of the word *choregia* says a great deal. It originally referred to a contribution of supplies or costumes given to the chorus of a play by a wealthy citizen. Aristotle's use of it in this passage implies that the population and territory of a city are basic provisions for the city's production and, furthermore, that they require some external organization and animation. They do not, if you will, have a mind of their own. In this circumstance, the population is inert

material that can be selected and molded at will. As it is put, "The primary factor necessary, in the equipment (*choregia*) of a state, is the human material" (Pol VII. iv, §4). And, in the next few chapters, Aristotle goes onto discuss the amount, quality, division, and distribution of this material. All in all, he seems quite settled with the idea that a *polis* can be crafted or produced.

But, the whole idea that a statesman can prepare the population in the same way a weaver prepares wool seems strange. Because this is a discussion of the ideal state rather than a manual for the production or founding of a real *polis*, we might dismiss Aristotle's depiction of human material as purely theoretical. Consider that at the end of chapter 12, Aristotle cuts short his list of the multiple aspects of the proper construction of the *polis* because ". . . it would be a waste of time to linger here over details and explanations. It is easy enough to theorize about such matters: it far less easy to realize one's theories. We talk about them in terms of our wants; what actually happens depends upon chance" (VII, xii, 9). His abruptness is not surprising. In the *Ethics* he is clear that there can be no precise or detailed application of political ideals because politics exhibits too much variety and fluctuation. At most, we can understand it roughly and in outline (1094b12-20).

Furthermore, as he recognizes in the next chapter of the *Politics*, we can only "pray that our state should be ideally equipped at all points where fortune is sovereign — as we assume her to be in the sphere of the 'given' (VII, xiii, 9). The makeup of the population would likely be included in this sphere of the given rather than the made. So, not only is it impossible to understand politics in the same way one understands a craft, we also are deprived of the opportunity to prepare our materials as would a craftsman.

Still, the very fact that he conceives of the best constitution and the best state as products, in the same sense that a blanket and a ship are the products of the weaver or shipwright, bears further consideration. For Aristotle, the "ideal" is not necessarily something that is out of reach or purely theoretical but consists in having all the material conditions of life met as one would wish (II, i, 1). Under these conditions, it might actually be possible for a statesman to be like a master craftsman who imposes a form onto human material in the same way a weaver imposes a form onto wool. Just as the weaver understands how to turn wool into a blanket, the legislator molds the natural character of humans into good citizens (Pol VII, xiii, 13). And, even if fortune gives the statesman these materials "pre-prepared," this is really no different than the situation of any

craftsman. In Book I, Aristotle writes, ". . . the art of the statesman does not produce human stock, but counts on its being supplied by nature and proceeds to use her supply, . . . It is not the business of the art of weaving to produce wool, but to use it . . ." (I, x, 1-2). The statesman can be a producer of the *polis* after all.

However, there remains a problem. As we might remember from *Statesman*, the real difficulty is that human beings are not inert material. "Human material" is unique in that it demands a say in the direction and outcome of its production or making. Imagine if the lumber of a house started instructing the house builder how to build a frame or the costumes of a chorus began to make suggestions to the actors. As we know, humans have many opinions on how their cities are run. And, without doubt, this makes the growth of a city far more complicated than that of a blanket or a ship. If humans could be as are the materials of a weaver or shipbuilder, the city could be run on precise technical knowledge alone. But, alas, this is not what is given by nature. With this in mind, the prospect of having a *techne* of human material or kingly *techne* is unlikely.

While *techne* definitely has a role in the running of the *polis*, Aristotle resolves that the city requires additional knowledge. For Aristotle, the singularly

technical ruler, such as Plato's weaver of temperaments, is an impractical creature. Rather than his technical knowledge, the activity of the good statesman is exhibited by way of good judgement or phronesis.

ii) Growth

The first chapter of the *Politics* is similar to the ode to man. As in the ode, Aristotle describes how humans came to live in cities. Through generations of teaching and learning human beings moved from tiny households, to small villages to life in the city. We overcame the cold of winter through the art of building and the pangs of hunger through the art of agriculture. We came together to defend our buildings and fields. Finally, in the *polis* our ability to intelligently anticipate, prepare and react to circumstances and conditions is at its height. The city is a safe haven from the harshness of the natural elements, a place where humans decide the course of their lives rather than chance. In the city we have a foundation of experiences and resulting arts that allows for peace from war and leisure from toil. Technical knowledge clears away the difficulties associated with

our material needs through the production of crafts and frees up time for higher concerns and practices.²⁹

Aristotle is clear that technical knowledge does not itself "produce" the good life. By saying " . . . man is by nature an animal intended to live in a polis" (Pol I, ii, 9) Aristotle acknowledges that human nature cannot be fulfilled without the productive arts. We are unable to complete ourselves by ourselves – not only do we need other people but also the comfort and protection of the city. But, to be clear, Aristotle really means that man is by nature a political animal (*politikon zoion*). He means that human beings are compelled to be political – to live and act in a *polis*. This practice is their end and not some other end or product that is made through the activity of politics. Rather than a *techne* that makes, politics is a practice guided by *phronesis*.

Both *techne* and *phronesis* are intellectual virtues that deal with things that can be otherwise or things that can be changed (NE 1141a1-2).³⁰ Rather than directed

²⁹James Nichols, in his essay "Technology in Classical Thought," puts it bluntly, "The scattered life of ancient times, essentially depicted by Homer's presentation of the Cyclopes, holds no special charm for Aristotle" (1993, 37).

³⁰Unlike, for example, an astronomer's knowledge of the moon's orbit, the knowledge of both the *technites* and the *phronimos* is directed toward some sort of change. So, even though it can be demonstrated (NE 1139b20), knowledge of the orbit of a planet has only an indirect practical application because, although it may allow one to predict the tides and thus be a better sailor, an astronomer cannot then go on to change the orbit of the moon to create conditions for better sailing. His is a knowledge of things that cannot be otherwise (NE 1139b20).

toward making, *phronesis* is "a reasoned and true state of capacity to act with regard to human goods" (NE 1140b20).³¹ Where the craftsman changes raw material into products, the *phronimos* changes human beings into good citizens. Yet, there is still a similarity between these undertakings. Because both a raw material such as wood and a human being such as a youth will not develop naturally or independently into a chair or a good citizen, they both require something external to move them in that direction. As it is put at the beginning of Book II of the *Ethics*, humans can be habituated to make right and proper choices where before they made wrong and improper ones. Aristotle explains that the ethical virtues come from custom and habituation (NE 1103a14ff). Likewise, in Book VII of the *Politics*, he explains, "There are three means by which individuals become good and virtuous": the natural endowment we have at birth; the habits we form; and the rational principle within us (VII, xiii, 10-1). In the same way a craftsman chooses his materials and shapes them from an original form, habituation, moral education, and rational persuasion

³¹It is not simply judgement but an ability to act properly in given circumstances. As will be discussed later, almost everyone has the capacity for judgement. Far more uncommon are the capacity for good judgement and, even more so, the capacity for good political judgement.

shapes the natural endowment of a youth so that he turns into an ethical adult.

However, there are also differences. Where wood will not on its own accord shape itself into a chair, human beings will, to some degree, change themselves willingly into a good citizen provided they are placed in the proper environment. According to Aristotle, a person chooses (*prohairesis*) to act in virtuous manner for its own sake. In turn, where the craftsman imposes a form onto his materials, the *phronimos* can expect his "material" to voluntarily change itself to its new form. In other words, for *phronesis*, the efficient cause of the change is in the material and not from an external source. Differently, in the case of *techne*, the efficient cause is from an external source – in the craftsman, not the product.

This parallels the division between things by nature and things by artifice. In the *Physics*, Aristotle explains that something is "by nature" only when it has in itself a source for change and staying unchanged (*Phys* 192b, 14-15). In other words, its source of movement or "efficient cause" is in itself. For example, a tree grows, changes or moves from a seed but that growth is compelled toward the development of a fully grown tree – the efficient cause of the tree is in itself. A blanket or a ship, on the other hand, have an efficient cause in

a weaver or shipwright – in the maker and not in the thing made (NE 1140a10-15). They do not grow, change or move without the craftsman. We can conclude, as does Aristotle, that a tree is natural and a blanket and a ship are artifacts. Likewise, we can conclude that things guided by *phronesis* are natural and those by *techne* are artificial.

So, when Aristotle explains that following the example of the *phronimos* is an essential part of a moral education (NE 1106b36-1107a2), he is speaking of the natural growth of a human being. By observing and imitating this man of good character, a student can become a better person. Obviously, no matter how long a piece of wood is kept in the presence of a beautiful chair it will never start to be more like a chair. In his imitation, a student will get into the habit of acting in a virtuous manner. This will instill in him the skills he needs to live a good and proper life. For example, by imitating temperate acts a student will develop a mastery over his passions, appetites, and desires. The proper satisfaction of the passions, appetites and desires are the means by which the irrational is conformed to the want of the rational part of the soul. At first, there may considerable tension between this rational temperance and, let us say, his irrational passion for sex or appetite for food. But, with enough practice, this

tension will dissipate, the student's soul will be ordered, and the ethical virtue of temperance will be an aspect of his internal efficient cause or reason for acting.

Importantly for Aristotle, we should not repress our natural inclinations but guide them to good ends. In fact, the student's passion for sex and appetite for food are the initial spurs for self-understanding and development. The experience of satisfying the appetites, seeking that which is pleasurable and avoiding that which is painful, is the first step in the growth of good judgement.³² At its most basic level, good judgement can involve a decision to not eat too little or too much but the right or middle amount. This type of choice is the start of the development of a greater capacity for good judgements about higher things. A student works his way through this hierarchy guided by that which is pleasant, the example of the *phronimos*, and through formal education and training. While the appetites, passions and desires may prompt one to act, ethics and virtue clears the way for that action to achieve even higher ends (NE 1113a9-13). As Aristotle writes, "choice is the starting point of action: it is the source of motion but not the

³²Aristotle writes, "for that which has sense-perception there is both pleasure and pain and both the pleasant and the painful: and where there are these, there is also wanting: for this is a desire for that which is pleasant" (De Anima, 414b1-5).

end for the sake of which we act . . . The starting point of choice is desire and reasoning directed toward some end" (NE 1139a31-36). Through proper choices, the moral weakness, immaturity or intemperance that might have instead lead one to lust or gluttony is pushed aside. Rather than merely being continent or controlling desire, virtuous action is about leading desire or growing toward natural and good ends.³³

Yet, this "growth" still requires "production" because some, if not most, of the appetites are satisfied with the products of techne. The point is to have right and proper choices guide what is being produced rather than products guiding choice. Clearly, if the appetites are not guided by virtue and remain excessive or defective, they will inspire the creation of bad and even dangerous products.

iii) Reproduction:

In the second chapter of the *Politics* Aristotle writes, "Male and female must unite for the reproduction of the species – not from deliberate intention, but from the natural impulse . . . to leave behind something of the same nature as themselves (I, ii, 2). Later, he

³³For example, Aristotle is clear that anger is appropriate at certain times (1126a3-5).

describes the origins of the *polis* in the union of couples and in the formation of the household and the village:

Because it is the completion of associations existing by nature, every polis exists by nature, having itself the same quality as the earlier association from which it grew. It is the end or consummation to which those associations move, and the 'nature' of a thing consists in their end or consummation; for what each thing is when its growth is completed we call the nature of that thing, whether it be a man or a horse or a family" (Pol I. ii, §8).

By calling the city the end of these other associations, Aristotle does not just mean that the city comes last in a chronological order. He means that the nature of these earlier associations is subsumed by or become part of the character of a *polis*. The nature of a couple for reproduction is also the nature of the *polis* as a whole – a *polis* also wishes to "leave behind something of the same nature as themselves." In the same way a mother and father pass down their "same nature" to a child, the *polis* wants to transmit its *ethos* to the next generation of citizens. Because the end of reproduction is subsumed by higher associations, the couple reproduces by impulse where the *polis* is reproduced with deliberation and through reason (VII, xiii, 12, also I, ii, 2).

The *phronimos* is the key element in this reproduction. He has been habituated and educated to the relative norms and conventions of the community and can "deliberate about what is good and expedient for himself, not in some particular respect, e.g. about what sorts of thing conduce to health or to strength, but about what sorts of thing conduce to the good life in general" (NE 1140a25). By acting toward and achieving good ends time and time again, the man of good judgement comes to rationally understand or perceive the common character or quality of all good action.³⁴ Now, the *phronimos* is more than an ethical exemplar. In the *Politics*, *phronesis* is named "the only form of goodness which is peculiar to the ruler" (III, iv, §17) and, as noted in Book VII, the legislator is described as someone who knows "what is the end or aim to which a good life is directed" (Pol VII, xiv, 8). In other words, the *phronimos* is also the statesman. In this capacity he "must labour to ensure that his citizens become good men" (VIII, xiv, 8). Rather than working the citizens as a weaver crafts wool, the legislator must "bring into being" (*gignomai*) a good citizen as a mother produces a child.

³⁴That is why, according to Aristotle, young men may be clever or smart but not wise in practical matters (NE 1142a12-21). They simply lack the required experience.

The problem, as Aristotle sees it, is that there are enduring barriers to this reproduction. He points to the "vulgar decline" of statesman who are concerned only with the "useful" and "profitable" as well as empire building (Pol. VII, xiv, 15-17). Considering all that Aristotle has said, this is a dire circumstance. If the *polis* fails to pass down the bases of its *ethos*, laws and the good life to the next generation of citizens, then the constitution of the whole city will become deviant. He is clear that the citizens reproduced by that city's legislators will be unhappy (VII, xiv, 18). And, while Aristotle points to Sparta as an example of this breakdown, he might as well be pointing to Athens during and after the Peloponessian War. Arguably, once the link between generations is broken, recovery of "human goods" is difficult.

This said, it is not surprising that in the following passages Aristotle makes many notable recommendations for the regulation of the birth and general training of the citizenry. The bases of the good life must be instilled or, in the case of a *polis* gone astray, re-instilled on all levels: body, spirit and mind. The advice he gives is strikingly technical in tone and content; similar to Plato's description of the doctor who causes some pain but ultimately heals and saves.

Aristotle is not simply encouraging and guiding birth or providing a conducive physical and moral environment for children but is calling for the management of reproduction in its entirety. He notes that ". . . the sort of people which a legislator can easily guide into the way of goodness is one with a natural endowment that combines intelligence and spirit" (VII, vii, 3) but also that "such a beginning is only a step to some further end" (VII, xv, 8). In order to ensure a there is "a stock of the healthiest possible bodies in the nurseries of our state" the legislator should regulate marriage partners (VII, xvi, 1-10). As presented here, the mother and father are merely the surrogates of the legislator. He is crafting the child and the parents are his tools. The legislator also decides whether, once born, a child should live or die, "There should certainly be a law to prevent the rearing of deformed children" (VII, xvi, 15).³⁵ From the very earliest point, the legislator seeks to remedy deformity or mutation in the population. Not only does he choose the tools but judges whether the reproduction is a success or failure. Aristotle explains that he wishes to avoid children small in stature, those that are weakly or physically or mentally imperfect (VII, xvi, 6 and 16). Whether or not

³⁵Barker notes that a deformed child would likely be subject to death by exposure on the hillsides above Athens (note 3, p. 327).

all those born below these levels are done away with is not so much the point. In all cases, Aristotle thinks that the decision should be left up to the legislator. The same goes for diet, exercise, play, and the early stages of education in general. Clearly, this is significantly different than the "voluntary" growth associated with *phronesis* and much more like the imposition associated with *techne*. Aristotle even concludes, "The purpose of education, like that of art (*techne*) generally, is simply to copy nature by making her deficiencies good" (VII, xvii, 15). Education is itself a process of reproduction to complete what birth has left undone.

But, it must be remembered that this describes the early stages of education. In the last passages of Book VII we get an indication that, at a relatively young age, children begin to willingly conform to the conventions of their *polis*. Aristotle suggests that by the age of five children are to watch "others at work on lessons which they will afterwards have to learn themselves" (VII, xvii, 14). Just by being exposed to others acting in good manner and bettering themselves, a child will also become better. Already we see that the technical side of upbringing subsumed by the higher goal of developing good habits. As mentioned above, these good habits will eventually lend themselves to the development of

phronesis. Finally, phronesis will then be exercised by the next generation of statesmen in the upbringing of the following generation.

Importantly, both *techne* and *phronesis*, with habituation consisting of elements of each, participate in the establishment and maintenance of the good citizen and *polis*. The ends of the couple, the craftsman, and the man of good judgement are all held within this end. Even the legislator is subject to some aspects of technical control. Aristotle explains that "Law trains the holders of office expressly in its own spirit. . . ." But, with this training, the law ". . . then sets them to decide and settle those residuary issues which it cannot regulate, 'as justly as in them lies.'³⁶ It allows them to introduce any improvement which may seem to them, as the result of experience, to be better than existing laws" (Pol III, xvi, 5). In other words, while the technical side of legislation is necessary it also must give way to the dynamism of politics and the *polis* itself. Aristotle even divides the technical making of legislation from the dynamic practice of *phronesis* (NE VI, 8).

When the legislator makes only technical decisions or is removed from consideration of the particulars of the community, his rule will likely result in

³⁶This could read as "according to the best of their judgement."

unhappiness. This is obvious in the case of the clever man or *deinos*. As with the *deinos* from the ode to man, Aristotle's *deinos* is comparable to a *panourgos*, a criminal or rogue, a lawbreaker, a man without limits (NE 1144a23ff.).³⁷ It may be that the *deinos* is able to legislate or rule the city – he has the capacity to make – but he does not know how to direct its growth to human goods.

Surprisingly, a political leader who understands what is good can also produce unhappiness. Because he knows the good, this legislator might sometimes institute a law that demands the involuntary betterment of not just children but also individual adults or even the citizenry as a whole. For example, it is sometimes necessary to inflict punishment on or take a coercive measure against a criminal (Pol VII, xiii, 6). As mentioned above, it is also possible that an entire *polis* may be in need of this sort of medicine. But, Aristotle warns, the legislator must be careful not to over-prescribe his remedy:

To change the practice of an art is not the same as to change the operation of a law. It is from habit, and only from habit, that law derives the validity which secures obedience. But habit can be created only the passage of time; and a readiness to change from existing to new and different laws will

³⁷In his discussion of Aristotle's *deinos*, Hans-Georg Gadamer quotes the first line of the ode to man as a way to explain the "terrible" character of cleverness (1989, 323-4).

accordingly tend to weaken the general power of law (Pol II, ix, 19-24).

Even if it is for their own good and directed toward happiness, laws that are constantly changing will leave the citizenry unable to learn and follow them.³⁸ Even in this situation, the *phronimos* must exercise his judgement and bring in new laws at a conservative pace. Otherwise, there is a very real risk that he will be ousted from the city and the citizenry will be even farther from happiness. Aristotle notes that a political leader of "merit so outstanding as to surpass that of all the rest," (Pol III, xvii, § 5) risks being ostracized (Pol III, xiii, §15) or worse. He explains, "It is true that it would be better if the legislator could so frame a constitution initially that it would never need any such remedy; but the next best course, should the need arise, is to endeavor to apply this sort of correction" (Pol III, xiii, 23). It is better to remove the outstanding man if he threatens the stability of the *polis* too much.

In the end, this man is not really a man of good judgement at all. Only a man of good judgement is able to deliberate about good things and *ascertain* those things

³⁸As Melzer puts it, "Since habituation requires changelessness, a healthy traditional society must be relatively static; therefore, it must necessarily be suspicious of the example and influence of the arts, with their reformist and innovative tendencies (1993, 300). Nichols comes to a similar conclusion, "The innovative tendency of the arts must not be extirpated but rather tempered by a comprehensive political prudence that recognizes the true character (and limitations) of law" (1993, 39).

through action. He does not achieve any goal, as does the clever man, but necessarily a good goal (NE 1142b20).³⁹ He does not deliberate about a good goal and find himself unable to achieve it as is the case with the outstanding man. He is able to both aim at and hit the proper target (NE 1141b9-14). Again, as in the *Statesman*, a kingly techne is unlikely if not impossible.

To be able to aim at and hit the proper target, a statesman must have a knowledge of human goods in general as well as the relative conventions of his community. To know only the universal is not enough. But, this is also true of the particular. If indeed his city has lost its way, the present conventions and laws can neither guide nor train the legislator. Any new laws based on them will only reproduce the very things that are deviant at present. He must have a knowledge beyond the conventions of the city, some form of higher experience and education. This, I think, is the point behind Aristotle's political science. As it is presented, political science involves an education on how politics works in all communities (e.g. studying the constitutions of different regimes) as well as practical experience within a specific community (e.g. its terrain, neighboring

³⁹What is more, unlike a lucky man who may achieve good ends, the man of good judgement aims and hits his target not by luck but by the deliberate use of the correct means (NE 1144a10).

communities, the size and make up of its population, and its legislation). Through a combination of larger considerations of politics and law, political education and political experience, the *phronimos* is able to strike a balance between the particular needs of his community and what is good for all communities (Pol. IV, i, sec. 7-8). This is the program laid out at the end of the *Ethics* (1180b28ff and esp. 1181a10-12) and taken up as the project of the *Politics*.

As Aristotle explains, phronesis is not "concerned with universals only – it must also recognize the particulars . . ." (NE 1141b15-16). Consider that the philosophers Anaxagoras and Thales are described as being both wise and imprudent (NE 1141b3-9).⁴⁰ While they may have an understanding of the good in general, they do not have the capacity to articulate that understanding into practice as does the *phronimos*.⁴¹

⁴⁰As presented, this distinction between philosophy and politics illustrates Aristotle's point. However, as Ruderman points out, the division is not so stark. Both Thales and Anaxagoras were involved in politics (410, note 4). So, in fact, this example actually illustrates an "unarticulated middle ground" between philosophy and politics.

⁴¹This "close" relationship between philosophy and politics is suggested by Aristotle's description of the soul. The human soul is divided into the rational and irrational. He argues that the rational part of the soul rules over the irrational part. This is matched in the city where the rational master rules over the irrational slave. The rational part of the soul is sub-divided into the practical and the speculative. Here, the speculative part of the soul rules over the practical part. This is matched in the city in the relationship between the speculative philosopher and the practical politician. Arguably, because they reside in the same part of the soul, their relationship is closer than that of the master

This is also why Aristotle explains that not every man of practical wisdom is a statesman but only that a statesman has practical wisdom. At first, it is hard to see how the practical wisdom of political men such as Pericles is the same as those "who are good at managing households" (NE 1140b10-11). Aristotle even suggests that certain "lower animals" have practical wisdom in that they have foresight with regard to their own life (NE 1141a27-29). Here, *phronesis* is involved in almost every good action rather than the exclusive practice of the good politician. It is as though there are two kinds of *phronesis*: the relatively common *phronesis* of the *oikos* or a private *phronesis* and an uncommon *phronesis* of the *polis*. This distinction is important because the criterion for *phronesis* differs considerably between the two. Common *phronesis* is based in the good taste, material and/or aesthetic sensibility that is required to properly manage a household and is apolitical (Ruderman 413). Uncommon *phronesis*, however, is based on political experience, education and contemplation and is clearly political.

and the slave. So, rather than the philosopher "ruling over" the politician, the philosopher advises or instructs him on what is good. This also clearly means that rationality includes both practical and speculative elements. Therefore, if the *polis* is to be based on reason, then its running must include both politics and philosophy.

The relationship and hierarchy between the two is cleared up, at least in part, when Aristotle explains that those outside of political office may have "right opinions" about what ends to aim for but not the means to act out or ascertain those ends (Pol. III, iv, 18). It makes sense that he presents political science as the "supreme directing faculty" of all prudent action (NE 1141b20ff) as well as architectonic (NE 1094a23-b2). This indicates that any prudent action that occurs in the household, or anywhere else for that matter, is possible only because of the greater prudent actions of good politicians and legislators. For example, proper household management would not be possible if there were not good laws to protect property or, for that matter, a good constitution in general. Political science "legislates as to what we are to do and what we are to abstain from" (NE 1094b5-6). While Aristotle is also clear that one cannot live good life without both household management and politics (NE 1142a9-10), the latter allows for the former.

From here, we can round out our discussion of phronesis and step back to take a larger view of what is at stake for Aristotle. Early in Book VII, he warns:

The world would be a curious place if it did not include some elements meant to be free, as well as some that are meant to be subject to control; and if

that is its nature any attempt to establish control should be confined to the elements meant for control, and not extended to all. One does not hunt men to furnish a banquet or festival: one hunts what is meant to be hunted for that purpose is any wild animal meant to be eaten (Pol VII, ii, 15).

Aristotle recognizes that complete control of everything or technical leadership of the *polis* is a possibility but also that it is not a good choice to make. When control is "extended to all" every tradition including the limitation that prohibits cannibalism must be put aside. Clearly, Aristotle makes the connection between unrestrained *techne* and dehumanization.

To conclude, let us return to our question: Is politics *techne* or *phronesis*? Creon, Alcibiades, and even Plato's weaver/doctor seem willing to run roughshod over particular taboos and sacred rights in the name of a greater good. For them, politics is *techne* that may include *phronesis*. Aristotle's *phronimos*, on the other hand, recognizes that both the particular and the universal are part of the *polis*, politics and the good life. For him, good statesmanship is *phronesis* that includes *techne*.

Chapter 2: The Decline of Political Judgement

This chapter, similar to the last, will focus on specific works and passages to highlight the changing roles of both *techne* and *phronesis*. Not surprisingly, the medieval and modern¹ thinkers discussed below do not use the ancient Greek terms. Instead of *techne* and *phronesis*, they write of science and prudence. But, more than just a difference in language, the meanings of these words are also different. This is especially true for the difference between *phronesis* and prudence. In fact, it might even be said that modern politics is founded upon this change in meaning. More specifically, modern politics is founded upon the decline and discreditation of the classical virtue of *phronesis*, its replacement with prudence, and the rise of science.

Arguably, this change begins when the medieval scholar and Christian philosopher, St. Augustine, divides human judgement into two kinds. He writes of a "False prudence" or "prudence of the flesh" that relates to temporal, particular and worldly affairs and a "prudence

¹The term "modern" is derived from the Latin *modo* meaning "in a manner", "to the measure", or "just now." This last meaning suggests that the "now" or present represents a distinct break from the past. Hence, that which is modern breaks with tradition, superstition, and old institutions (e.g. the medieval Church). Both Machiavelli and Hobbes, as characteristic modern political thinkers, argue against holding to past standards, morals, and beliefs and for the unique opportunities of the present.

of the spirit" (see below) that describes a choice to live a proper, religious life in harmony with God. Rather than directing or guiding the lower prudence to higher ends, adherence to prudence of the spirit nullifies the distracting and sinful influence of the flesh. In turn, the connection between the particular and universal, indicative of Aristotelian phronesis, is broken. Like the Christian description of "false prudence", modern prudence is characterized as a means that produces an ulterior end. So, rather than a practice, modern prudence is an "art" or, as Machiavelli describes it, a technical ability. Finally, Thomas Hobbes attempts to discredit and replace prudence or shortsighted judgement with a more reliable scientific knowledge. The accounts from chapter one concluded that a complete technical control of the city was either impossible or undesirable. Hobbes, however, argues for an everlasting and effective new science of politics.

Medieval Thinkers

St. Augustine defines "prudence" as the ability to know what is good, that which we should seek, and what is evil, that which we should avoid. He writes: "Prudence is love choosing wisely between the things that help and those that hinder" (Of the Morals of the Catholic Church,

15). Initially, this statement seems similar to the connection Aristotle draws between phronesis and a virtuous life. Both Aristotle and Augustine argue that it is right and proper to act in accordance with human goods. They also seem to agree that prudence is the precondition for all of other ethical virtues (Of the Morals of the Catholic Church, 45). Augustine writes:

Is not the virtue of prudence constantly on the lookout to distinguish what is good from what is evil, so that there may be no mistake made in seeing the one and avoiding the other? The need for prudence bears witness to the fact that we are surrounded by evil and have evil within us (City of God, 19.4.4).

In the same sense as Aristotelian phronesis directs the lower things of the soul (i.e. the appetites and passions) toward higher ends (e.g. De Anima, 414b1-5; NE 1113a9-13), Augustine describes prudence as the capacity to direct our actions away from the evil in the world and in ourselves toward that which is good (see below).

The difference, however, is that where Aristotle believed human fulfillment came from living a good life in accordance with both particular circumstances and universal rational principles, early Christian thought presents right action and corresponding human goods embodied in a life in harmony with the Christian God. Ultimately, it is God's love (*agape*) or divine intervention that guides us to choose the way to Him and

avoid that which leads us astray. As Augustine says, it is from Christ that we learn what we are to love and how much we are to love it and that God is our highest good (Of the Morals of the Catholic Church, 13). In saying that prudence is love, Augustine is subordinating human judgement to a higher power – good judgement is subsumed by God's love.

Consequently, the unique position of phronesis as a bridge between the ethical and the intellectual virtues is no longer held. This is related to Augustine's division of prudence into two kinds: "Prudence of the flesh is that form of prudence whereby we seek to gain temporal goods and to avoid temporal evils. Prudence of the spirit is that form of prudence whereby we do not put our hope in temporal goods, nor do we fear temporal evils" (Exposition of Certain Propositions from the Epistle to the Romans, 49). As already mentioned, the higher form of prudence allows us to see that the only important thing in life is choosing eternal salvation and avoiding eternal damnation. In turn, all of the contrivances of the temporal world including family, community, and politics are to be sacrificed for this highest end. Clearly, the balance suggested in Aristotle's notion that phronesis is not "concerned with universals only – it must also recognize the particulars . . ." (NE 1141b15-16) is no longer present. Now, only by

accepting, understanding and ministering God's word can one live the good life.² Good judgement, then, is merely choosing an already determined course.

The separation between the particular and the universal, the practical and the contemplative, the ethical and the intellectual or the temporal and the spiritual also explains the difference between medieval commentator's use of the Latin *prudentia* and the ancient philosopher's use of the Greek *phronesis*. Celano notes, "Prudence, as distinct from *phronesis*, becomes a virtue of the inferior part of the soul, whose main function is the habituation of the rational faculties in the governance of the passions . . ." (230). This prudence is "the civic moral virtue" and *phronesis* is reinterpreted as an "intellectual activity" (232). Again, this separation between inferior prudence and an elevated *phronesis* breaks the connection of the practical and contemplative found in Aristotle's account of *phronesis* as good judgement.

This partition also means that Aristotle's political science becomes an impossibility. Because medieval interpretations fail to understand *phronesis* as public action and, instead, banish it to an intellectual activity, the ethical actions of citizens in the city are

²Corinthians 13:13, "there are three things that last forever: faith, hope, and love . . . the greatest of them all is love."

separated from their intellectual understanding of happiness. Politics is no longer an institution which directs citizens towards the good life but simply facilitates the individual journey of each individual toward happiness with God. In other words, *phronesis* is intermediary rather than central to the attainment of happiness. It is no longer about everyday decisions but is narrowed to the singular act of choosing God. By this standard, every good Christian is a *phronimos*. Celano explains:

Unable to find a unifying force in Aristotle's notion of *phronesis*, the medieval commentators concentrated upon the ideal of the human end, *eudaimonia* or *felicitas*. Happiness they understood to be the final end for all human beings, and such an ideal could align all diverse customs and practices into a unified science that ultimately led all people to an understanding of the first cause (229).

This has significant political ramifications. The Aristotelian idea that ethics are not a set of unchanging laws but relative to the variable actions of human beings and communities presents a clear problem for medieval thinkers. The standard of the *phronimos* provided by Aristotle is far too imprecise. Because the *phronimos* is human, the variety and diversity of human practices makes a science of ethics untenable. That is to say, the rigors of science simply cannot tolerate the flexibility and variety associated with *phronesis* and the *phronimos*.

Rather than practical matters or politics, the ends of ethical action are divorced from the city and married to a vision of God. In turn, phronesis becomes more about a good afterlife than the good life.

Moving to a later thinker, St. Thomas Aquinas discusses prudence at length in II-II, questions 47-56 of his *Summa Theologiae*. He, like Augustine, believes God to be the ultimate guide for all good judgements. For him, phronesis is reinterpreted as *synderesis* or the imprint of divine law on the human soul. Prudence, differently, is not in us by nature, God's will or divine imprint (II-II, 47. 15), but is a learned or nurtured capacity to translate that imprint into proper actions in particular circumstances.

Temporal action (i.e. domestic prudence or political prudence [see II-II, 50. 3-4]) is not considered to be an end in itself but directed toward the higher end of contemplation of the first principle: God. So, good actions are mere reflections of the divine imprint – not a reflection of life in the city but of a higher power outside of its borders. Aquinas makes clear, "The right ends of human life are fixed" and that there is a "naturally right judgement about such ends" (II-II, 47.15); that prudence has its source in an understanding of those ends (II-II, 49.2); that our "... reason is instructed by the Holy Ghost about what we have to do"

(II-II, 52.1); and that "prudence, which denotes rectitude of reason, is chiefly perfected and helped through being ruled and moved by the Holy Ghost" (II-II, 52.2). Once again, things such as experience and education are not for living a good life in a particular city but fulfilling God's plan for all humans.

Now, even selfish and criminal actions do not reflect the breakdown of the political community but represent individual weakness. Considering Aristotle's clever man, Aquinas writes, "there is 'cleverness,' [*deinotike*] i.e. natural diligence which may be directed to both good and evil; or 'cunning,' [*panourgia*] which is directed only to evil, and which we have stated above, to be 'false prudence' or 'prudence of the flesh'" (II-II, 47, 13). The problem with the clever man is not that he fails to know or has failed to learn how to direct himself or others to the good, but that he chooses not to. Because material gain or the things of the flesh tempt him, he does not allow the dictates of God and divine law to prescribe his actions. As Aquinas says later, the imprudent man despises the counsel of the Holy Ghost (II-II, 53.1) and that "prudence of the flesh . . . is a sin, because it involves a disorder in man with respect to his last end, which does not consist in the goods of the body" (II-II, 55.1). Unlike Aquinas, Aristotle sees cleverness as a failure to relate

individual goods to the common good. For Aquinas, the goods of the body simply cannot be a "last end" or final purpose for anyone.

It should still be noted, however, that even though the good may already be determined and the same for all people, the "way" to that good is not clear and remains particular. It remains to be seen what means are required to reach that end – individual action is not predetermined. Likewise, while the ends of politics and political judgement are determined, a political leader can still deliberate on the proper means. He does not participate in the decision of where to direct his city only how. There is room for a diversity of means in Aquinas and temporal prudence or prudence of the flesh is still a pivotal virtue for Augustine. However, while the means may differ the end is the same end for everybody. Politics, then, becomes a means to an end rather than an end in itself.

Machiavelli

Modern political thought is founded on this change in politics from ends to means. For example, in the sixteenth century, Niccolo Machiavelli advises that prudence must be used in the service of technical

knowledge rather than the other way around.³ As it might be put, he looks to the medieval division of temporal and spiritual prudence and decides to emphasize the former and disregard the latter. Now, there is no higher order, first principle, or divine stamp to guide the individual to right decisions. As with ancient *techne*, prudence is portrayed as a skill to control and manipulate chance (*fortuna*) for material gain.

In fact, it is upon this very idea that Machiavelli chooses the subject of *The Prince* to be "new" rather than "hereditary" principates. In chapter II, he explains:

I say, then, that in maintaining hereditary states accustomed to the blood of their prince, the difficulties are very minor compared to those which are to be found in the new [state]; because it suffices [the hereditary prince] not to omit the order of his ancestors, and moreover, with respect to accidents, to wait for the opportune moment to act. In this mode, if such a prince is of ordinary industry, he always maintains himself in his state, unless there is an extraordinary and excessive force which deprives him of it; and, deprive of it though he might be, let the usurper have some mishap and he reacquires it (8).

³This corresponds with Francis Bacon's and René Descartes' calls for the conquest of nature for "the relief of man's estate" to make us "the masters and possessors of nature." See Francis Bacon, *The Advancement of Learning* Book I and *The Interpretation of Nature* (Proem), in *Selected Writings of Francis Bacon*, ed. Hugh G. Dick (New York: Random House, 1955), pp. 193 and 150-54 as well as René Descartes, *Discourse on the Method*, in *The Philosophical Works of Descartes*, Volume I, ed. Elizabeth S. Haldane and G.R.T. Ross (Cambridge: Cambridge University Press, 1981) p. 119.

Because the people are already accustomed or formed by his regime and laws, the hereditary prince requires nothing more than "ordinary industry" to keep his power. If unforeseen circumstance or accidents do occur, he requires only an average ability to overcome or correct them. But, in order for a usurper to take over this state, he must possess a far greater capacity to predict and mitigate contingencies. He must be able to win control over or "re-form" the bodies, hearts and minds of a disloyal populace. As Machiavelli says at the start of chapter 3, "But the new principate is that which presents difficulties" (11). In turn, the skill required for acquiring and keeping a new state is worthy of study and the subject of his treatise.

In the same chapter, this skill for acquiring and keeping is described as prudence. Machiavelli explains that the Romans were among the most prudent of all princes:

For the Romans, in these cases [taking over provinces], did all that wise princes ought to do; which is, to have regard not only for present disorders, but also future ones, and with all industry to anticipate and provide for them; because, when one foresees them from afar, one can easily remedy them . . . for when one knows from afar (which is given only to a prudent one) the ills that are being born, they are cured quickly; but when, by their not having been known, they are left to grow in such a mode that everyone knows them, then there is no more remedy (15-16).

Here, prudence brings together four different skills. It is the ability to foresee potential "ills" well before "everyone knows them," to know what remedy is required, to have the proper medicine on hand, and the capacity to apply or prescribe it to the patient. As this applies to the state, a prudent leader requires insight, knowledge of means, access to supplies, and expertise in their use. More specifically, a prudent leader must be able to detect a rebellion before it gets underway, know how to effectively crush it, have well armed men at the ready, and be able to lead those men in battle. According to Machiavelli, because the Romans were prudent in this way, they were able to gain and maintain a vast empire.

We learn more about modern prudence in chapter VI where Machiavelli advises the reader:

. . . to do as prudent archers do, who, when the target they propose to strike appears very far off and knowing nicely how much the virtue of their bow can do, they place their aim much higher than the intended target, not to reach such a height with their arrow, but so they may, by aid of so high an aim, attain their purpose" (32).

We could take this to mean that prudence is the ability to bridge human desire and sensual reality with technical ability. Machiavelli believes human desire, described alternately as "the target they propose to strike" and "their purpose," is not attained by any straightforward or apparent route. Instead, its

satisfaction often appears "very far off" which suggests that the sensible world does not provide or fulfill our desires in any immediate sense. To complicate matters further, our immediate sensible perceptions often deceive us to think we can attain our distant purposes with more ease than is actually required. Any number of variables or difficulties can appear from out of sight to disrupt, hold back, or block our success. With this in mind, Machiavelli advises that we "aim much higher than the intended target" because he knows that the flight of our "arrow" will not be as true or as strong as it first appears or that reality is far harsher, more arduous, than our sight first tells us. Importantly, the action stemming from this insight is not focused directly on the world itself but through the "bow." The bow serves as the instrument of prudence. Hence, technical knowledge is the key by which Machiavelli's archer is able to articulate or "instrumentalize" his amended awareness of nature into reality.

Considering the discussion of phronesis from chapter 1, this is profoundly different from Aristotle's conception of the relationship between what we see, what we know, and how we act. In the *Ethics* he explains there is a highest good to which all the lower goods we desire are aimed and asks, "Will not the knowledge of it, then, have a great influence on life? Shall we not, like

archers who have a mark to aim at, be more likely to hit upon what we should" (NE II, ii, §20-25)? Aristotle's archer aims directly at the target he sees. Yes, his archer uses a bow or *techne* but his judgement is tied to his knowledge of the target rather than his technical knowledge of or ability with the bow. Knowledge of the target, the *telos*, the highest end determines the arc of the arrow and guides the archer's *techne*. For Aristotle, this knowledge of ends directly abets human purpose whereas technical knowledge is only indirectly related to this end.

Of course, this difference is not limited to bows and arrows but expands to expectations of the political. By shifting the focus of prudence from ends to means or from targets to bows, Machiavelli decidedly recasts politics as a technical activity. Remember, for Aristotle "prudent" acts and politics are practices with ends in themselves whereas *techne* is a means to an end or an external efficient cause for a product. Machiavelli does not make this distinction. Prudent action and politics are focused on predicting and controlling change for the sake of an external end: acquiring and keeping. They are not ends in themselves or practices but, as with *techne*, are the external efficient causes for a product. Just as Aristotle's ancient technician imposes form onto matter to arrest the movement of nature (Phys 185 a12ff),

Machiavelli's prince uses politics to keep nature, chance or *fortuna* at bay. He writes of good political leaders, "fortune provided them with nothing other than the occasion which gave them the matter into which they could introduce whatever form they pleased . . ." (33). But, without prudence a political leader would be forever bound to the dictates of fortune and unable to deftly pluck his bow to hit his target.

Machiavelli's advice on how to keep nature, chance or *fortuna* at bay is, for the most part, directed at the control of human nature. Accordingly, he provides a whole host of means to redirect, subdue, form or reform the nature of the citizenry. For example, it is better to be feared than loved (chapter 16) and it is better to be miserly than generous (chapter 17). These axioms rest on the idea that the study of the successes and failures of past political leaders can provide fundamental principles for future political action. In *Discourse on Livy*, he explains:

Prudent men usually say (and not by chance or without merit) that whoever wants to see what is to be, considers what has been; for all the things of the world in every time have had the very resemblance as those of ancient times. This arises because they are done by men who have been, and will always have, the same passions, and of necessity they must result in the same effects . . . a nation hold their same customs for a long time, being either continuously avaricious, or continuously

fraudulent, or have any other similar vice or virtue (Book 3, chap. 63).

Similar to Aristotle, Machiavelli's political science is a combination of education and experience. But, where Aristotle pursued political science as something different from technical control, Machiavelli advises that politics is all about the controlling or forming human beings by technical means.

This also differs from medieval interpretations. Rather than choosing good over evil, Machiavelli states that a wise prince must "learn to be able to be not good" (93) and that prudence "consists of knowing how to recognize the qualities of inconveniences and to pick the less bad as good" (135). Instead of choosing the highest good or the way to God, good judgement entails choosing the "less bad", lesser evil or the "not good." In fact, according to Machiavelli, there are vices "without which it would be difficult to save the state" (94). Modern prudence, then, is the same "false prudence" discussed by earlier Christian thinkers not simply separated from a higher "prudence of spirit" but completely free of its authority, and power. Machiavelli is unflagging in his advice that "good counsels, from whomever they may come, must needs arise from the prudence of the prince, and not the prudence of the prince from good counsels" (142). He dismisses the idea that political prudence is somehow guided by a higher or superior power whether from the

Holy Ghost, an insightful advisor or a rival prince. Clearly, the whole tenor of prudence is diminished from the goal of civic happiness discussed by Aristotle or eternal salvation discussed by both Augustine and Aquinas. The most we can hope for is to mitigate the destructive influence of nature and the impact of chance.

Despite its diminished status, it is not as though modern prudence is easy to practice or that its goals are simple things to achieve. In fact, it may very well be that modern prudence is a harder skill to carry out and considerably more rare than it was for either the ancients or Christians. For example, in *Discourses on Livy*, Machiavelli sets the bar for the prudent leader very high indeed. He writes, "The welfare of a Republic or a Kingdom, therefore, is not in having a Prince who governs prudently while he lives, but one who organizes it in a way that, if he should die, it will still maintain itself" (Book 1, Chap. 11). Beyond the everyday decisions of a prince, the practice of prudence is directed toward the complete and everlasting control of the contingencies of politics through the creation of enduring law and, it can be assumed, order.

But, this said, he doubts whether or not this type of regime can ever be established. Of these same prudent leaders he writes, "It is easily probable that no one such as these springs up in a City: and even if one

should spring up he is never able to persuade others of that which he intends . . ." (Book 1, chap. 18). This is redolent of both Plato's and Aristotle's discussion of the outstanding man. All three suggest that a man of infallible prudence or of unerring judgement cannot "spring up" or command in the city. Plato and Aristotle both decide that laws and constitutions are more practical to maintain consistency and certainty in politics. Surprisingly, Machiavelli seems to conclude the same. He suggests that "a people is more prudent, more stable, and of better judgment than a Prince" (Discourses on Livy, Book 1, chap. 58). The collective judgment of a population is better suited to foresee hidden dangers to the state than a single political leader.⁴ The fallibility of political leaders is also emphasized in *The Prince*: "I judge that it could be true that fortune is the arbiter of half our actions, but that she lets the other half, or nearly that, be governed by us" (146). While we stake out our half, Machiavelli makes clear that it is impossible to reliably predict and completely

⁴This relates to Machiavelli's advice in Chapter XIV that a prince must have an intimate understanding of the character of his people and land as well as an objective perspective or a grasp of the big picture. This also relates to Machiavelli's earlier suggestion in Chapter V that a Prince might come to reside in his new principality in order to both win the respect of the people and keep a close eye on things.

control chance because we are still largely governed by nature. He continues:

And I liken her [fortune] to one of those violent rivers which, when they become angry, flood the plain . . . everybody surrenders to their impetus, unable to oppose it any way. And although these thing are so, it does not follow that men, when there are quiet times, cannot therefore make provisions with defences and embankments in such a mode that, rising later, either they will go through a canal, or their impetus would not be so licentious or so harmful (146-7).

Technical means, the building of defences and embankments, are applied to subdue nature or chance. And, while the river is redirected while it is moving through the city, its course is not fundamentally altered on the landscape as a whole. Machiavelli believes that a portion of nature can be controlled but that it cannot be completely overcome.

Hobbes

When Galileo looked through his telescope, he saw a universe that was isotropic and homogeneous. Existence, he realized, was the same everywhere, nature was a place of infinite equality, and the Earth was just one point in a black sea of space. Thomas Hobbes decided that this

must also be true of politics.⁵ For Hobbes, politics is not noble or magnificent as thought the ancient Greeks and our lives are not about seeking a perfect natural end or some false notion of the good life. As is the case in the Galilean universe, we have no purpose, essence, or teleology beyond our own survival.

In his *Leviathan*, Hobbes argues that citizens obey the law only in return for protection, assurance of their preservation and commodious living. Legislation is nothing more than a method for gaining and maintaining power. It is not the want of God, as was true for medieval Kings and Queens, or the fulfillment of our nature, as was true for the ancient Greeks. Politics is a construction or, as Hobbes calls it, an "artifice". In turn, questions about the best leaders and laws, justice and truth or good, beautiful and noble things are of lesser importance for Hobbes.

For the same reason Augustine, Aquinas, and Machiavelli transform, diminish and narrow the place of

⁵In fact, Hobbes had a personal acquaintance with Galileo and came to incorporate Galilean doctrine into his own writing (Hebert, 33). Furthermore, Hobbes seems to also preempt Newtonian physic when he writes, "That when a thing lies still, unlesse somewhat els stirre it, it will lye still for ever, is a truth no man doubts. But that when a thing is in motion, it will eternally be in motion, unless somewhat els stay it . . ." (87). This is a very similar statement to one of Newton's laws of motion, "Every body continues in its state of rest or of uniform motion in a straight line unless it is compelled to change that state by forces impressed upon it" (published in 1687 "The Mathematical Principles of Natural Philosophy"). We should note, however, that Hobbes' observation predates Newton's by almost 50 years.

prudence in political life, Hobbes wages an all out attack on prudence. Yet, his definition of prudence initially seems quite similar to classical phronesis. He writes, "But this is certain: by how much one man has more experience of things past than another; by so much also he is more prudent, and his expectations the seldomer fail him" (97). Like Aristotle, Hobbes allies experience and age with good judgement. However, unlike Aristotle, he does not hold this capacity in high esteem. According to Hobbes, a prudent man is like a good prophet; they are nothing more than good guessers: "he that is most versed and studied in the matters he guesses at: for he hath most *Signes* to guesse by" (97). Critical of both ancient and Christian conceptions, Hobbes' prudence is neither directed by concern for human goods nor guided by divine counsel. For him:

Signes of prudence are all uncertain; because to observe by experience, and remember all circumstances that may alter the successe, is impossible. But in any businesse, whereof a man has not infallible Science to proceed by; to forsake his own natural judgement . . . is a signe of folly . . . (117).

Here, Hobbes provides a strong proviso to Aristotle's portrayal of judgement. Natural judgement is engaged only when "a man has not infallible Science to proceed by." In other words, when available, the certainty of science should take precedence over

prudence. And, while this is true of "any businesse," certainty in politics is his real concern. For Hobbes, prudence is simply not up to the task of politics and is neither rare nor hard to come by. He writes, "For prudence is but experience, which equal time equally bestows on all men in those things they equally apply themselves unto" (183). Unlike Machiavelli, Hobbes suggests that all persons are equally capable of some insight into events because everyone is able to compare past experience to the future. This is not a virtue or a unique skill but a simple fact of life. As he later says:

. . . it is evident that we are not to account as any part thereof that original knowledge called experience, in which consisteth prudence, because it is not attained by reasoning, but found as well in brute beasts as in man; and is but a memory of successions of events in times past, wherein the omission of every little circumstance, altering the effect frustrateth the expectation of the most prudent: whereas nothing is produced by reasoning aright, but general, eternal, and immutable truth (682)

So, while prudence is based in experience, it does not stem from reason. In turn, it is subject to errors and miscalculation that disqualifies it as a foundation for politics.

Yet, in Aristotle's explanation, a purely technical knowledge of or absolute certainty in politics is considered unlikely due to the sheer complexity of human

beings. Even Machiavelli demurs at the bold claim that a prince could completely predict and control nature. But, Hobbes indicates that this is not unassailable truth but merely a technical limitation. He argues that politics should and can alleviate the unpredictable and violent character of the natural world and that we should work toward replacing prudence with technical knowledge. It is just a matter of time and industry:

Time, and Industry, produce every day new knowledge. And as the art of well building, is derived from Principles of Reason, observed by industrious men, that long studied the nature of materials, and the divers effects of figure, and proportion, long after mankind began (though poorly) to build: So, long after men have begun to constitute Common-wealths, imperfect, and apt to relapse into disorder, there may, Principles of Reason be found out, by industrious meditation, to make their constitution (excepting by externall violence) everlasting" (378).

This new knowledge is parallel to the technical "art of well building." As the nature, figure, and proportion of a house can be studied, so too can humanity. In this sense, the citizens are now truly understood as "human material." By Hobbes' account, Aristotle's doubts about the portrayal of humans as mere *choregia* stemmed from a lack of technical understanding and ability. In turn, the political order described in the *Politics* is contextualized as "imperfect and apt to relapse into disorder", a product of an earlier ignorant age. Once the

infallible rules of science or "Principles of Reason" are discovered, politics can be directed towards the establishment of a "constitution everlasting" that can resist the natural fluctuations of its citizens and no longer requires their natural judgement.

Indeed, Hobbes colours all earlier political traditions as simply inferior, less informed versions of his present project. In this way, both the ancient tradition of Aristotle and the medieval traditions of Christianity are discredited. As he explains, these traditions actually suppress the discovery of the "Principles of Reason:"

For I doubt not, but if it had been a thing contrary to any mans right of dominion, or to the interest of men that have dominion, That the three Angles of a Triangle should be equall to two Angles of a Square; that doctrine should have been, if not disputed, yet by the burning of all books of Geometry, suppressed, as farre as he whom it concerned was able (166).

That is to say, infallible truths have been traditionally put in a subordinate position to fallible judgements and their associated passions. The implication is that a scientifically based politics was not impossible but simply not engaged because of the ignorance and self-interest of political leaders. As he goes on to explain, this suppression has resulted in a widespread lack of understanding of reality, "Ignorance of remote causes, disposeth men to attribute all events,

to the causes immediate..." (166). This ignorance has allowed politics to waver with the passions or "causes immediate" of its leaders. This said, while the persecution Galileo by the Church may reflect this type of suppression and the spread of an "ignorance of remote causes," it is less sure that Aristotle participated in "the burning of all books of Geometry." However, he did argue that human judgement should have authority over the development of technical knowledge. So, for this reason, Aristotle is guilty of promoting ignorance.

Instead of the passions, Hobbes suggests "remote causes" or scientific knowledge should guide politics. If politics were based in something universally true, such as Geometry, political life would not fluctuate with the constant change of the immediate world regardless of person, time or place. A politics of this sort could impose a powerful form over nature just as the carpenter imposes the form of a chair onto wood. However, in this example, the wood would eventually continue its natural movement once the carpenter's work is done. What Hobbes seeks is a constant and permanent solution to the natural fluctuations and passions of human material. He does not want only to redirect Machiavelli's "river" but to damn and bury it.

In order to succeed, all the unpredictable passions, desires and irrationalities of human beings must be

understood. In Chapter VII of *Leviathan*, Hobbes makes this important connection between individual human sense and psychology and political stability. He worries about an "excess of passion" that pushes men to seditious thought and actions. And this worry leads him to put all citizens under suspicion of revolt. As he describes, "For the Thoughts, are to the Desires, as Scouts, and Spies, to range abroad, and find the way to the things Desired" (139). From this we can gather that Hobbes takes the passions to be a clandestine source for our behaviour. It is the task of a good government to locate and contain any dangerous elements (i.e. "Scouts and Spies") of human thought and action that could potentially disrupt the proper running of the state. Overall, Hobbes' concern for the psychology of individual citizens is a touch stone for the whole of his political philosophy. As his central concern is the maintenance of stability, safety, and security, not only does he have to be aware of the macroscopic balance of the nation as a whole but also the microscopic balance of each individual citizen. In a sense, the state is directed toward the manipulation of human nature through greater scientific understanding of the passions and the implementation of that understanding in the design of law and public institutions.

For Hobbes, they are the instruments of control. Rather than completing human nature, politics is

concerned with manipulating the appetites. As he explains: "But as men, for the atteyning of peace, and conservation of themselves thereby, have made an Artificiall Man, which we call a Common-wealth; so also have they made Artificiall Chains, called Civill Lawes;" (263). The better these laws and institutions control and limit our natural inclination the greater opportunity there is for peace. Hence, rather than being lead by our passions and better judgement, we are limited by artifice.

So, from the very start of *Leviathan*, Hobbes sets us off on a course wholly different from the understanding presented by the classical thinkers. In disregarding the possibility that the passions lead us toward a natural and teleological good, Hobbes breaks away from Aristotle's description of the hierarchical relationship between the appetites and the virtues. For Hobbes, the state manipulates our nature through artifice to an artificial *telos*. Whereas the classical conception of virtue moderates the appetites, in Hobbes all we are is appetites.

Because the specific objects of pleasure differ so much between men, Hobbes bases the manipulation of the appetites on our common aversion to pain (i.e. "Fear of Death, and Wounds" [161-2]). As it is based on an alleviation of pain and not a fulfillment of pleasure,

politics is cut off from satisfying the passions or is de-eroticized. The desire for pleasure, the initial spur for all activity in classical thought, is confined, held-down, limited to acquisition and wealth.

In turn, Hobbes' politician is necessarily a benign, passionless man — resembling a submissive bureaucrat rather than anyone magnanimous. This is reflected in Hobbes' discussion of the good Counsellor. Similar to Machiavelli's reinterpretation of prudence, Hobbes argues that natural judgement should be put into the service of science. And, as detailed in Chapter XXV of *Leviathan*, the vehicle for this demotion of good judgement is the specially trained "Counsellour." At first, the "Counsellour" bears a similarity to Aristotle's phronetic political scientist. He "requires a great knowledge of the disposition of Man-kind . . . And the Strength, Commodities, Places both of their own Country, and their Neighbours; as also of the inclination, and designes of all Nations . . ." (308). He requires a knowledge of both the general truths of nature and a particular knowledge of political life. And, as Hobbes notes, this requires age and "more than ordinary study" (308). But, unlike an education in ancient political science, all of this experience and training is not directed toward the development of a good leadership, practical wisdom, or even good citizens. Instead, Hobbes expounds the

importance of this experience and training because it leads to a grasp of the "Infallible rules, (as in Engines, and Edifices, the rules of Geometry,) . . ." (308). He continues, "all the experience of the world cannot equall his Counsell, that has learnt, or found out the Rule." So, it is not the particular life of the good counsellor that makes him an invaluable element of the state but his scientific knowledge. The counsellor's advice stands alone as does a blueprint or set of instruction.

But, it hardly seems possible that Hobbes is arguing for the complete technical control of the state and its citizens. Nonetheless, in Chapter XXX of *Leviathan*, Hobbes makes clear that "the Common-peoples minds . . . are like clean paper, fit to receive whatsoever by Publique Authority shall be imprinted in them" (379). Clearly, Hobbes is confident that he can in fact control the "common-peoples" in an absolute way. Yet, earlier in the book he seemed slightly more equivocal. In Chapter XXI he writes, "For seeing there is no Common-wealth in the world, where in there be Rules enough set down, for the regulation of all the actions, and words of men, (as being a thing impossible:) It followeth necessarily . . . by laws prætermitted, men have the Liberty, of what their own reason shall suggest, for the most profitable to themselves" (264). Hobbes seems to accept that it is

unlikely that politics can completely master human nature or, at least, has yet to do so. It is not clear why at this point Hobbes claims that it is impossible to have a Common-wealth that completely masters the actions and words of its citizens. Is this simply the result of a technical limitation of state power?

This seems likely. While he does want an infallible set of rules for politics, he also recognizes the difficulty of articulating an exact method, "unless we shall think there needs no method in the study of Politiques, (as there does in the study of Geometry,) but onely to be lookers on; which is not so. For the Politiques is the harder study of the two" (392). Hobbes accepts that it may be very difficult to fully grasp all of the contingencies and complications of politics. Where the method of Geometry comes with time and study, a complete and proper method of Politiques may require something still beyond the knowledge of men. As he states at the end of Part II:

neither Plato, nor any other Philosopher hitherto, hath put into order, and sufficiently, or probably proved all the Theorems Morall doctrine, that men may learn thereby, both how to govern, and how to obey; I recover some hope, that one time or other, this writing of mine, may fall into the hands of a Sovereign, who will . . . convert this Truth of Speculation, into the Utility of Practice (407-8).

He holds out the hope that a statesman may someday come to this full understanding and apply those rules to politics.⁶ But, it is unclear whether Hobbes is actually calling for a completely mechanical and, thus predictable understanding of humans or that he is instead arguing that humans maintain something uncertain, outside of mechanical explanation. Richard Peters sums up one side of the debate, "Hobbes ruthlessly . . . pushed the mechanical model into the innermost sanctuaries of human intimacy, endeavor and decision" (76). In other words, Hobbes' mechanistic explanation of physics is as equally apparent in his psychology and politics. By consequence, the *Leviathan* is a text for the understanding of the laws of politics in the same way Newton's *The Mathematical Principles of Natural Philosophy* is an account of the laws of physics.

Hebert objects to this approach arguing that Hobbes' emphasis on human subjectivity, desire and rights hardly seems mechanical (26). And, if we define Hobbes' mechanical interpretation of the universe as one and the same as Newtonian physics, then human emotions and political morality, as discussed in Part I and II of *Leviathan*, do seem to fall outside of the mechanical

⁶This is similar to Machiavelli's "exhortation" to liberate Italy in Chapter XXVI, the final chapter of *The Prince*. Both thinkers look to or, better yet, call to a great political leader to come forward and put their theories into practice.

model. Furthermore, Hobbes' idea that humans possess an internal characteristic or "endeavour" (118-119) which animates them also conflicts with a singularly mechanistic interpretation of Hobbes.

Hebert's objection to a mechanistic interpretation of Hobbes natural philosophy only highlights the very problems which Hobbes addresses in his political philosophy. It is exactly because humans have "a perpetual and restless desire of power after power, that ceaseth only in death" (161) that Hobbes attempts to mitigate this natural tendency with artifice. Only because politics has yet to be understood in the same way as physics or geometry does it requires a different approach that includes consideration of ambiguous human subjectivity, desires and rights. That is to say, rather than being able to fundamentally alter human nature, the state must keep a vigilant watch for insurrection against state power. But, arguably, this is only for a lack of technical expertise. If a blueprint of human thought and psychology could be constructed, then a purely objective approach to the citizenry would suffice as they would be nothing more than malleable objects or material. And, as it is left at the end of Part II of *Leviathan*, Hobbes waits for that day.

This said, it is an overstatement to say that Hobbes pushes the mechanical model into the innermost

sanctuaries of human intimacy. In *Leviathan*, Hobbes is clear that human beings never give up or abandon their right for self-preservation (192) and that there is still plenty of room for private individuals to think and act outside of the awesome power of the state. Even if all of the technical problems associated with a science of rule were overcome, there would still be areas of human life unaffected; there remain restrictions to the complete technical control of humans. It is very narrow ground when compared to the wide scope of political prudence. Now, humans are apolitical, limited to the private realm. Importantly, even if we are "habituated to virtue" through good parenting or education in our private lives, there is no transfer of this private ethic or *ethos* to public life or politics. By discrediting prudence as the basis for politics, Hobbes effectively cuts ethics off from politics. Hobbes does push the mechanical model into all aspects of public life leaving the private sphere relatively unencumbered.

Chapter 3: The Rise of Technology as a Barrier to Phronesis

The Enlightenment and Existentialism

I am beginning this chapter on Martin Heidegger with an interim analysis of Enlightenment views on the relationship between science and politics. I do so for two reasons. First, eighteenth and nineteenth century political philosophy can be understood as an extension and acceleration of Hobbes' project. Second, twentieth century existentialism can be understood as a reaction to this extension and acceleration. Admittedly, the centuries between Hobbes and Heidegger deserve more explanation than they are given in the few paragraphs below. Nonetheless, Hobbes' discreditation of Aristotle was so successful and influential, that it was not until Heidegger addressed this matter that the discussion of techne and phronesis re-ignites.

The twentieth century British philosopher, Sir Isaiah Berlin clearly explains the central doctrine of the Enlightenment:

. . . local and historical variations were unimportant compared with the constant central core in terms which human beings could be defined as a species, like animals, or plants or minerals; that

there were universal human goals; that a logically connected structure of laws and generalisations susceptible of demonstration and verification could be constructed and replace the chaotic amalgam of ignorance, mental laziness, guesswork, superstition, prejudice, dogma, fantasy, and, above all, the 'interested error'¹ maintained by the rulers of mankind and largely responsible for the blunders, vices and misfortunes of humanity (1981, 1).

The basic idea is that the new science and physics, which had given so much insight into inanimate nature, could be now applied with "equal success" to ethics, politics and human relationships in general. The application of reason to society, so it was thought, would save man from long held inequalities and set him "on the path of wisdom, happiness and virtue."

Needless to say, this idea was very influential on a number of fronts. The French philosopher and political theorist Marquis Condorcet, for one, attempted to explain human behaviour in terms of mathematical principles. Similarly, the German idealist Kant² and the utilitarian John Stuart Mill come to treat ethics as either a "computer which needs a program for deciding moral questions" (Kupperman, 71-2) or as a calculus for the maximization of happiness. With enough knowledge, information, and data of particular circumstances, so it

¹This phrase is attributed to the "extreme scientific determinist" Claude Helvétius (Hume, 163).

²For a study of Kant's ideas on political judgement see Beiner 1983, 31-63. For a similar study that includes Marx see Howard 1996, 31-43 and especially 133-151, 211-229.

was thought, one could scientifically calculate human behaviour and locate universal rules or laws for ethics and politics. In Enlightenment ethical and political theory, "prudence" is perceived as a measurable skill for securing private interest or self-satisfaction. Because all individuals are more or less the same in their interests, politics, law, and government are practiced with little concern for the particularities of time and place or, as Berlin puts it, the "local" and "historical."³

For many reasons, we can understand the Enlightenment as the extension of Hobbes' project. Efforts to create a moral system or infallible foundation for ethical and political action is an extension of the early modern attempt to constrain and amend human nature.⁴ The promotion of a universal rationality or pure

³Alexander Hamilton and James Madison refer to advances in the "science of politics" as inspiration for American policy and law in the *Federalist Papers*. Compare a passage of Alexander Hamilton in *Federalist*, No. 6 to Hobbes' discussion of immediate and remote cause in *Leviathan*: "momentary passions and immediate interests have a more active control over human conduct than general or remote considerations of policy, utility or justice" (quoted by Wilson Carey McWilliams, "Science and Freedom", p. 89). As in Hobbes, the framers of the American Constitution promoted a disinterest and objectivity to contain the passion of the populous. Berlin explains this sentiment: "One set of universal and unalterable principles governed the world . . . these laws governed inanimate and animate nature, facts and events, means and ends, private life and public, all societies, epochs and civilizations; it was solely by departing from them that men fell into crime, vice, and misery (3)."

⁴Thomas Hibbs explains that "Most discussions of the history of 20th century moral philosophy trace the return of virtue to Elizabeth Anscombe's essay from the 1950's, 'Modern Moral Philosophy.' A jeremiad against Kantian and utilitarian ethical theories,

reason that nullifies ethical disagreements is the same project as Hobbes' project to overcome the contingencies of individuals and communities. In both cases, there is an increasing technical control of human life and a replacement of traditional institutions by a universal culture of progress and development.

Importantly, though, where Hobbes also wished to purge "the chaotic amalgam of ignorance, etc." from the public sphere, many of these eighteenth and nineteenth century thinkers actually pushed the dictates of reason and science into the recesses or "innermost sanctuaries of human intimacy." This is a significant turn in modernity. Rather than in Hobbes, we can understand this change in thinking as the beginning of an unprecedented acceleration of science and technology into all spheres of life: not only politics but also ethics, and human relationships in general.

If nothing else, the violence and upheaval of the twentieth century suggests those efforts to create a "science of society" were a failure. Of course, well before the Russian Revolution, the Soviet Union, and

Anscombe's essay urged that, given the present state of philosophical ethics – with its incoherent conceptions of obligation, its lack both of terminological clarity and of an adequate philosophical psychology –, we should 'banish ethics totally from our minds.' She hinted, but only hinted, at the possibility that an adequate moral philosophy might be resurrected from Aristotle, a suggestion that was to be enthusiastically embraced by later proponents of virtue, most notable by Alasdair MacIntyre in his influential *After Virtue*."

World War II, there existed a stream of truly "Counter-Enlightenment" thinking. But, only after World War II does the Counter-Enlightenment gain acceptance and popularity in the form of modern existentialism.⁵ And, arguably, it is from this counter-enlightenment sentiment that Martin Heidegger's analysis of technology comes.⁶

So, criticisms of technology such as Heidegger's can be simply understood as one aspect of a wider critique of Enlightenment thinking, positivism, pragmatism, and the general "quest for certainty" and "conquest of nature" that characterizes much of philosophy since Descartes, Bacon, and Hobbes. His analysis of technology can be characterized as part of a prolonged questioning of modernity, progress, and liberalism. But, Heidegger himself does not see it this way. Instead, he comes to the surprising conclusion that technology is actually the ground for modern natural science. By his account, typical criticisms of modern science and most existential

⁵Berlin considers the origins of the "counter-enlightenment" movement associated with such thinkers as Giambattista Vico, J.G. Hamann, and J.G. Herder. A parallel movement in literature and poetry might be noticed in Paul Cantor's discussion of the Romantic poets Blake, Shelley, and Byron (113-116). Berlin links this stream of thinking with Schelling (17), and the fathers of modern existentialism, Schopenhauer, Nietzsche and Kierkegaard (19).

Also, Walter Kaufmann writes: "Existentialism is a timeless sensibility that can be discerned here and there in the past; but it is only in recent times that it has hardened into a sustained protest and preoccupation" (1956, 12).

⁶Despite his rejection of the "existentialist" label, Heidegger can be associated with this stream of thought. For example, his division of authentic and inauthentic is taken from Kierkegaard.

philosophies are too narrow. To simply criticize or, worse yet, vilify modern technologies such as cars and computers, social scientific obsession with methodology, Enlightenment emphasis on human rationality or even the entirety of the modern epoch is superficial or insufficient. According to Heidegger, technology not only dominates contemporary life but also stamps or enframes Western civilization as a whole.⁷ It is not a matter of returning to some pre-modern or pre-scientific state. Nostalgic longing for things past or simpler times are mere trifling. Overall, the common reproach against Heidegger that his analysis is nothing more than "romantic wailing about the alleged evils of technology" (Bunge, 68)⁸ is a misunderstanding.

Continuing the discussion of *techne* and *phronesis*, from chapter 1, and science and prudence, from chapter 2, Heidegger shows why technology is an impassable barrier to the practice of *phronesis*. For Heidegger, technology does not simply come to structure ethics, politics, and human relationships but blocks or conceals authentic human existence. Where *phronesis* may have been "the way" in which the ancient Greeks were able to navigate around

⁷Weinberger uses "stamps" in this way in his essay "Politics and the Problem of Technology" (114).

⁸As quoted by Carl Mitcham, 1994, 37-8.

barriers to human fulfillment, technology closes off or conceals this, if not all, routes to authenticity. This being the case, a contemporary revival of phronesis is questionable if not impossible.

Heidegger

I **Techne and Technology**

In May of 1976, Martin Heidegger asked, "Is modern natural science the foundation of modern technology – as is supposed – or is it, for its part, already the basic form of technological thinking, the determining foreconception and incessant incursion of technological representation into the realized and organized machinations of modern technology" (1977, 3)?⁹ This is a question he asked and answered in many different ways and many different times. In a 1970 interview he explained: ". . . modern natural science is grounded in the development of the essence of modern technology and not the other way around" (1970, 43). For Heidegger, modern science and modern scientific thinking are merely a part of a much larger history of technology. So, in order to understand his analysis, we must return to the radical beginnings of techne.

According to Heidegger, all beings have an essence which comes into being and goes out of being. This is

⁹Trish Glazebrook considers this question in "From φύσις to Nature, τέχνη to Technology: Heidegger on Aristotle, Galileo, and Newton." *The Southern Journal of Philosophy* (2000), Vol. XXXVIII: 95-118.

sometimes explained as an unconcealment (*aletheia*) and concealment (*lethe*), a disclosure and hiding, a presencing and absencing or, more starkly, birth and death.¹⁰ It is also explained as the movement, movedness, or "emerging power" of nature or *physis*.

Like all other things, the essence of technology also unconceals and conceals itself. However, unlike any other coming into being or revealing of essence, the unconcealment of the essence of technology is characterized by the concealment of the essence of all other beings. As illustrated in *The Question Concerning Technology*, just as the hydroelectric dam on the River Rhine submerges the Rhine River valley, technology as a whole obscures the rest of existence. Not only are the essences of the earth, the sky, the water, and the air enframed (*Ge-stell*) by technology but so are human actions and thoughts. Everything is taken as standing-reserve (*Bestand*) – "stuff" to be manipulated and formed rather than things with a given nature. This means that the unconcealment of the essence of technology takes the "movedness" of nature and replaces it with the singular presence of technology. Heidegger writes, "man . . . comes to the very brink of a precipitous fall; that is,

¹⁰In his General Introduction, David Krell notes the distinction between *Sein*, meaning "coming to presence", and *alethia*, meaning disclosedness or unconcealment (Basic Writings 1993, 32). This said, both still are part of the movedness of *physis*.

he comes to the point where he himself will have to be taken as standing-reserve" (1993, 332).¹¹ He continues, "Everywhere everything is ordered to stand by, to be immediately at hand, indeed to stand there just so that it may be on call for a further ordering." (1993, 332).¹² According to Heidegger, the unconcealment of the essence of technology and, in turn, the concealment of the rest of existence did not begin in the twentieth century or even in the recent past. Well before the advent of computers, cars, and other machines or, for that matter, contemporary economic systems and political systems, the essence of technology began to reveal itself in ancient *techne* or technical knowledge. This revelation comes in four stages that can be identified by way of four different definitions of *techne* provided by Heidegger.¹³ The four definitions alternately emphasize: i) the

¹¹The "1993" references to Heidegger all come from Martin Heidegger: Basic Writings. Reference information on the original essays is provided on p. iv.

¹²The same idea is suggested in his Bremen lectures of 1949: "Agriculture is now a motorized food industry - in essence the same thing as the manufacture of corpses in the gas chambers and extermination camps, the same thing as the blockading and starvation of nations, the same thing as the manufacture of hydrogen bombs." Luc Ferry and Alain Renaut identify this quote as the only sentence where Heidegger expressed his view of the Holocaust (71). The passage itself is from an unpublished cycle of four lectures on technology Heidegger gave in 1949. It was first quoted in Wolfgang Schirmacher's *Technik und Gelassensheit*. Freiburg: Karl Aber, 1984.

¹³It might be suggested that, taken altogether, Heidegger identifies six different stages of all unconcealment. The first stage is *physis* or the spontaneous revelation of beings through nature. The sixth stage is technology.

fleeting; ii) the enduring; iii) the reciprocal; and iv) the instrumental character of techne. By focusing on these four definitions, I hope to highlight the way techne develops and its relationship to both *physis* and technology.

In *An Introduction to Metaphysics* Heidegger describes techne as "neither art nor skill, to say nothing of technique in the modern sense. We translate techne by 'knowledge'" (159). He adds tools and materials to the list of what techne is not (160). Earlier in the same work, techne is defined as neither art nor technology, but a knowledge, the ability to plan and organize freely, to master institutions and also creating and building in the sense of a deliberate producing (16). Yet, in *The Question Concerning Technology*, he writes, ". . . techne is the name not only for the activities and skills of the craftsman but also for the arts of the mind and the fine arts" (1993, 318). And, finally, in *Letter on Humanism*, techne is described as ". . . a process of reflection in service to doing and making" (1993, 218).

Taken at face value, the first and second definitions seem in disagreement. At once, techne includes the activity of building but expressly not an art or skill. It is difficult to conceive creating and

building as just knowledge without, at least, being a skill. The third definition is clearly at odds with first two definitions. It includes activities and skills where the other two expressly do not. The fourth definition expands upon the first and third suggesting that *techne* is not just knowledge for the sake of knowledge but, rather, instrumental knowledge. These discrepancies and similarities do not reflect Heidegger's indecision about *techne* or a contradiction in his thought. Instead, they show that the orientation or role of *techne* changes and, in turn, his definition changes.

If we look at the sources or context of each of the four definitions, we realize that Heidegger actually is considering four different stages or periods of the historical development of *techne*. The first is introduced in the context of Sophocles' *Antigone*, the second is from Plato's *Phaedrus*, the third reflects a consideration of Aristotle's discussion of causality, and the fourth is offered as a general definition of both Plato's and Aristotle's philosophy. Altogether, we can see that the fleeting *techne* of *Antigone* develops into the instrumental *techne* of Plato and Aristotle, which ultimately lends itself to the modern scientific notions of Hobbes and Galileo.

1. *Fleeting Techne*

Heidegger presents a radical interpretation of techne in the context of the ode to man from *Antigone* (1959, 146-165). Here are a few of the lines from his translation:

He set sail on the frothing waters
amid the south winds of winter. . .
and hunts the beasts of the wilderness
and the native creatures of the sea . . .
and to the courage of rule over cities.

As detailed in Chapter 1, this ode (332-75) recounts the story of man's development from primitive sailor, to savage hunter, to a builder of cities. Heidegger flatly dismisses this progressivist interpretation. Instead, he explains this passage is an expression of the original relationship between man, technical knowledge, and nature.

For Heidegger, sailing, hunting, and city building are not the beginnings of a progress out of nature or man's isolation from nature but the places or scenes of disclosure for the breaking in of the "overpowering". Without sailing there could be no overpowering force of the sea, without hunting there could be no overpowering pain of hunger, and without the city there could be no natural disaster. In "The Self-Assertion of the German University, he calls this relationship between man,

knowledge and nature "the original Greek essence of science". While we understand modern science as a means to transform nature to serve human ends, Heidegger argues that the original Greek essence of science reminds us of our impotence in the face of nature, that humans are in the throes of a fate beyond their determination, and that their existence will move to non-existence.

Importantly, the *technai* discussed in *Antigone* are described as "knowledge" without any sense that it is enduring or lasting. While *techne* may allow a freedom from nature's dynamic influence, the chorus from *Antigone* makes no suggestion it is a lasting freedom from or mastery of nature. Far from it, it is a freedom that is fated to be unmade. We could take the great wall of the Achaeans in Homer's *Iliad* as another example of this type of *techne*, "Built against the will of the immortals, The wall could not endure for long" (Book 12, line 10-11). The powerful wall is built only to be overpowered by the gods. That is to say, its real purpose, the reason it was built, was to be destroyed. This *techne* is violence against nature and also an openness to nature. The violent city of Thebes in *Antigone* and the Achaean wall in the *Iliad* are openings for the disclosure of the overpowering.

So, returning to his rectoral address of 1933, Heidegger explains that this original sense of *techne* or

technical knowledge can and should be retrieved (31). This also helps to explain his controversial translation of line 497d9 of Plato's *Republic* at the end of the address as "All that is great stands in the storm . . .".¹⁴ Our thinking, our building, our politics, and our art must be engaged in the same way the Achaeans built their wall. They must be *episphales* (prone to fall and precarious) – not to protect against or hide from the collapse and confusion of Western thinking and civilization but to be "scenes disclosure", to usher in destruction as preparation for a "new beginning." Consider also his quotation of the words of Prometheus, "'But knowledge is far less powerful than necessity.'" That means: all knowledge of things remains beforehand at the mercy of overpowering fate and fails before it". Heidegger's appeal to the fleeting character of knowledge suggests that we need not be beholden to any of the static traditions or institutions of contemporary science and politics. Instead, he wants us to move away from an

¹⁴Allan Bloom translates the same line as "For surely all great things carry with them the risk of a fall, and, really as the saying goes, fine things are hard." There is no mention at all of a "storm." It may be that Heidegger was thinking about Acts 27: [9] When much time was spent, and the voyage was now dangerous (*episphalês*), because the Fast had now already gone by, Paul admonished them, [10] and said to them, "Sirs, I perceive that the voyage will be with injury and much loss, not only of the cargo and the ship, but also of our lives." Here, Paul "stands in the storm." At the very least, this passage from the New Testament transmits a similar sense as Heidegger's translation.

emphasis on the enduring toward the fleeting and violent character of this pre-Socratic *techne*.

2. *Enduring Techne*

According to Heidegger, the enduring character of *techne* comes from Plato's emphasis on the eternal *eidos*. Sometimes called Plato's "theory of the forms," *eidos* or idea refers to the essential reality of a thing, abstracted from its physical presencing.

In *Phaedrus* Socrates considers the relationship between *techne* and the *eidos*. He explains that for someone to engage in art or *techne* they must "know the truth" about their subject, understand the nature of the soul their art addresses, and arrange their art to reflect that nature (277C). Now, rather than simply focusing on his materials, skill, and environment, the house builder, for example, must also engage in something of a philosophical investigation. Rather than building a house solely to provide shelter from the elements, Socrates' artist attempts to build something that imitates or reflects an aspect of the soul. As Socrates concludes, all of the arts are merely reminders of what is complete, enduring and perfect in the soul (278a-b).

In many works, Heidegger describes how Platonic emphasis on the enduring and permanent character of the

eidos narrows our conception of and relationship to nature (*physis*). For example, in *An Introduction to Metaphysics* he asks, "But if the essential *consequence* is exalted to the level of the essence itself and takes the place of the essence, what then?" He continues, "The crux of the matter is not that *physis* should have been characterized as *idea* but that *idea* should have become the sole and decisive interpretation of being" (1959, 182). Heidegger explains that the *idea* or *eidos* is initially understood as the visible appearance of the "movedness" or "emerging power" of nature (*physis*). In this way it is only a mere consequence of nature. Plato's "theory of ideas" comes to exalt the merely visible and, thus, "The vision makes the thing. Now this vision becomes decisive, instead of the thing itself" (1959, 183). From here, *physis* as movedness is ignored in lieu of the superficial, unmoving *eidos*. But, Plato still accepts the transient character of the world. The enduring *eidos*, then, cannot be entirely reflected in the world as it is given and the visible apprehension of *eidos* is taken as a deformed copy of pure appearance. *Eidos* becomes a *paradeigma*, a model or prototype rather than anything immediately apparent. Heidegger concludes, "Because the actual repository of being is the *idea* and this is the prototype, all disclosure of being must aim

at assimilation to the model, accommodation to idea" (1959, 185).

In another consideration of the *eidos*, Heidegger explains that *physis* no longer " . . . possesses the unique quality of delivering over to itself that which *through it* is first transformed from something orderable (e.g., water, light, air) into something appropriate for it alone (for example, into nutriment and so into sap or bones)" (1998, 227), but is conceived of as raw 'material'." Just as philosophy focuses on the visible, modern science "seizes upon the most extreme non-essence of $\phi\upsilon\sigma\iota\varsigma$ and inflates it into the real and only essence" (1998, 228). So, Plato's articulation of metaphysics marks a fundamental turn away from the primal relationship with nature expressed in pre-Socratic sources.

Overall, this second *techne* expresses an effort to isolate things thought and made by humans from the influence of nature rather than as sites of disclosure for overpowering nature. Now, *techne* no longer reveals nature but, instead narrows it to raw material waiting for technical transformation. According to Heidegger, this turn lends itself to modern science, the objectification and manipulation of nature, technological thinking or "enframing" (*Ge-stell*). Where before *techne* could only toss man "back and forth between structure and

the structureless, order and mischief, between the evil and noble" (1959, 161) as described in *Antigone* and other ancient works, it could now transform, assimilate and accommodate the world to the model or prototype (i.e. the soul or *eidos*).

3. *Reciprocal Techne*

The third definition of *techne* from *The Question Concerning Technology* is posed in contrast to modern science and technological thinking. Using the example of a silver chalice, Heidegger explains that, instead of simply imposing form onto matter, Aristotle understands the craftsman or artist is indebted or co-responsible for every production rather than the sole arbitrator of what is useful (1993, 313-317). The silver chalice is a *poiesis*, a bringing-forth, or a site of and for the disclosure of being in the same sense as the Achaean wall. But, where the wall is the bringing-forth of or site of disclosure for the overpowering, the chalice is constructed specifically to be used as a sacrificial vessel. The emphasis is now on its usefulness rather than its fleeting character, on its permanence instead of on its futile existence and inevitable destruction.

I will introduce three more examples of reciprocal *techne*. Two are from Heidegger and one is my own.

Indebted, reciprocal or co-responsible *techne* is discussed in "The Essence and Concept of *Φυσις*." There, Heidegger asks, "What does 'matter' mean? Does it mean just 'raw material'?" He answers, "Aristotle characterizes *υλη* (matter) as to *δυναμει*. *Δυναμει* means the capacity, or better, the appropriateness for . . ." For example, " . . . The wood present in the workshop is in a state of appropriateness for a 'table'" (1998, 214).¹⁵ In the example, the "producer" accepts the given nature of the wood as a guide to form the table. It is that by which the thing is measured rather than the artist acting as the sole measure of what is useful, relevant or material to their art. In terms of *Being and Time*, the same reciprocity is available in an explanation of being-in-the-world. Understood within the context of a discussion of Aristotle, this term is rooted in Aristotle's explanation of *physis* as that which brings something into being and guides the movedness of that being. From here, being-in-the-world as the use of "equipment" can be understood as directly participating in *physis* because the use of any thing is a part of that thing's movedness (1962, Sec. 13, 97). For example, our

¹⁵The translation "matter" in the parentheses is mine.

use of a hammer is participating in the movement of that hammer or the unconcealment of its nature.¹⁶

There is the same sense in the example of Heraclitus (Fragment 119) from *Letter on Humanism*. Heidegger translates *ethos anthropoi daimon* as "The (familiar) abode for man is the open region for the presencing of god (the unfamiliar one)" (1993, 258). This does not describe an extraordinary spiritual vision but the ordinary coming to presence or place of disclosure of Heraclitus' thinking. In this way, we can understand the "matter" of his thought as appropriate to him as the wood was appropriate for the table.

Although Heidegger does not refer to this passage, a good example of "appropriateness" can be found in Homer's *Odyssey*. Here, Odysseus is given material and tools to build a raft by the beautiful goddess Calypso:

She gave him a great axe, well fitted to his hands, an axe of bronze sharpened on both sides; and in it was a beautiful handle of olive wood, securely fastened; and thereafter she gave him a polished adze. . . she had shewn him where the tall trees grew. . . Twenty trees in all did he fell. . . the beautiful goddess, brought him augers; and he bored all the pieces. . . the beautiful goddess, brought

¹⁶Charles Guignon explains the reciprocal outgrowth of being-in-the-world, "On the one hand, the being of everyday functional contexts is inseparable from the specific uses we put things to in the course of our shared practical involvements in the world. On the other hand, who *I am* as an agent is determined by the equipmental contexts and familiar forms of life that make up the worldly "dwelling" in which I find myself" (Cambridge Companion to Heidegger, 12).

him cloth to make him a sail, and he fashioned that too with skill. . . (Odyssey 5.228-260).

This passage illustrates a reciprocal relationship between tools (axe, adze, auger), skill ("twenty trees all did he fell," "she had shewn him where the tall trees grew," "he bored all the pieces"),¹⁷ and matter (wood, bronze, trees, cloth). Odysseus is just one part of the production of the raft. He did not take it solely upon himself to build the raft but was given the tools and shown the location of the trees. On the same note, it is also wrong to say he was entirely guided by Calypso. While she showed him the location of the trees and gave him the cloth, it was his skill that felled the trees and fashioned the cloth into a sail. This example shows that matter is not raw material to be molded any which way but has an appropriateness for a particular production. So, those twenty trees were not just appropriate for any raft but Odysseus' raft. The same holds true for the cloth of his sail.

Including the original example of the silver chalice, I have listed four examples of reciprocal techne. This type of techne stands in contrast to the modern scientific notion that nature is raw material to be used and formed as man sees fit.¹⁸

¹⁷He is also described as duplicating the action of a man well-skilled in carpentry.

¹⁸We see this in Machiavelli's advice that "the nature of the people is variable . . . Therefore, it is needful to order in such a mode

According to Heidegger, Aristotle tries to maintain or rediscover something of the original relationship between man, knowledge and nature as found in *Antigone*. However, for him chalices and cities were not built as violent attempts to lord over nature but were themselves enduring disclosures of nature. For Aristotle, *techne* amends the deficiencies of nature rather than courting its wrath.¹⁹

4. *Instrumental Techne*

Heidegger connects the grasping of the *eidos* with the fourth definition of *techne* as " . . . a process of reflection in service to doing and making" (1993, 218). He puts forward that the philosophies of both Plato and Aristotle are focused on the enduring character of the *eidos* and seek out the technical means or "the science" by which it can demonstrate or instrumentalize this permanence in the world.

that when the people do not believe any more, one is able to make them believe by force" (*The Prince*, 34). Yet, even Machiavelli was well aware that this mode was by no means permanent. It required a particular vigilance and awareness against the overpowering of *fortuna*. The defenses and embankments Machiavelli advised (147) invite the same but now weary forces that destroyed the Achaean wall. So, even in this most frank expression of mastery there still remains something of what is given by nature.

¹⁹See Aristotle's *Politics* 1336b, ". . . all art and education aim at filling up nature's deficiencies."

But, as shown above, it is Plato not Aristotle that associates *techne* with the *eidos*. Instead, Heidegger presents Aristotle's silver chalice as reflecting the poetic or reciprocal character of *techne*. Why is Aristotle now, in this fourth definition, grouped with Plato and accused of blocking the poetic character of *techne*? The answer is that the second definition, sourced in Plato, and the third definition, sourced in Aristotle, have different emphases. The second definition illustrates that the house builder may allow his materials, tools, and skill to guide his building but ultimately subordinates them to the enduring and permanent *eidos* written in the soul (i.e. the *telos* or end of the house is in the soul). On the other hand, the silversmith of the third definition is guided by a *telos* within the silver (the material cause), the shape of a chalice (the formal cause), how it will be used (the final cause) and his skill (the efficient cause). This difference between Plato and Aristotle is not at all present in the fourth definition because this fourfold (i.e. the four causes) comes to be eclipsed by a dominant efficient cause. As Heidegger explains, the co-responsible is sacrificed for or shrinks to the singular responsibility of the maker (1993, 332). Even though he recognizes the "appropriateness" of the materials he uses, Aristotle still defines *techne* as "involving a true

course of reasoning". That is to say, for Aristotle, the artist must first have an idea of the thing he wants to produce and only then can go about bringing that thing into being.

Differently, pre-Socratic *techne* seems steeped in what Heidegger calls the "mystery of all revealing". Odysseus and Heraclitus do not necessarily know ahead of time what they are going to make or think. In both cases, many things are left unexplained. How did Calypso fit the axe to Odysseus' hands? Why does the god present himself to Heraclitus? The meeting of the familiar and the unfamiliar, as with the meeting of Odysseus' familiar labour and the unfamiliar Calypso, happens without reflection.

For both Plato and Aristotle, *techne* is a reflection of human ideas and not at all mysterious. And, because it is explained as merely a reflection of the ideas of the artist or craftsman, this fourth *techne* is instrumental and allied with contemporary technology.²⁰

II Phronesis and Technology

²⁰As a "process of reflection," *techne* is in opposition to another term from *Being and Time*: ready-to-hand. Being-in-the-world involves the actual use of equipment rather than merely a reflection upon it. If we just think about the meaning of objects then we do not participate in the *physis* or movedness of a being. Things are "ready-to-hand" only when we use them in a completely unreflective way.

From this point, the essence of technology begins to reveal itself as something akin to contemporary technology. Even though there are no "technologies" as such, the perspective by which technologies manifest has been established. Put another way, the philosophy of Plato and Aristotle, the way they think and understand the world, is the lens through which existence becomes technological. So, in ancient Athens most beings have yet to be filtered through the lens and thus remain unaffected. However, as this type of thinking becomes more and more prevalent, more and more of existence is transformed. It is simply a matter of time between Aristotelian science, Copernicus, Galileo, Newton, and Einstein. Likewise, it is simply a matter of time between the most basic products of instrumental thinking and global technology. For Heidegger, technical knowledge or *techne* is "a process of reflection" that transforms the world because, through it, existence is assimilated to the technological model.

What is more, this process will continue; eventually leaving humans unable to think outside of its narrow confines. Heidegger writes, "The need to ask about modern technology is presumably dying out to the same extent that technology more decisively characterizes and directs the appearance of the totality of the world and the

position of man in it" (1993, 434). The development or spread of technology is intimately tied to the "dying out" of our need to question technology so much so that technology increases "to the same extent" as our ability to question that increase decreases.

Heidegger gives us no clear indication of how we should respond to the increasingly technological character of the world and the threat to our capacity to conceive of its consequences. Yet, while not explicitly presented as responses to enframing, we can garner three possible "answers" that might correspond to three different stages in his own thinking. In the infamous rectoral address of 1933, he calls for the violent recapturing of a pre-technological world through the destruction of the results and "international organizations" of the scientific establishment. However, Heidegger does come to recognize that this answer is insufficient. The defeat of the Nazis put into question the very possibility of any political response to technology. As Heidegger asks in the 1966 *Der Spiegel* interview, "how can a political system accommodate itself to the technological age, and which system would this be? . . . we still have no way to respond to the essence of technology." This suggests the need for a different answer. Elsewhere, he puts forward that "We can affirm the unavoidable use of technical devices, and also deny

them the right to dominate us, and so to warp, confuse and lay waste our nature" (1966, 54). This answer implies that we can somehow both use technologies while avoiding "dehumanization." We might also look to other essays such as "The Thing" and "Building Dwelling Thinking", where Heidegger proposes the creation of new institutions (e.g. local culture, language) as an indication of how we might both live with and remain unencumbered by technology. Still, considering all that Heidegger has said, it remains unclear how we can live, work, and think in a technological society while not becoming dominated by technical devices. And, this may be why he moves away from both his call for a violent recapturing of the primordial and for the invention of new institutions and suggests that, by accepting or realizing that technology dominates us, will we once again know what it is to be in the grasp of a fate beyond our control.²¹ In the same *Der Spiegel* interview, he concludes, "Only a god can save us." This means that instead of being impotent in the face of overpowering nature, we are now impotent in the face of overpowering technology.

²¹He explains that a grasp of the essence of technology, what he calls the "task of thinking," "demands a new accuracy for language rather than the invention of new terms, as I once thought; on the contrary, it demands a return to the original contents of our own constantly decaying language" (1970, 47).

This third option is, I think, the most difficult to understand.²² While Heidegger may want to recover the vigor, mettle and fortitude of the ancient sailor from *Antigone* tossed back and forth on the frothing waters of a vast sea on an indestructible and untiring earth, he accepts that this is an impossible if not distant dream. He writes, "A future thinker, who is perhaps given the task of taking over this thinking which I have tried to prepare, will have to acknowledge the following words, which Heinrich von Kleist once wrote: 'I step back before one, who is not yet here, and I bow a millennium ahead of him, before his spirit.'" (1970, 47). He does not simply accept that authentic human existence or *Dasein* will forever be concealed by technology but holds out the hope that *Dasein* will once again be revealed perhaps "through" technology. However, there remain, in our day and age, untenable barriers to a return to the authentic. For now, we can only accept technology as our "fate" – there is no human project for the destruction of or escape from technology. This means that we cannot render a foundation for something such as a new politics or new ethics for a

²²This should be considered within the context of Heidegger's larger concern that Time is itself Being. The concealment of the question of Being or, put another way, the concealment of *Dasein* via the unconcealment of technology is also the unconcealment of (as well as the unconcealment of the concealment of) Being and Time. It so happens that all of this concealment and unconcealment occurs through Western civilization.

technological age from Heidegger. There is nothing we should or can "do" about technology.

Despite this, many still take Heidegger's discussion of authenticity as either a "wake up call" or a "rallying cry": we need to change the way we think and act, they argue, or technology will enslave and control us; rather than a distant dream, the promise of authenticity is much more of an immediate goal. But, this suggests that we are in something of the same circumstances as the ancient Athenians at the time of Aristotle – we have lost our way and need to be reminded of what is good, true and beautiful.

I think it is fair to say that Heidegger thinks we have done more than lost our way. We have altogether forgotten the purpose of our being or even what it means to "be" at all. In Chapter 1, it was suggested that once the link between generations is broken or once the "genetic material" of a *polis* fails to be passed down, recovery of "human goods" is difficult. Heidegger looks a millennium ahead for this recovery because, we have no *phronimos*, no repository for the good life, to restore or return us to the right and proper way to be. Instead, we must re-learn or re-member all that has been forgotten or cut off with no teacher or exemplar to point us in the right direction.

A parallel between authenticity and phronesis has already been suggested by Robert Bernasconi in his article "Heidegger's Destruction of Phronesis."²³ Bernasconi admits any analysis of Heidegger's use of Aristotle is a "somewhat reckless undertaking" because so many key sources remain unavailable. Since the publication of the Bernasconi article, many of these missing sources have become available. Most important to a discussion of Heidegger's understanding of phronesis is the publication and translation of the 1924-5 Marburg lectures contained in *Plato's Sophist*.

Before engaging that text, however, I would like to present a brief review of what Heidegger means by "authenticity."²⁴ It is a key concept in *Being and Time*

²³Bernasconi also reviews other arguments relating phronesis to *Umsicht* or circumspection, *Verstehen* or understanding, *Entschlossenheit* or resoluteness and *Gewissen* or conscience (130).

²⁴The English word "authentic", associated with words such as integrity and genuineness, comes from the Greek *authentikos* meaning principal or authoritative. The related *authenticus* means "comes from the author" or original. However, these etymologies give only a small insight into Heidegger's use of the German word *Eigentlichkeit*. Literally translated as something close to "ownmostness" or "that which is my own (*eigen*), Heidegger poses authenticity in opposition to *Uneigentlichkeit*, inauthenticity or that which is not my own (*uneigen*) (see *Being and Time*, Division 1, section 9). *Eigentlich* means actual, intrinsic, or proper. In turn, *Eigentlichkeit* can be translated as "properness". Furthermore, *eigentlichkeit* can also be connected to another Heideggerian term, *Ereignis*, meaning enownment or the way things "come-into-their-own". Overall, Heidegger's authenticity suggests an openness to the return of essence or an original way of existence. This is what he is referring to when he proclaims in the Rectoral address that, "the beginning exists still. It does not lie behind us as something long past, but it stands before us," it "has invaded our future; it stands there as the distant decree that orders us to recapture its greatness." Clearly, then, authenticity does not imply self-creation

and is associated with Heidegger's opposition to, what he calls, the inauthentic. This includes such things as the "publicness", "averageness", "chatter" (of common talking) and "scribbling" (of common writing) of the "They." The inauthenticity of this "They" corresponds to social, political, and cultural institutions that are manifestations of technology. Our culture and these institutions are narrowed by its unconcealment.

Arguably, those that fight against, destroy, or remain outside these cultural and institutional centres are authentic. This might include everyone from the young saboteur Albert Leo Schlageter who Heidegger lionized as a Nazi martyr, to the man of "new courage" described in his rectoral address, to the simple farmer in the fields, the Black Forest peasant or the craftsman from *Being and Time* hammering away in his workshop, to the poet Hölderlin. Outside of Heidegger's own work, authenticity is linked to Buddhism, the deep ecology movement (Zimmerman 1993, 240-6) as well as psychotherapy (Guignon 1993, 215-237) and many contemporary spiritual and therapeutic movements. At least initially, we can see some links between these "alternatives" and the authentic. All of these people and movements suggest

or even self-improvement because both seem selfish or individual pursuits, unconnected from the unconcealment of being.

typical ways of thinking and acting are insufficient or detrimental to human fulfillment and happiness.

However, most of these examples can be brought into question by Heidegger's later work or a deeper understanding of what is meant by the authentic. For example, commentators such as Guignon argue that instead of focusing on "the gravity and responsibility of existence by recovering a more profound grasp of what it is to be, they conceive authenticity as "a matter of being 'true to oneself,' where this 'self' is understood as consisting of 'inner' feeling, needs, and drives" (1985, 322). This very same "egoism" is, in fact, inauthenticity (Zimmerman 1981, 43-67).²⁵ Another obvious problem with authenticity is its relationship with National Socialism (Wolin 1993, 167).²⁶ The connection

²⁵This is a criticism of Sartre's early descriptions of authenticity in *Being and Nothingness* (1943) and *No Exit* (1943) as the ability to create the self outside of "the gaze" of "the other."

²⁶Wolin notes that Eric Weil and Alphons de Waelelens support this view. On the one hand, Heidegger's many speeches and activities during his time as Rector of Freiburg University made it clear that he promoted support of Hitler and National Socialism as "an affirmation of 'authentic existence.'" On the other hand, these same speeches and actions seemed not to explicitly support the Jewish and racial considerations normally associated with Nazism (Löwith 1993, 180-2). I think that Heidegger truly believed that the Germany of the early 1930s held out the possibility for authentic existence – he was not simply swept up in the fervor of the times – but his vision of a Nazi State did not match Hitler's vision. Jeffrey Herf argues that the Nazi appropriation of the language of authenticity highlights the disjuncture between Heidegger's philosophy and his "political error" (Herf 1984, 224). Still, an argument can be made that Heidegger both explicitly (Rockmore 1992, 111) and implicitly supported Nazi racial considerations (Rockmore 1991, 192). What Steiner calls Heidegger's "total public silence" (1987, 116) on the Holocaust and the policies of the Third Reich lends credence to this

between things such as craftwork with authenticity can also be challenged because it may be possible to have authentic industry (i.e. the initial Nazi war machine) and inauthentic handicrafts (i.e. mass produced).²⁷ Finally, the use of authenticity to describe the results of ubiquitous self-help enterprises seems to reflect Heidegger's description in name only.

Really, authenticity is about clarity. This might mean that we should clear away insignificant fixations on wealth, power, success, sex, etc. By opening ourselves up to the facts of our existence, we realize our purpose or essence is beyond our control.²⁸ So, egoism or humanism

view. But, in a return letter to Herbert Marcuse written not long after the war, Heidegger addresses his failure to "provide a public, readily comprehensible counter-declaration." As he explains "it would have been the end of both me and my family" (January 20, 1948). This seems a most common and legitimate excuse for silence. It also worth reviewing some of the other points raised in the same letter "I expected from National Socialism a spiritual renewal of life in its entirety."; "I recognized my political error and resigned my rectorship in protest against state and party."; "[I] was exploited for propaganda purposes both here and abroad"; none of my students "fell victim to Nazi ideology"; "the bloody terror of the Nazis in point of fact had been kept secret from the German people."

We can conclude with some confidence that Heidegger's philosophy did not match up with the politics of the day. This is evident in his Bremen lectures of 1949 where he compares the holocaust to mechanized agriculture and nuclear war. It seems clear that Heidegger understands the Holocaust as one of the worst reflections of global technology – far from the "spiritual renewal" he was looking for.

²⁷Handicraft is not necessarily authentic but can be drawn into the technological (Zimmerman 1990, 222).

²⁸Heidegger's concern for authenticity, which is grounded in an anxiety over our impending death, is challenged by contemporary technologies such as genetic engineering and psychopharmaceuticals. Genetic engineering holds the possibility of an end to mortality. However, by itself, this still allows for an anxiety that we can die

distract us from this openness and leads to frustration and a lack of fulfillment.

Now, we should be reminded of Aristotle's discussion of phronesis. This is what Heidegger has in mind in his interpretations of phronesis from Book VI of the *Ethics* taken up in the Marburg lectures. In fact, two important passages suggest a connection between authenticity and Aristotelian phronesis. The first passage is Heidegger's translation of phronesis as "the right and proper way to be Dasein" (§8a [47-49]).²⁹ The second passage describes why phronesis is a virtue. As Heidegger puts it, a person

from an accident, murder, etc.. But, in combination with psychopharmaceuticals designed to alleviate anxiety, such as Prozac, there is neither the isolating moment of death nor anxiety over the possibility of death. So, genetic engineering and psychopharmacology seem to deny the possibility of an authentic existence as Heidegger described it. But, this is only a suggestion and is introduced to illustrate how the further unconcealment of technology may end any and all possibility for authentic existence.

²⁹Heidegger is not merely interpreting Aristotle. Indeed, one is struck by Heidegger's extraordinary translation of phronesis. Of course, his Marburg lectures were given in German and, therefore, the English translation may be partly responsible for what is always lost in translation. But it is hard to accept that Aristotle subscribed to the uniquely Heideggerian concept of Dasein, literally meaning "being-there." As it was defined in Chapter 1, Aristotle understands phronesis as "a reasoned and true state of capacity to act with regard to human goods" (EN 1140b20). Why is Heidegger's rendition so different? Bernasconi explains Heidegger's appropriation with the help of Hans-Georg Gadamer, one of the students at the lectures, "The fact that in his readings in the history of philosophy Heidegger has embedded his own questioning so deeply into his interpretations that he thinks with and not against his predecessors, has been a constant source of misunderstanding" (129). Heidegger is not seeking an accurate translation or critical understanding of Aristotle. Instead, he is trying to engage the same ideas and arguments. With this in mind, "the right and proper way to be Dasein" is as a legitimate a rendition of phronesis as is Aristotle's.

can be so concerned or wrapped up in things of minor significance that he loses sight, covers himself up, and therefore does not see himself – "Therefore he is ever in need of the salvation of φρονησις" (§8b [51-52]).

The first passage describes phronesis as the unconcealment of human essence (*Dasein*) free from the concealment of all other things. As *Dasein* is characterized by its ability to consider the purpose or meaning of its own existence,³⁰ phronesis "as the right and proper way to be *Dasein*" implies self-understanding, and self-awareness. As it is described later, phronesis is a revealing of the conscience of *Dasein* (§8c, [55-56]). Importantly, phronesis is not "self-understanding" itself but rather the "way" to this understanding. This is even more clear in the second passage. Phronesis is not the unhindered unconcealment of human essence but the capacity to overcome the almost constant barriers to this revealing. In our daily lives, we are distracted by petty concerns that lead us down wrong and improper paths. For example, we may become so obsessed with sex or other pleasures that we are unable to think beyond our narrow desires. Likewise, we may suffer from such severe depression that we are unable to think or function at all. Phronesis is the ability to break through these

³⁰see sec. 1-4 of *Being and Time*.

obsessions and depressions. When one is distracted by pleasure, pain, or depression one lacks *phronesis* (Bernasconi, 134). But, as Heidegger explains, "Insofar as man himself is the object of the *αληθεμειν* (unconcealment) of *φρονησις*, it must be characteristic of man that he is covered up to himself, does not see himself, such that he needs an explicit *α-ληθεμειν* in order to become transparent to himself" (§8b [51-52]).³¹ *Phronesis* is action that clears the way to being. If we were never covered up by things that distorted or distracted us, there would be no need for the salvation of *phronesis*. Put differently, if the *phronimos* was never faced with personal, economic, ethical, or political dilemmas, he would never be able to reveal himself as a man of good judgement – the challenges and deprivations of everyday life distinguish us. Heidegger explains, "every mistake is a personal shortcoming" (§8c, [53-55]). That is to say, improper action reveals a person's lack of *phronesis* – petty distractions cloud our judgement leading us to make mistakes. The challenges of everyday life that conceal our true path are, in a sense, necessary elements for our own self-understanding. Only through the experience of strife is the *phronimos* able to come to understand the good life in general.

³¹Heidegger's translation of *aletheia* as unconcealment is my addition.

Taken together, these passages describe the difference between authentic and inauthentic existence. Where an authentic person is able to "reveal himself to himself," most of us are unable to overcome barriers to self-revealing. Because we do not know the "way" to being, we think and act in wrong and improper ways and are driven toward negative or improper action. Heidegger explains that when one is taken up with "average everydayness" one is inauthentic (1962, sec. 35-38). So, it seems possible that by changing our way of thinking, our actions, or even where we live we can move from inauthentic existence to authentic existence. For example, where most people living in the city are inauthentic, those living in the provinces are authentic.

But, as mentioned above, this movement between the inauthentic and authentic may be far more difficult than it might first seem. As the first passage indicates, Heidegger views *phronesis* as the way the ancient Greeks were able to reveal or unconceal their essence. *Phronesis* was the way they positioned themselves for unconcealment of "the good." Unique to our contemporary situation, however, is that the fulfillment of human existence is barred by the unconcealment of technology. In the same way an individual may be inordinately wrapped up in things of minor significance such as pleasure or neurosis, the planet is wrapped up in technology. Not

surprisingly, Heidegger links global technology with inauthenticity. We cannot overcome the insurmountable barrier of technology in the same way the *phronimos* overcomes the things of minor significance, the petty concerns, the pleasure, pain and depression of everyday life. Where these things may have been cleared away through ethics or politics, Heidegger is clear that "Technology is in its essence something which man cannot master by himself" (Der Spiegel, 105). This may mean that in the technological age we do not have access to phronesis. If not phronesis, then what?

Because of the uniqueness of our situation, phronesis will not suffice as "the right and proper way to be Dasein." We need something different. Heidegger's discussion of resolve (*Entschlossenheit*) in *Being and Time* suggests a potential substitute (sec. 54-60). As with phronesis, resolve or resoluteness can also be described as the ability to overcome "the many things of minor significance" that distract one from circumspection. However, unlike phronesis, resolve is action without deliberation. Consider Heidegger's appeal that we must embrace those men of new courage, a strong leader such as Hitler. Only then can we find a "clearing" where Being can reveal itself to us. This is the message of the Rectoral Address. He says, "The beginning exists still. It does not lie behind us as something long past,

but is stands before us . . . The beginning has invaded our future; it stands there as the distant decree that orders us to recapture its greatness". He calls for "the questioning, unsheltered standing firm in the midst of the uncertainty of the totality of being". He implores the German people to stand in the overpowering light of uncertainty. But, in order to see this light or revealing, we must first remove what bars or blocks it. In the 1930s, Heidegger seemed to think this would require an immense planetary wide effort on the part of the German *volk*. He writes:

From a metaphysical point of view, Russia and America are the same; the same dreary technological frenzy, the same unrestricted organization of the average man . . . The spiritual decline of the earth is so far advanced that the nations are in danger of losing the last bit of spiritual energy that makes it possible to see the decline (taken in relation to the history of "being"), and to appraise it as such (1959, 37-8).

The challenge posed by both Russia and America marks a point of a deep deprivation of the German people. But, for Heidegger, it is from this deprivation or strife that a *volk* can sense their essence. Only in this negative atmosphere can one feel what they are not. This gives impetus to destroy this barrier or distraction to the unconcealment of essence. That is to say, by destroying Russia and America, Germany can create a clearing for the

unconcealment of not only their essence but also for the return of Being.

Where Hobbes argued that a technical orientation was always accessible but simply not engaged because of the ignorance and self-interest of political leaders, Heidegger presents technical orientation or technical interpretation as stemming from the particular and ancient turn toward Western metaphysics. As with Hobbes, Heidegger argues that this technical orientation to the world gives rise to an absolute control of nature. But, where Hobbes argues technical knowledge is the key to avoid the dangers of nature, Heidegger puts forward that this flight is "*danger* in the highest sense" (1993, 333) because it "enframes" our spiritual relationship with existence to such a degree that we are unable to see or appraise the rift.

It may be that "the nation" will allow for this seeing and appraising of "the spiritual decline of the earth." In saying this, Heidegger is arguing for a violent response "to recapture, to repeat" a primordial existence unencumbered by the influence of technology. Indeed, it is fair to say that this aspiration led Heidegger to actively support National Socialism in the belief that it could obliterate both the Russian and American forms of democracy which he described as political manifestations of technology. As he explains in

the *Der Spiegel* interview of 1966, "At that time I saw no alternative."

While phronesis does embrace uncertainty to a degree, it does not abandon certainty altogether. Heideggerian resolve is not the same as phronesis.³² It is only half of the equation – action without deliberation. Crowell argues that resolve can "be encompassed by no rules, assessed by no public criteria, be integrated into no public practices; it is not a form of skillful coping and cannot be thought of in terms of phronesis." In fact, we can hardly even say that resolve involves action because it "transpires on the basis of death, the total breakdown of such abilities-to-be."³³ As Rosen has pointed out, "If reason is identified with science, then resolve and courage are unreasonable" (1987, 45). Consider the fact that the *phronimos* is said to have understanding of the good life in general. This understanding seems to elude Heidegger's resolute heroes.

³²Jacques Taminiaux and Franco Volpi argue for the connection. See "The Reappropriation of Nicomachean Ethics: *Praxis* and *Poiesis* in Fundamental Ontology" and "Dasein as *Praxis*: the Heideggerian Assimilation and Radicalization of the Practical Philosophy of Aristotle."

³³In a similar vein, Theodore Kisiel has compared Aristotelian phronesis with Heidegger's concept of *Augenblick* (moment of vision) arguing that both relate to culture rather than just personal insight (1993, 282 and 286). William McNeill has made a similar argument suggesting that Heidegger posed *Augenblick*, now translated as "glance of the eye," as a foundation for phronesis (1999). *Augenblick* is also linked to authenticity in *Being and Time* (sec. 68).

This said, we must also question the connection between authenticity and phronesis. Where phronesis may be authentic, this sort of authenticity is no longer available. For Heidegger, it is resolve rather than phronesis that was to bring about a transformation of sterile, static and narrow ethics and politics. Because technology conceals the essence of human existence, we can no longer meet the dual requirement of phronesis to aim at and achieve good ends: so, our ability to both think and act is clouded by technology. The best we can do is to act without a clear idea of where that action will lead us.

But, as it turned out, the German effort of the 1930s failed. Therefore, Heidegger seems to view the next centuries and generations as a period of immense deprivation. Perhaps, only then will a future thinker be able to overcome the challenge of technology.

Preface to Part II

In large part, the two chapters of Part II are reviews of the different philosophical and, in some cases, popular responses to Heidegger's analysis of technology. Perhaps with the exception of George Grant and Herbert Marcuse, they are not really scholarly responses to Heidegger but, instead, considerations of the very same "challenge of technology" that Heidegger first articulated.

Chapter 4 details and criticizes the essentialism and constructivism first discussed in the introduction. On the one hand, the essentialists try to follow Heidegger's path into the unknown. They argue that because technology has ordered the entire planet and everything on it, we are forced to abandon traditional political and social institutions as well as philosophy and rationality in order to save ourselves from technological reordering. On the other hand, constructivism is a counterpoint to Heidegger because it seems to repeat the very same antifoundationalist assertions at the base of modern thinking discussed in chapter 2. The constructivists follow Hobbes. They argue there is no ground to human existence beyond that which

we construct.¹ This difference noted, both essentialists and constructivists argue that we must revolt against, radically reform, or outright abandon our current institutions and turn to the important task of finding some new mode existence, some new foundations for acting and thinking.

Differently, Chapter 5 considers thinkers who conclude that, rather than revolting against, reforming, or abandoning the Western tradition, we must recover or revive it. Also in chapter 5, I turn to a more explicit consideration of the main thesis of this work. As it was put, it is not the essence or character of technology that leads to dehumanization but a failure of politics. Finally, I explain why we should practice a political judgement that restrains technology from dehumanization and ensures that it contributes properly to human flourishing.

¹Constructivist arguments are merely a repetition of Hobbes original effort to discredit Aristotle's portrayal of a teleological universe. This is the basic idea behind Peter Lawler's identification of most postmodernism as "hypermodernism" (2). With this in mind, it might be said that constructivist arguments defend the basic premise of Hobbes' argument and attempt to fulfill his project of technological control of human beings. This said, Lawler wrongly includes Heidegger on his list of "hypermoderns." He argues that Heidegger rejects nature as a ground for human existence. But, by accepting that the unconcealment of essence is beyond human control, Heidegger does accept a ground for all things including human beings.

Chapter 4: Essentialism and Constructivism as Responses to Technology

This chapter has three sections. In the first section, I consider the essentialists who accept Heidegger's discussion of enframing. I subdivide these thinkers into three categories that reflect Heidegger's three responses to technology: 1) "aggressive", i.e., the elimination of technology; 2) "moderate", i.e., the reform of institutions better to reflect the changes that technology brings; and 3) "passive", i.e., the acceptance that we cannot act against or direct technology. The second section considers the constructivists who do not accept the enframing argument. They are subdivided into two categories: "revolutionary" or those that want to overthrow reigning social structures toward an egalitarian technological society, and the "evolutionary" or those that want to reform institutions toward the same end. The third section reconsiders both sides of this debate in the context of Andrew Feenberg's dichotomy.

While I come to a provisional agreement with essentialism, I wish to highlight the insufficiencies of the particular arguments of both constructivists and essentialists as well as each theory as a whole.

I **Essentialists**

i) Aggressive

Aggressive essentialists argue that technology is necessarily directed toward human suffering. Rather than trying to orient technology toward improving the human condition, these sometimes called "neoluddites" wish to see the destruction of the whole technological edifice. They take their name from the nineteenth century band of English artisans lead by Ned Lud who rioted against mechanization and destroyed machinery. However, where the original Luddites targeted the specific machines they felt threatened their way of life, the neoluddites have a far broader program to eliminate technologies of all kinds to create the conditions for the spontaneous development of what they call a "natural society".

Kirkpatrick Sale is often identified as the intellectual leader of this movement. His recent book on the contemporary relevance of the Luddites, *Rebels Against the Future* (1996), is unapologetically anti-technology.¹ Sale's status as an aggressive opponent of

¹We might also look to Chellis Glendinning, E.F. Schmacher, Jerry Mander, David Noble, and Theodore Roszak for other contemporary anti-technology philosophies.

technology is solidified when he admits that the convicted terrorist Ted Kaczynski, otherwise known as the Unabomber, belongs on his list of environmentalists, ecologists, economists, members of the "no-growth school", "activists fighting against nuclear power, irradiated food, clearcutting, animal experiments, toxic waste, and the killing of whales."²

The origins of this strain of thinking might be located somewhere in the ideas of the eighteenth century French philosopher Jean-Jacques Rousseau. He criticized the modern scientific view that nature is mere material for humanity in his *Discourse on the Origins of Inequality*. He writes, "You are lost if you forget that the fruits of the earth belong to all and the earth to no one!" We could also look to the nineteenth century American transcendentalists Henry David Thoreau and to Ralph Waldo Emerson as inspirations for anti-technology or "back to nature" movements. Thoreau observes in *Walden*: "We do not ride on the railroad; it rides on us." In his essay, "The Poet," Emerson questions a burgeoning information society: "Why covet knowledge of new facts? Day and night, house and garden, a few books, a few actions, serve us as well as would all trades and all spectacles." Mary Shelley, Thomas Carlyle and John Ruskin

²Sale notes that he shares Kaczynski's philosophy but not his methods.

should also be included in this list of seminal anti-technology thinkers. However, none of them call for the complete banishment or destruction of technology. Instead, they recognize that certain technologies are troubling and dangerous while others are useful and helpful. Aggressive essentialists, quite differently, oppose technology as a whole.

A truly anti-technology philosophy might be derived from Friedrich Georg Juenger, the brother of better known Ernst Juenger. His 1949 tirade, *The Failure of Technology*, alternatively titled *The Perfection of Technology*, argues that technology is a demonic force that seeks to destroy the planet – the world is being laid waste by the accelerating need of machines for resources (i.e. oil, coal, etc.). In technology, he observes, "we find a way of thinking which cares nothing for preservation and saving of the substance" (21).

The problem with Juenger's work is that his ideas about our technological future are extrapolated from early and mid-twentieth century visions of inhumane living spaces, growing pollution, and inefficient resource exploitation. Consider his descriptions of the modern city: "The machine invades the landscape with destruction and transformation; it grows factories and whole manufacturing cities overnight, cities grotesquely hideous, where human misery is glaringly revealed; cities

which, like Manchester, represent an entire stage of technology and which have become synonymous with hopeless dreariness (22); of the technological subjection of man: "Man no less than ore deposits belongs to the resources subject to consumption by technology."; and his ideas about the future of food: "In matters of food we act wisely if we avoid the technician wherever we can" (84). Simply put, Juenger has an exclusively mechanical view of technology. He sees technology in rather superficial terms of open pit mines, belching smokestacks, assembly lines, and synthetic vitamin pills.

While this doomsday vision has played out to a degree, there is a general consensus that destruction and waste serve neither the interests of the industrialist nor the environmentalist. Since his writing, there have been (many successful) attempts to mitigate the type of "misery" and "dreariness" that Juenger and others foresaw as our unfortunate future. Juenger's nightmare scenario provides a relatively narrow illustration of technology. For example, it fails to explain how technology could manifest in such things as "environmentally friendly technologies." Clearly, a computerized filter capping a smokestack or a hydrogen fuel cell replacing an internal combustion engine are technologies. Yet, they work against Juenger's criticism: in that the former cleans the air and the latter reduces noise. Even industrial

Manchester and Great Britain as a whole have seen the closing of factories and a transformation into deindustrialized (post-industrialized), "high-tech" economies. Juenger's concerns about synthetic food also seem to be misplaced. Genetically modified food can be a substitute for natural food while maintaining all of the qualities Juenger wants. It has all the things that Juenger says the synthetic pill lacks -- it grows, it has a smell, and it ripens. Really, genetic modification solves the problem that Juenger attributes to the meeting of technology and food. In turn, despite the fact that genetic modification is an even greater extension of the technological apparatus than the vitamin pill, his complaints do not apply.

While he might be excused for not seeing these developments, we cannot excuse Kirkpatrick Sale and his followers. The aggressive essentialist description of technology is superficial because it fails to see that technology can produce either the bad or the good, the base or the noble, destruction or greatness. Whether engaged in environmental destruction or protection, technology "essentially" has the same affect. Take for example the concerns of Paul Harrison and Fred Pearce, the authors of the *American Association for the Advancement of Science's Atlas of Population and Environment*. They write:

We have become a major force of evolution, not just for the 'new' species we breed and genetically engineer, but for the thousands of species whose habitats we modify, consigning many to extinction, compelling others to evolve and adapt to our pressures, . . . We have become a force of nature comparable to volcanoes or to cyclical variations in the Earth's orbit.³

They decide, "As we enter the third millennium, the destiny of our planet is in our hands as never before, yet they are inexperienced hands. We are modifying ecosystems and global systems faster than we can understand the change and prepare responses to them." According to these scientists/environmentalists, on the occasion of impending ecological disaster we must accelerate our understanding of "ecosystems and global systems" and "prepare" an appropriate response. It is not a call for a destruction of technology but instead for better technology or, in their words, "more experienced hands." For them, the possibility that the earth's environment will become uninhabitable is not a necessary consequence of technology but rather a consequence of inefficiency in the same way a hydroelectric dam may fail to maximize its energy output or genetic engineering may fail to achieve optimal health. Importantly, Harrison and Pearce recognize that both man and the earth as a

³Henderson, Mark. "Human development 'threatens key resources'." The Times of London, re-printed in The Ottawa Citizen, 17 Feb. 2001: C8.

whole have been ordered by technology. But, rather than seeking a way outside that ordering, they seek a reordering along physically and ecologically sensitive values. This achievement is predicated on an ever more rational articulation of nature (i.e. ecosystems and global systems).

This also suggests that neoluddite arguments, anti-technology philosophies, or aggressive essentialism are insufficient because they cast technology in an explicitly antagonistic position to human beings. As Harrison and Pearce highlight, humanistic visions for the world are not to be discounted or overrun by technology but incorporated into technology. Rather than anything so explicit as the "pillaging of the earth" that Juenger describes, the technological transformation of the planet may be quite different. Subtle technologies, such as genetic modification, invisible computers, and silent machines serenely recompose the foundations of the natural environment, our cities and homes. They are "low-impact" in the same sense as they are efficient. After all, pollution, whether of air, noise, or sight, and diseases of the body, mind or planet are signs of inefficient use of resources in the same way the side effects from a drug indicate it is not properly focused on the right part of our anatomy. Juenger's mid-twentieth century vision reflects the way in which technology still

opposed many human ends. Now, much of this opposition has been overcome. The real concern is that soon very little will be left to indicate that technology and human concerns differ in anyway.

ii) Moderate

At first, we might call Neil Postman a neoluddite because he argues that technology not only clearly precipitates the destruction of the environment but also has a less obvious and corrosive affect on culture. However, he also tries to persuade his readers that they can save themselves from the cultural void that technology engenders by reinventing their ravaged traditions along new lines. Postman is a moderate essentialist because he both accepts the enframing character of technology and believes that its affects can be dulled.⁴ But, rather than relying on traditions as they stand, Postman and other moderate essentialists argue that we must change our institutions to match the new standards introduced by technology. I argue that this

⁴For example, in *Building a Bridge to the Eighteenth Century: How the Past Can Improve Our Future*, Postman argues that we can and should retrieve the ideas of Enlightenment humanists such as Voltaire, Rousseau, Jefferson, and Franklin. Like these thinkers, we must recognize that science has much to offer but also brings potential for inhumane results.

kind of change actually facilitates our further technological inculcation.

For example, in *Technopoly*, Postman argues that, while it makes our lives easier, technology destroys the "metaphysical and theological symbols and narratives" which lie at the foundation of culture; throughout history each new technology sets us further adrift into a sea of meaninglessness. So, because the telescope discredited the Church, it set Europe off into "the psychic desolation of an unfathomable universe." Because the factory and assembly line discredited skilled labour, it dismantled the family farm as the foundation of the economy and left men to conform to the "dark Satanic mills" that stripped them of their souls (42). And, because the computer and the internet discredit traditional means of communication, they are now dismantling what remains of our communities.

There is a basic contradiction running through Postman's analysis. His main concern is that, because technology gives us limitless freedom, it leads to nihilism. Yet, while he decries this nihilism, he still wants to keep all of the freedom, efficiency and ease provided by technology. That is why he both advocates the increased censorship of information and limitation of technology through religion but also puts forward that we should feel free to modify "religious theory" to our

liking. On the one hand, he promotes the restraint provided by religious tradition and, on the other, the freedom to choose which aspects of that restraint is to our taste.⁵ Obviously, these two positions work against each other. To simply pick and choose through religious doctrine, piecing together a "made to fit" faith, will not provide the limitations Postman is looking for. As he himself explains, "When religion loses much or all of its binding power – of it is reduced to mere rhetorical ash – then confusion inevitable follows about what to attend to and how to assign significance" (80). Postman wants all of the authenticity and rootedness associated with tradition and culture as well as the freedom of expression and the independent pursuit of happiness provided by technology.⁶

Hans Jonas is another good example of a moderate essentialist. He also recognizes the nihilistic or, as he

⁵Postman presents the same contradiction in his analysis of the family, university, courts of law, and the state.

⁶This reminds me of George Grant's (see below) observation that while we may have a nostalgic longing for tradition we really cannot tolerate those that maintained real ties to their national heritage "only those who wanted to preserve charming residual customs." As he says, ". . . some like pizza; some like steaks; some like girls; some like boys; some like synagogue; some like the mass. But we all do it in churches, motels, restaurants indistinguishable from the Atlantic to the Pacific" (1969, 26). According to Grant, we have lost the autochthonous or primal foundations of our cultures. It is a place where tastes (i.e. "pizza" and "steaks"), identities (i.e. "boys" and "girls") and values (i.e. "churches" and "synagogues") may differ on the surface but the underlying principle or outlook which governs these choices is exactly the same.

might put it, Gnostic character of technology. Even though Jonas accepts much of Heidegger's analysis and is identified as a "neo-Heideggerian" (Durbin, 42), he also puts forward a project of reform. Rather than reforming culture, as is Postman's concern, Jonas seeks to develop an ethics appropriate for the technological age or "the ethics of technological intervention". He writes:

What recalled me from theoretical detachment to public responsibility and set a new task to my philosophizing . . . was the growing realization of the inherent dangers of technology as such – not of its sudden but of its slow perils, not of its short-term but of its long term threats, not of its malevolent abuses which, with some watchfulness, one can hope to control, but of its most benevolent and legitimate uses which are the very stuff of its active possession (1974, xvi).

And concludes, "But the most obvious fact is that meeting the challenges of technology is a matter for ethics; . . . this entails a search for principles that enable us to deal with issues mankind never had to deal with before" (1974, xvi).

He explains that classical ethics functioned in both a relatively small space (i.e. the *polis*) and a relatively short time (i.e. the here and now). Because modern technology has spread human influence across the entire planet and has far-reaching future impact, the

limited scope of classical ethics has been antiquated.⁷ According to Jonas, "the boundary between 'city' and 'nature' has been obliterated: the city of men, once an enclave in the non-human world, spreads over the whole of terrestrial nature and usurps its place" (1974, 12) and "no less than the whole biosphere of the planet – has been added to what we must be responsible for because of our power over it" (1974, 9). Where before our actions had only a relatively minor ethical impact, now nature itself falls under the rubric of human ethical activity. Furthermore, ethics in an age of technology requires far more foresight, complexity, and risk: "No previous ethics had to consider the global condition of human life and the far-off future, even existence, of the race" (1974, 10).

For Jonas, the anthropocentric focus of classical ethics does not suffice in an age where so much other than humanity sits in human hands. The ethics of technological intervention requires a "rethinking" of the extra-human; not only human goods but also the entire planet and everything on it. He writes, "The new order of human action requires a commensurate ethics of foresight and responsibility, which is as new as are the issues

⁷Jonas decides, "Modern technology has introduced actions of such novel scale, objects, and consequences that the framework of former ethics can no longer contain them" (1974, 8).

with which it has to deal" (1974, 14). As is the case with Postman's analysis, rather than culture or ethics leading technology, technology is leading culture and ethics. According to Jonas, we must abandon our traditional ethics and reinvent them along new lines prescribed by technology.

Langdon Winner says the same thing about politics. Similar to Marshall McLuhan's idea that "the medium is the message" (see below), Winner argues that technologies are inherently political — introducing new structures and relationships. As he says, "choices about computer technology involve not only obvious questions about 'what to do', but also less obvious ones about 'who to be'" (1995). Some technologies are egalitarian and democratic while others introduce undemocratic structures and relationships. In turn, we must change politics to facilitate the development of the "good" technologies and the avoidance of the "bad". Winner argues that by avoiding "technological somnambulism" or by understanding the essence of technology we will be able to infuse humane ends into technology. He concludes:

We need to seek alternatives, social policies that might undo the dreary legacy of modernism: pervasive systems of one-way communication, preemption of democratic social choice, corporate manipulation, and the presentation of sweeping changes in living conditions as something justified by a univocal, irresistible "progress." . . . By virtue of their

vocation, computer professionals are well-situated to initiate public debates on this matter, helping a democratic populace explore new identities and the horizons of good society (1995).

Winner advocates the increased participation of technologist in the management of political institutions and society in general.⁸ This, it seems to me, is in many ways the same thought expressed by the environmentalists/scientists Pearce and Harrison. We must take on a planetary responsibility and reinvent our society to better fit with the new standards introduced by technology.⁹ At basis, Postman, Jonas and Winner accept the logic of this argument. For all of them, technology is so invasive and overpowering that they are compelled to argue that we must willingly inculcate our traditions, institution and ourselves to its demands. So, while they want to limit or direct technology, ultimately they participate in its further application.

iii) Passive

As mentioned in chapter 3, of the three categories listed here, passive essentialism is the most difficult

⁸As he says, "People doing research on computing and the future could have a positive influence on these matters" (1995).

⁹This is also very similar to the ideas expressed earlier in the twentieth century by Thorstein Veblen. In *The Engineers and The Price System* (1921) and *The Instinct of Workmanship* (1914), Veblen argued that economic and political life must be reorganized for the freer application of technology.

to understand. I have argued that it is misleading to simply focus on the subjects of environmental destruction, the creation of virulent viruses, and the constant beeping and ringing of mechanism, as do the aggressive essentialists. I have also argued that the reform of institutions and traditions advised by moderate essentialists does nothing to direct or limit technology but instead participates in, if not accelerates, the incorporation of humanity into technology. It might very well be that the insufficiency of both aggressive and moderate essentialism is what leads to passive essentialism. These essentialists decide that the activist effort to subordinate technology to human concerns is itself an outgrowth of technological thinking and actually seeds the way for further enframing. That is to say, protest and criticism of the "failures" of technology simply highlight the need for new methods to incorporate human needs into technology.

This is the main point of Jacques Ellul's well known *The Technological Society*. He argues that such activism is simply a part of "the interrelation of technique"¹⁰ that drives technology forward. After all, Ellul defines

¹⁰The confusion stemming from Ellul use of "technique" is worked out in his later *The Technological System* where it is explained that the French "technique" and "techniques" are used in the same way as the English "technology" and "technologies." In turn, in the English translation of the later work, technology is used in place of technique.

technology as ". . . the translation into action of man's concern to master things by reason, to account for what is subconscious, make quantitative what is qualitative, make clear and precise the outlines of nature, and take hold of chaos and put order into it" (1964, 43). By revealing all that is subconscious, qualitative, and hidden about our nature, the activists are hoicking up into full view human ground yet to be enframed — allowing "the technical milieu" to absorb the natural" (1964, 79). This is clear in his description of "the inhuman atmosphere" of contemporary cities:

Consider the concentration of our great cities, the slums, the lack of space, of air, of time, the gloomy streets and sallow lights that confuse night and day. Think of our dehumanized factories, our unsatisfied senses, our working women, our estrangement from nature. Life in such an environment has no meaning (1964, 5).

Ellul is not damning "the machine" but illustrating how the city had not yet been fully integrated into technological society. There is a lack of space, air, and time because of inept organization or poor urban planning. There is confusion between night and day because "sallow lights" are not effective enough to replicate the sun. Despite Ellul's obvious distaste for modern city living, his description points out what is left to be done rather than what has been done.¹¹

¹¹This might have been the inspiration for such places as Brasilia. This infamous planned city built in the late 50s and early 60s on a

For Ellul, negative repercussions such as slums and dehumanized factories are the inevitable consequence of all technological innovation. As he says, "It is doubtless still to modify any given element, but only at the price of secondary repercussions" (1964, 109). Another example is that it may be possible to provide food for the growing planet but only at the cost of forced labour and the depletion of the soil. The interrelation of technique suggests these negative consequences then stand out for further integration: "It will not be sufficient merely to control grains, meat, butter, and so forth. The stage at which this would have been feasible has been passed. New technical methods must be found" (110).¹²

previously uninhabited region of rain forest is clean to the point of being sterile. Influenced by Le Corbusier, the architect Lucio Costa tried to build a city where pedestrian and motorized vehicle could live in harmony. He writes:

. . . it must not be forgotten that the car, today, is no longer Man's deadly enemy; it has been domesticated and is almost a member of the family. It only becomes "dehumanized" and reassumes its hostile, threatening attitude when reintegrated into the anonymous body of traffic. Then indeed Man and Motor must be kept apart, although one must never lose sight of the fact that, under proper conditions and for mutual convenience, co-existence is essential (1957).

As it turns out, co-existence with "Motor" requires a considerable adjustment of "Man." The problem is that pedestrian traffic can only travel the city along its east-west axis. Any effort to travel north to south is met with expressways without crossings. Brasilia has the highest pedestrian death rate in the country.

¹²The interrelation of technique leads us to develop genetically modified foods. A similar example is found in the hydrogen fuel cell as a response to the negative repercussion of exhaust pollution from the earlier development of the internal combustion engine.

In the same sense, human boredom, neurosis, and anxiety stand out for further integration. Ellul writes of the "psychotechnician," "They want to restore man's lost unity, and patch together that which technical advances have separated. But only one way to accomplish this ever occurs to them, and that is to use technical means" (411). Like the ills of the city, the ills of the modern psyche are the reasons for technological advance. The attempts of psychologists and sociologists to alleviate the boredom of the worker through the science of human behaviour and to palliate the citizen through better planning are the "techniques of 'humanization': to render unnoticeable the disadvantages that other techniques have created" (413). Boredom, neurosis and anxiety are brought forth, quantified, and put into order through technical means. Our reactions and activism against technology are used as fodder for our further inculcation.

Yet, early in his writing, he still holds out the hope that this integration was only in a transitional period. He observes, "What we are witnessing at the moment is a rearrangement of the world in an intermediate stage; the change is not in the use of a natural force but in the application of technique to all spheres of life" (1964, 42). In turn, he argues that there is a

chance to stand outside of the interrelation of technique, ". . .the challenge is not to scholars and university professors, but to all of us. At stake is our very life, and we shall need all the energy, inventiveness, imagination, goodness, and strength we can muster to triumph in our predicament" (xxxii). So, despite my labeling Ellul a "passive" essentialist, his ultimate concern in *The Technological Society* is not merely understanding technology but doing something about it. Still, it unclear how energy, inventiveness, etc. can escape from the interrelation of technique in a way that other reactions such as estrangement and boredom failed to.

In his later work, Ellul recognizes the contradiction. In *The Technological System*, Ellul asks, "What is the difference between the old factory and the new" (2)? He decides that the "earlier analogy to the anthill is passé, the ants have disappeared" (3). In other words, the transitional period or "intermediate stage" (1964, 42) in which *The Technological Society* was written is over. In the new era of the technological system, technology builds upon itself a "virtual society" to camouflage its mechanism — the types of images Juenger had to play upon are buried, hidden from view. This later work shows that Ellul has moved away from attempts to awaken humans to their predicament and toward questioning

whether it is at all possible for man to " . . . 'take in hand,' direct, organize, choose and orient technology" (311) as is the moderate essentialist position. He recognizes that, on the one hand, technology has become less sensually definite, sinking into the background, and, on the other hand, the hidden aspects of humanity have become exposed: "Human relations can no longer be left to chance. They are no longer the object of experience, of tradition, of cultural codes, of symbolism. Everything has to be exposed (group dynamism, psychoanalysis, depth psychology), elucidated, then transformed into applicable technological schemata (pedagogy, human relation, etc.)" (35). The real problem of technology is that it delves into the inner most recesses of human and non-human nature, bringing the mysterious and poetic foundations of existence to a reasonable explanation and, if warranted, manipulating them to desired ends. At basis, this is a process of sterilizing chance and contingency out of existence - "It gives man a sterile universe with neither germs nor microbes" (1980, 37). Now, the idea that humans can hold onto a "germ" of critical perspective is unlikely. Ellul writes, "Man in our society has no intellectual, moral, or spiritual reference point for judging and criticizing technology" (316). This permeates every

aspect of our lives including the political. Ellul writes:

It used to be said the politics was an art, consisting of finesse, aptness, a particular kind of ability, even genius; in short, of personal qualities which seemed to operate by chance. If politics was to become a technical activity, chance must be eliminated . . . Even a mediocre politician, by the application of 'method,' was able to achieve a good average policy, to ward off catastrophes, and to assure a coherent political line" (83).

According to Ellul, our institutions and ways of thinking have been integrated to such a degree that not only can we not act against technology but we also have no foundation to understand or examine it.

Marshall McLuhan has the same concern and, like Ellul, seems to straddle the moderate and the passive. He also worries about the dehumanizing effects of technology and seems to recognize that activism is futile. However, he still asserts in *Understanding Media*¹³ that he has "the full confidence that it is possible to win an understanding of these forms [media] that will bring them into orderly service. . ." (1964, 21). A similar point is made in the introduction to an earlier work, *The Gutenberg Galaxy*. There he explains, "Far from being

¹³Similar to Ellul's use of the term "technique", McLuhan's ideas about "media" have created some confusion. McLuhan is not concerned with the affects of "the mass media" but every medium. As is made clear in his *Laws of Media*, McLuhan is talking about human artifacts or, for our purposes, technology.

deterministic, however, the present study will, it is hoped, elucidate a principal factor in social change which may lead to a genuine increase of human autonomy" (1962, 3). So, McLuhan thinks that by winning an understanding of technology we will see to an "increase of human autonomy." But, how "understanding" helps us to maintain our independence from the influence of technology remains unclear.

What is clear is that McLuhan is not calling for the elimination or destruction of technology. In a late interview, he puts it bluntly, "Resenting a new technology will not halt its progress" (1995, 264). And continues:

First of all-- and I'm sorry to repeat this disclaimer-- I'm not advocating anything; I'm merely probing and predicting trends. Even if I opposed them or thought them disastrous, I couldn't stop them, so why waste my time lamenting?... I see no possibility of a world-wide Luddite rebellion that will smash all machinery to bits, so we might as well sit back and see what is happening and what will happen to us . . . The central purpose of all my work is to convey this message, that by understanding media as they extend man, we gain a measure of control over them . . . If we persist, however, in our rearview-mirror approach to these cataclysmic developments, all of Western culture will be destroyed and swept into the dustbin of history (1995, 264-5).

According to McLuhan, by "probing and predicting trends", by sitting back, we can gain "a measure of

control" over technology. He also gives some indication of a more specific concern. McLuhan is more than just a neutral observer of technology but also a defender of Western tradition and culture. However, how is understanding linked to control or the maintenance of Western culture? To really get to the heart of McLuhan's ideas about the relationship between understanding, control, and maintenance requires an explanation of two of his most famous and misunderstood aphorisms: i) the medium is the message; and ii) the global village.

The idea that media "extend from man" means the same thing as "the medium is the message." For McLuhan, like Winner after him, our relationship with media is not merely metaphorical but one with very real social and psychological consequences. He writes, "For the 'message' of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs" (1964, 24).¹⁴ In *Counterblast*, McLuhan restates, "To say that any technology or extension of man creates a new environment is a much better way of saying that the medium is the message." This is well illustrated in the present and ongoing change from print culture to electric

¹⁴Also see Harold Innis (*The Bias of Communication*, 1951), Walter Ong (*Ramus: Method and Decay of Dialogue*, 1958), Eric Havelock (*Preface to Plato*, 1963), and, less so, Neil Postman (*Technopoly*, 1992) for similar studies of the effect of media.

culture.¹⁵ He argues that the culture, or the social and psychological structures, produced by the printing press are the foundation for the nation-state, democracy and the modern sense of self – the uniformity and repeatability of print elicited a segmentation and fragmentation of individuals from each other and the world (1964, 170). But, this culture is being replaced by what McLuhan calls a "global village" (1962, 31)¹⁶ brought on by electric media. He describes this new environment:

The more you create village conditions, the more discontinuity and division and diversity. The global village absolutely insures maximal disagreement on all points. It never occurred to me that uniformity and tranquillity were the properties of the global village . . . The tribal-global village is far more divisive -- full of fighting -- than any nationalism ever was. Village is fission, not harmony (1967, 272).

And explains, "I don't approve of the global village. I say we live in it" (ibid).¹⁷ The "global

¹⁵Walter Ong, an early colleague of McLuhan's at Saint Louis University, describes the psychological effects of the transition to new media, ". . . it would appear that the technological inventions of writings, print, and electronic verbalization, in their historical effects, . . . have restructured consciousness, affecting men's and women's presence to the world and to themselves and creating new interior distances within the psyche" (17).

¹⁶This term first appeared in *The Gutenberg Galaxy*.

¹⁷Obviously, when cultural commentators appropriate the "global village" to argue the democratic nature of the internet, the overcoming of time and space within a telecommunications explosion, that the boundaries between cultures and groups are loosing relevance with greater access to information and that instantaneous communication will bring forth greater individual freedom, this is not how McLuhan understood the global village.

village" does not only involve a sociological change but also a psychological change. According to McLuhan, electric technology overwhelms the central nervous system because it mirrors the speed of the electric impulses that connect our senses to our brain and all of its functions – electric media speeds at us too quickly to allow the moment of "interior distance" required for critical consideration. He explains it as "total and inclusive. . ." and decides that ". . . Now man is beginning to wear his brain outside his skull and his nerves outside his skin; a new technology breeds a new man" (1995, 264-5). This is why McLuhan puts his main emphasis on immediate understanding of this process, to understand media. He tells us we should be aware of this circumstance before our ability to understand has been pervaded by the environments introduced by electric technology.

The problem is that because the new environment created by media introduction is so foreign to traditional ways of acting and thinking we fail to notice any change. Mind you, this is not a new development in the shift from print to electric culture – media have been altering humans from the very beginning. However, McLuhan does identify our present move as particularly important and disturbing because he describes our very

capacity to understand as a consequence of print technology – the print revolution produced a fragmented, specialized, and individualistic man.¹⁸ When he asks us to "understand", then, he wants us to use our present ability to think rationally as individuals before electric media takes that ability from us. He wants us to understand what the coming of the global village means: individuality, the identity of self, and Western civilization are disappearing. He writes:

. . . the age anxiety and of electric media is also the age of the unconscious and of apathy. But it is strikingly also the age of the consciousness of the unconscious . . . this could not have happened before the electric age gave us the means of instant, total field-awareness. With such awareness, the subliminal life, private and social, has been hoicked up into full view, with the result that we have "social consciousness" presented to us as a cause of guilt-feelings. . . In the electric age we wear all mankind as our skin (1964, 56).

For McLuhan, electric culture is characterized by both apathy and activism, a couch potato dissidence. Only within a global village do we really feel the pain of others as our pain. We are able to surpass the spatial limitations of our immediate surroundings and experience

¹⁸McLuhan devotes the whole of *The Gutenberg Galaxy* to the study of this development of "point of view" via print technology, "Print exists by virtue of the static separation of functions and fosters a mentality that gradually resists any but separative and compartmentalizing or specialist outlook" (126).

the lives of others in a far more direct way than was ever before possible.¹⁹

McLuhan fretted over the perilous state of rationality, independence, sovereignty and human autonomy in general. Yet, he is often cast as a technological determinist or a technophile promoting a peaceful, global village unified by technology.²⁰ Even though McLuhan may be resigned to accept the incipience of the electronic scale, there is also a frank attempt to limit its imposition on us. As he says, "Far from wishing to belittle the Gutenberg mechanical culture, it seems to me that we must now work very hard to retain its achieved values" (1962, 137). McLuhan is warning against the loss of print culture.

¹⁹Arguably, this type of planetary empathy is in an embryonic stage with global telecommunications, the internet, etc. According to McLuhan, this will further accelerate into a electronically induced telepathy between all persons – an extension of social and psychological consciousness.

²⁰Umberto Eco, for example, casts McLuhan as a determinist:

Marshall McLuhan . . . concludes that, when the mass media triumph, the Gutenbergian human being dies, and a new man is born, accustomed to perceive the world in another way. We don't know if this man will be better or worse, but we know he is new. Where the apocalypticists saw the end of the world, McLuhan sees the beginning of a new phase in history (1994, 136-7).

Eco makes the common error of neutralizing McLuhan's morality. His portrayal of McLuhan as detached, concluding that "the Gutenbergian human being dies" and is simply replaced by a "new man," misses the passion and trepidation at the base of his theory.

In both Ellul and McLuhan, there seems a small but quickly shrinking window of opportunity to do something to avoid or mitigate the onset of the technological system or the global village. George Grant argues that the window closed decades ago. Influenced by Heidegger, Grant regularly puts forward that "the planetary technical future" (1969, 139) is our "fate" and that there is nothing we can do about it.

Yet, at first, it may seem that Grant, like Ellul and McLuhan, holds out the prospect that by identifying the overwhelming power of technology we can somehow stave off its affects – maintaining critical thought and human autonomy in the process. But, what might seem like a call to arms is in fact a lamentation for the past. He clearly states that, ". . . those who would try to divert, to limit, or even simply to stand in fear before some of its [technology's] applications find themselves defenceless . . ." (1969, 139).

For example, in *Lament for a Nation*, Grant argues that his fellow Canadians were forgetting the things that made Canada a sovereign nation. At the time, this was taken as a rallying cry to rouse Canadian nationalism out from under the shadow of American influence. However, this was not Grant's intent. He explains the purpose of his most famous writing; "This meditation is limited to lamenting. It makes no practical proposal for our

survival as a nation. It argues that Canada's disappearance was a matter of necessity" (1989, 5). It was a moment to memorialize and remember what it is to live in Canada and be Canadian not a opportunity for activism. He explains, "To lament is to cry out at the death or dying of something loved. This lament mourns the end of Canada as a sovereign state . . . In a lament for a child's death, there is not only pain and regret, but also celebration of passed good . . . I have implied that the existence of a sovereign Canada served the good" (2-3). Grant recognized an important dimension of contemporary life – we replace the given, natural or the good with the made, conventional or values. For him, there is a real "good" to our existence as humans and citizens not only "values" that are socially and historically constructed. He explains, "'Good' has largely been replaced in our ethical discourse by the word 'value'" (1986, 41). In his usage, "good" means what any being is fitted for by nature and "value" means an artificially imposed standard. He wants us to realize that the conquest of nature via technology is not only about conquering vast spaces, disease, and scarcity through telecommunications, medicine, and globalization but also about the way we replace our given culture with an artificial one, with made to fit values.

He not only laments the loss of Canada as a nation but also our ability to question any loss of this kind. The lament highlights a gradual forgetting of the autochthonous or the things that anchor our existence. According to Grant, most of our civil institutions, politics and legislation are eroded at the core, the detritus of tradition, cut off from their roots. Since we focus on the visible or the surface of these institutions, we do not at first realize that they are empty shells. Only when we seek their foundations do we come to question their "good" and find them wanting.

This is the point of *Lament for a Nation*. The particular events of Grant's lament centred on the defeat of the Diefenbaker government in 1963. He felt that Diefenbaker's stance during the Defence Crisis of 1962 and 1963 to not accept American atomic warheads for the Bomarc missile was a defining moment in Canadian history. For Grant, this fleeting attempt at nationalism was important not because it established or girded a Canadian policy against an acceleration of the arms race but because it highlighted or brought clarity to the reality of Canada's existence. Diefenbaker's defeat made it clear that Canada's fate was not in Canadian hands. So, even though Grant had some praise for Diefenbaker, he recognized that it was his fate to be pushed aside as it was Canada's fate. Too much of Canada was already seeded

by American interests for a strong nationalist stance to take root. This is why it is wrong to characterize *Lament for Nation* as a call for the defence of Canada from American interests. Far from it, it is a true lament: a recognition of the disappearance of Canada, a celebration of a good, and an attempt to remember.

So all that can be done is a lament. But, there might be the tendency to ask, "What can we do about this?" or, "How can we solve this or that problem?" The most difficult aspect of Grant's thought is the idea that lamentation is tied to fate. In other words, there is no action that can be taken – we are not in control of fate. Overall, the passive approach of Ellul, McLuhan, and Grant seems insufficient: we should take to the streets, lobby for change, take a proactive approach against the affects of technology. But, to work under the guise that citizens or individual can re-order society into whatever form they see fit is to engage in the technological mind-set that they rail against. And so, according to the passive essentialists, in order to escape encompassing technology, they must do nothing. Otherwise, their actions will be sucked into the dynamo once more and turned out anew on the other side.

II Constructivists

i) Revolutionary

Constructivists claim that knowledge and reality are the products of social institutions and practices. In turn, technology is understood as a by-product of the imposed standards of the reigning establishment. That is to say, rather than understanding technology as an autonomous or independent force on society, we should see it as an outgrowth of society. For them, technology is a tool and has no "essence" or inner power directing it towards this or that end.

In *One Dimensional Man*, Herbert Marcuse argues that the "Establishment" not only controls social structures but also the way we think and understand the world. He starts his book with an account of "high industrial society" or technological reality infiltrating the recesses of the individual mind, obliterating the distinction between public opinion and private thought. In this age we have lost our ability to oppose the establishment – "In this process, the 'inner' dimension of the mind in which opposition to the status quo can take root is whittled down" (10). Hence, we are one-dimensional men in a one-dimensional society.

Marcuse asks us to "transcend" the logic of given institutions because they arrest and deny the possibility

of achieving the social goals of freedom and equality. He is quite clear that his project is not a transcendence or escape from technology itself and instead argues that the contemporary manifestation of technological society must be overthrown for a "*higher*" form. This is clear in his description of city living:

I take a walk in the country. Everything is as it should be: Nature at its best . . . nobody around, no radio, no smell of gasoline. Then the path turns and ends on the highway. I am back among the billboards, service centres, motels, and service stations. I was in a National Park, and I now know that this was not reality . . . (226).

The national park is juxtaposed by the pollution of the city in order to indicate the way in which nature is used to palliate the citizenry – an effort to distract from dreadful city life. As a whole, the meager goods provided by the established society serve to beguile the individual into a silent oppression without protest or opposition. Whether the limited freedom of driving a car or the few hours we have off from work, we are fooled into believing we have a good life. And, through his criticism, Marcuse seeks to reveal these things for what they are. He is not identifying the way in which the park transforms nature into standing-reserve. Far from it, he is calling for substantive parks, environmentally friendly automobiles, and just and meaningful work. For Marcuse, technology can deliver all of these things.

So, what may be surprising is that *One Dimensional Man* is not a criticism of technology or "anti-technology". It is not a tirade against technology but a call for better technology. As he explains, the problem is not so much that technology "de-mystifies" poetic or mysterious existence, which is Heidegger's concern, but instead that it brings into reality "a mutilation of the mind (and the body) inflicted upon the individuals by their society" (204). In other words, we first have been brainwashed into a certain way of understanding the world and then have instrumentalized that understanding through technology.

He is not calling for the overthrow of technological thought and action as such but the particular thought and action of the "Establishment." While criticism is stifled in contemporary society, Marcuse argues that a proper method or "critical theory" can divulge truths that have been hidden from view and thought. This is an important distinction to make because it shows that Heidegger's concern is fundamentally different than that of constructivists/critical theorists such as Marcuse. They use Heidegger's analysis but only in a limited sense. For example, like Heidegger, Marcuse accepts that the dangers created by technologies serve to hinder efforts to understand the causes of technology. As he puts it, "These causes remain unidentified, unexposed, unattacked

by the public because they recede before the all too obvious threat from without . . ." (ix). But, unlike Heidegger, he wants to replace these causes with different ones that reflect equitable social values.

Marcuse claims that "The transcendent project, in order to falsify the established totality, must demonstrate its own *higher* rationality . . ." (220). For Marcuse, "*higher*" refers to "improving the productive achievements of civilization," a transparency between the established totality and its institutions, and an offering of "a greater chance for the free development of human needs and faculties." This alternative is presented as an even greater or higher reflection of instrumentalized human values or humanism. The problem with the Establishment is that it is not technological enough! As he puts it, "Critical thought strives to define the irrational character of the established rationality . . . and to define the tendencies which cause this rationality to generate its own transformation." He continues, "The technological transformation is at the same time political transformation, but the political change would turn into qualitative social change only to the degree to which it would alter the direction of technical progress — that is, develop an new technology" (227). So, in no uncertain

terms, Marcuse is calling for the further technological transformation of an already technological society.

ii) Evolutionary

Emmanuel Mesthene's book is very similar to Marcuse's. This might seem strange because Mesthene can be understood as a defender of the very establishment that Marcuse wishes to overthrow. But, just as with *One Dimensional Man, Technological Change: Its Impact on Man and Society* is an unapologetic call for what I will now explain as a "technology of technology."

We first get this sense from Mesthene's worry that inquiries into technology have been either too narrow or too broad in their scope. He decides that to date "The term [technology] is operationally meaningless and unable to support fruitful inquiry" (23). What he wants is an effective and useful definition. But, we must ask of Mesthene, can we simply build or make a definition of technology that suits our purposes? He is asking us to create a technology of technology – to design our thinking about technology to fulfill technological ends. His "effective" definition of technology is "the organization of knowledge for the achievement of practical purposes." He explains "it is in this broader meaning that we can best see the extent and variety of

the effects of technology on our institutions and values" (25). His goal is to tailor his study to long-term policy needs of private management and public government or, as it is put, *effective knowledge* (vii).

A closer look at his work reveals that the actual standard for this organization of knowledge and objective understanding is technology itself. This is obvious in his discussion of the social impacts of technology. He writes of its negative consequences:

Most of the consequences of technology that are causing concern at the present time – the proliferation of weapons technology, smog, water pollution, radioactivity, urban sprawl, sonic booms, threats to the beauty and balance of nature, social and psychological tensions and unrest, job dislocations, and encroachments on individual privacy . . . are with us in large measure because it has not been anybody's explicit business to foresee and anticipate them (40).

According to Mesthene, these problems stem not from technology itself but when traditional values and institutions stand in the way of technological development. More specifically, Mesthene locates the negative impact of technology as an outgrowth of a traditional emphasis on the value of individual freedom. He explains that the "freedom of individual decision making is a value that we have cherished and that is built into the institutional fabric of our society. The negative effects of technology that we deplore are a

measure of what this traditional freedom is beginning to cost us" (40). In turn, we must transform our society to be less reflective of this "traditional freedom" or we must sacrifice our freedom for the good of technology.

Like Marcuse, he warns that it is a mistake to view technology as "an autonomous force that develops according to its own internal laws and lets its consequences fall where they may" (20). Yet, he also recognizes that technology fundamentally alters social "values, goals, and techniques." The question is, if technology gives us our social values, goals, and techniques, then by what standard outside of technology can technology develop?

Mesthene answers that politics serves to push society forward in progressive fashion; effectively changing the social order to match new opportunities given to us by new technologies. He explains that, "The strains that technology places on our values and belief, finally, are reflected in economic, political and ideological conflict . . . In the end, therefore, the problems that technology poses (and the opportunities it offers) will be resolved (and realized) in the political arena . . ." (viii). There is a real contradiction here. Even though he suggests that technology is not autonomous, he still presents technology as the driving force behind social change. In fact, he goes even farther

to argue that technological innovation must lead to social and political innovation if technological benefit is to be maximized and negative effects are to be kept to a minimum. The "negative" effects result from an attempt to hold back or lessen the widespread changes to values and beliefs that technology introduces. Our attempts to keep our traditions and customs intact from technological innovation only leads to economic, political and ideological conflict. So, if the political arena serves to objectively resolve this strain or conflict, how does it balance the strain between new and old values? By Mesthene's own argument it is also affected by technological innovation, it is not somehow immune, and therefore does not serve as an objective standard.

Nonetheless, Mesthene still argues that technology is a product of social institutions. But, in the example of educational technology, he seems to conclude just the opposite. He argues that educational institutions are too "primitive" to take full advantage of its [technology's] benefits (21). As he writes, " . . . curriculum contents remain virtually unmodified by the availability of new devices" (22). Which is it? Do social institutions develop technology or does the technology develop social institutions? Clearly, in this example, Mesthene points out the inability of schools to catch up to the technology — the American school system "seems ideally

designed to resist change" (22).²¹ As he concludes, "Technology may be the motor of all progress, but institutional sluggishness will most often turn out to be a very effective break" (22). He writes, "The problem — here, as well as in the application of educational technology — is how to organize society so as to free the possibility of choice and how to control our technology wisely in order to minimize its negative consequences" (24). But, as he has already said, the "negative consequences" which he identifies are the result of social institutions not adopting new technologies quickly enough, not keeping pace with the demands of technological innovation. By this logic the best way to control technology wisely is to allow it to direct the makeup of our society rather than our already existing traditions and institutions.

This becomes even clearer when we are introduced to a dichotomization of technology into "positive" and "negative" effects (26). Mesthene's explanation of this dichotomy as a dialectic of new opportunities and new problems is redolent of Ellul's "interrelation of technique": cars give us increased mobility but pollute the environment, medicine gives us health but leads to a

²¹This is quoted from Anthony G. Oettinger's study *Run, Computer, Run: The Mythology of Educational Innovation*, in the series "Harvard Studies in Technology and Society" (Cambridge: Harvard University Press, 1969).

population explosion, etc.. As Mesthene realizes, these problems beg for technological solutions and, one would imagine, that this would be followed by a brand new problem. He tells us we should neither focus on the bad or the good but realize both are intrinsic to technology. Yet, in next section, he again pleads that we should take advantage of "technological opportunities" while containing their dangers (34). Apparently, this dialectic is not at all intrinsic but, rather, mitigated if we approach these opportunities in the proper way. He worries that "actual or potential technology lies fallow" or not used to its full capacity because of problems or inefficient use of technology. Yet again, it is argued that these problems and inefficiencies stem from "backwards" looking social structures and values. And so he urges us to regauge existing social structures and "prevailing value systems" to be more attuned to opportunities provided by technology (36). At bottom, this is call for the complete transformation of society and citizen - "traditional institutions, attitudes, and approaches are by and large incapable of coming to grips with the new problems of our cities" (36). These factors stand in the way of such things as the resolution of urban tensions and the eradication of poverty. We need better public education, political information and

innovation to use technologies "to their full effectiveness" (38).

At this point, *Technological Change* starts to reveal itself as an alarming treatise for the technological evolution of society and human to allow for the full potential of technological opportunity. He quotes a government document from the late 1960s entitled *Toward a Social Report*:²² "No society in history has as yet made a coherent and unified effort to assess those factors that, for instance help or hinder individuals to . . . live a full and healthy life equal to his biological potential . . . The document *Toward a Social Report* is the first step in the effort . . ." (43). Now, even human "biological potential" is wrapped up in the same thinking as technological potential. Both are "lying fallow," waiting for the removal of traditional barriers to their full realization. Just as social attitudes keep our cities crowded, polluted and poor, they also elicit sickness and death. By this account, human pain and mortality are as much the products of backward thinking as are racism and crime — social ills to be eradicated. We now see the renewal of city and society as part of the same project of human renewal. The planet and everything on it must evolve via technology.

²²U.S. Department of Health, Education, and Welfare, *Toward a Social Report* (Washington, D.C.: U.S. Government Printing Office, 1969).

Toward this end, Mesthene calls for the implementation of "scientific decision making." This is done through the proliferation of scientific or knowledge agencies in government (i.e. NASA), the introduction of the professional scientist into the policy-making process (i.e. the increased use of experts), and the increased use of computerize information handling procedures (76-7). But, he balks at the idea that all political decisions will be taken from the individual. He merely suggests that technology points the way for a better society, the hard work remains to be done. The simple fact is, because the world is getting larger and more complex, computers are required to keep individuals free from the aggregate decisions that inevitably occur in a large governmental structure. In essence, technology empowers/allows the individual to express himself in a complicated world. Or, put differently, our freedom for individual expression and thinking has become contingent on technology.

III Essentialism and Constructivism Reconsidered

For all of the thinkers discussed in this chapter, the challenge technology poses is that it not only transforms everything into raw material but also denies criticism of that process. Yet, Feenberg points out that,

despite arguments about a lack of effective criticism, we nonetheless see continual protests against and questionings of technology. Feenberg writes, "The technological world we will inhabit in years to come will be a product of public activity to a great extent. How can one know in advance that all this debate and contestation will have no effect, positive or negative, on the fundamental problems identified by the critics of technology today?" He argues that Heidegger simply ignores the important role of activism and public protest because he is an essentialist that believes that technology has an "essence" not of human making. He dubs Heidegger and other essentialists as technological determinists who accept that technology is an autonomous essence that cannot be controlled or directed by humans (2000, 294).

But, there is a problem with this presentation. Feenberg holds to the idea that "essence" is static and unbending in its form and effect. Differently, Heidegger's understanding of essence stems back to Aristotle's description of essence as the movement of nature (see Met 1015a^{ff}). As mentioned in the last chapter, Heidegger explains that all things have an essence that is unconcealed and concealed, presencing and absencing, or living and dying. This is the movement or "movedness" of nature. Man may be able to participate in

this movedness but, according to Heidegger "man does not have control over unconcealment itself, in which at any given time the actual shows itself or withdraws" (1993, 323). So, in the case of technology, humans participate in the unconcealment of the essence of technology through the building of specific technologies but do not have any control over the unconcealment of technology itself. This is why, for Heidegger, the essence of technology is mysterious (1993, 311). Because it is mysterious, Heidegger has no interest in predicting or directing the future development of the technological because, as he famously concludes, "the essence of technology is by no means anything technological" (1993, 311).

But, Feenberg still attacks Heidegger for a lack of consideration for the actual design of devices (2000, 297, note 4). He expresses dismay over Heidegger's inability to differentiate between such seemingly diverse events as the Holocaust and agricultural techniques (2000, 297).²³ If indeed Heidegger sees no difference between the genocide of millions of people and the use of machines for the production of food, what hope is there for prescribing particular social and political goals?

²³Feenberg quotes Tom Rockmore's quotation of the already cited section of Heidegger's 1949 Bremen lecture: "Agriculture is now a motorized food industry - in essence the same thing as the manufacture of corpses in the gas chambers and extermination camps, the same thing as the blockading and starvation of nations, the same thing as the manufacture of hydrogen bombs."

His dismay shows a lack of appreciation for the full weight of Heidegger's indifference to the endless distinctions of the technological. Where Feenberg wants to locate "criteria for a reform of technology qua device," he criticizes Heidegger's analysis for being "developed at such a high level of abstraction" (2000, 297) that it fails to engage any practical considerations. This really misses the point. Heidegger is not interested in predicting or prescribing the development of specific technological devices and his presentation of the technological is neutral. For example, in "The Question Concerning Technology", he writes, "Agriculture is now the mechanized food industry. Air is now set upon to yield nitrogen, the earth to yield ore, ore to yield uranium, for example; uranium is set upon to yield atomic energy, which can be unleashed either for destructive or for peaceful purposes (1993, 320). Heidegger wants us to shift our focus from good or bad, peaceful or destructive technologies to the essence of technology itself.

Feenberg also criticizes Heidegger because he does not present a project of reform. His logic is that because essentialism does not allow for an emancipatory project it must be wrong. In truth, essentialism does not exclude Feenberg's want for "a radically different technological future" where dominate forms of

understanding are discredited and we can accelerate technology to a higher form – democratic, equitable and free. This vision of the future is not contradicted by essentialism. It may be that the future is all of these things, the opposite or something else we cannot imagine. Whatever the vision, the overarching tendency is still within the context of technology – we still believe that we can create whatever world we want, assign whatever human values onto existence whether democratic or authoritarian. According to Heidegger's analysis, because projects of technological reform such as Marcuse's, Mesthene's, and Feenberg's continue within the context of control, they are actually driving forward technological thinking and instrumentalization. They still lay out responses that strive to make man master rather than slave of his own inventions and, therefore, are themselves technological.

Consider that Feenberg's dichotomy is born out of similar debates within the social sciences. Essentialism vs. constructivism can be expressed in terms of "nature vs. nurture," "structure vs. agency," or "sex vs. gender". Feenberg and other constructivists choose nurture, agency, and gender over nature, structure, and sex. But, recently all of these distinctions have collapsed in on themselves. It is no longer a matter of deciding between natural predilection or artificial

environment but recognizing that the artificial environment can determine natural predilection. It is no longer a matter of deciding between given psychological structures or human agency but recognizing that the human agent can determine their own psychology. Likewise, it is not a matter of deciding between inherent sexuality or socially reinforced gender but recognizing that males and females can choose whether they are men or women. Of course, this is possible because of new technologies discovered in the twentieth century. Genetic engineering, psychopharmacology, and surgical sexual reassignment are just a few examples of our ability to replace the given with the made.

At first, this seems a vindication of the constructivist position. What before we understood as the autonomous essences of nature, society, and/or sexuality have been revealed as malleable or subject to human intervention. In other words, these technologies give us the ability to construct and direct the essence of almost anything. Through science we have gained a knowledge of these forces and, by consequence, have the ability determine the world in this or that way. But, *technology has no power over the essence of technology itself* – there are no technologies to intervene in or manipulate the essence of technology. And, as Heidegger tells us, the essence of technology remains mysterious and cannot

be controlled or contained through technological efforts. While it may seem that humans are perfectly in control of the planet and everything on it, we are not in control of technology. In turn, the more technology determines the course of nature, including human nature, the more the essentialist view of technology bears out.

Chapter 5: Aristotle's Answer

The idea that technology is getting "out of control" has gained a fairly widespread acceptance. Almost everyone has one concern or another about the way technology has changed the nature of the family, the community and even our sense of self. Even vehement supporters of technological advance have reservations about certain technologies. For example, a few year ago Mark Weiser, the then chief technologist at the Xerox Palo Alto Research Center, expressed some alarm at his company's work on "invisible thinking computers." He worried that it might lead to "dumber people" unable to think for themselves and, by consequence, unable to control technology. Weiser explained:

Early on we confronted the question of how to do this work most ethically. We concluded that it is vitally important for everyone, scientists and consumers alike, to remain alert to the ethical issues we may face as the world becomes filled with embedded, invisible computers . . . With a little vigilance and planning, we can reap the benefits of this new technology without compromising our intelligence, our opportunities or our freedom.

A similar example came from William Joy, co-founder of Sun Microsystems Inc.. On "self-replicating

nanotechnology", he matter-of-factly explained, "If you can let something loose that can make more copies of itself it is very difficult to recall. They are everywhere and make more of themselves. If attacked, they mutate and become immune . . . That creates the possibility of empowering individuals for extreme evil . . . Sun has always struggled with being an ethical innovator." Considering the depth of their knowledge and expertise, the comments of these men are serious and troubling. On the other hand, we might also be relieved to know that they are very much aware of the ethical dilemmas linked to their work and are speaking out. They are not stereotypical "mad scientists" or "Dr. Franksteins" that, only after the fact, realize the horror of their creations.

It need be asked, however, are they really in any position to make right and proper choices when it comes to regulating their inventions? While they do have expert knowledge of computer science and robotics, they likely do not have any knowledge of or experience with ethics beyond the narrow scope of required courses in bioethics or technoethics, if that. What is truly alarming about their statements is not the scenarios they portray but that both men are in a position to reassure us that they "remain alert to the ethical issues" or that their company is an "ethical innovator." It is absurd and

dangerous to assume that they have the capacity to regulate themselves.

It may even be that they are in the worst of positions. We must take seriously Robert Oppenheimer's infamous statement about experiment, "when you see something that is technically sweet, you go ahead and do it." This indicates that the very expertise that makes us first think that technologists are well suited to make good judgements is, in the end, what blinds them – their scientific curiosity may eventually force them to push ethical issues aside.

Where does our present incapacity or hesitancy to regulate technologies and technologists come from? From the previous chapters we can derive two possible answers: one from Heidegger and one from Aristotle. Suffice it to say, the constructivists, modern/Hobbesian and contemporary, have no answer because they think that we already regulate technology. For them, the negative repercussions of certain technological innovations, such as the ones mentioned above, are outgrowths of power structures or prevailing traditions. In turn, they call for a replacement of these structures and/or traditions with a new standard: new science, *higher* technology and *effective* knowledge.

For Heidegger, however, there is an answer: the revelation of the essence of technology has precedence over all other things including humans – the essence of all other things is concealed in the unconcealment of technology. This means that things such as ethics and politics are ultimately the products of technical thinking. Likewise, the virtues associated with public life must also be products. If this is the case, no wonder we have no capacity to regulate technology. Politics, law and virtue are unable to address technology because they are themselves technological.

Aristotle answers quite differently. He argues that the revelation of the products of techne or "production" is an underlying requirement for the practice of politics and, thusly, the fulfillment or the revealing of human essence. If this is so, ethics, politics and virtue should be able to subordinate, regulate, or direct technical production. However, our present hesitancy to do so, he might well argue, stems from something along the same lines as the "vulgar decline" of the statesmen of ancient Sparta or, as I have suggested, the decline of Athens during and after the Peloponnesian War. That is to say, technology has gotten out of control because we are suffering under a political leadership that concerns itself only with the "useful" and "profitable." Whether or not a new leadership practicing political judgement

can reverse this decline remains the question. And, this is the question this chapter addresses.

I The Revival of Phronesis

In other words, this fifth and final chapter is a description of Aristotle's answer to the question of technology. Heidegger's answer, as it was presented in chapter 3, might seem more valid because it is more recent. However, in the latter half of the twentieth century, there began an effort to revive and contemporize Aristotelian phronesis and, more generally, the practice of virtue ethics in answer to over-rationalization, instrumentalization, science, and technology.

In fact, the effort to revive phronesis has become an important theme of contemporary scholarship and philosophy. Bernstein identifies phronesis as the "underlying common vision" of some of the most important and/or influential thinkers of our time: Hans-Georg Gadamer, Jürgen Habermas, Richard Rorty, and Hannah Arendt (1983). Beiner similarly points to Gadamer, Habermas, and Arendt as "possible avenues of inquiry" to a contemporary understanding of phronesis (1983). Steinberger presents Michael Oakeshott and Arendt as subscribing to Aristotle's concept of political judgment (1993). And, Joseph Dunne argues that the work of John

Henry Newman, R.G. Collingwood, Gadamer, Habermas, and, once again, Arendt all can be related to Aristotle's concept of *phronesis* (1993). Charles Taylor (e.g. 1989) might also be included on this list of thinkers who have renewed interest in *phronesis*.

Arguably, Alasdair MacIntyre's celebrated *After Virtue* (1981) is responsible for the renewed interest in virtue ethics as a whole.¹ But, earlier and less known

¹Although it has come into common usage, the term "virtue ethics" carries an ambiguous meaning. The Greek *arete*, which is often translated as the English "virtue", is more accurately translated as "excellence." Rather than a moral code, *arete* applies to anything that is excellent, including excellent things that are non-human. As specifically related to human actions, excellence includes enduring qualities such as courage and temperance but also technical knowledge (*techne*) and good judgment (*phronesis*) – the former being part of Aristotle's category of "ethical" virtues and the latter part of his category of intellectual virtues. Yet, as Aristotle also makes clear, ethics are themselves conventional or relative; differing from one *polis* to the next. In turn, we do not come upon these excellences by nature but must be taught them. Therefore, the whole idea of "virtue ethics" seems somewhat contradictory.

Philip Cafaro explains that, in the parlance of moral philosophy, contemporary virtue ethics is a "eudaimonist" theory or one that is directed toward attainment of the good life. This, as opposed to the Kant's deontological theory or Mill's utilitarian theory. Generally, eudaimonist theorists are dissatisfied with the abstractness of Enlightenment moral concerns and ask the concrete question "How can I be a good person and live a good life?" This might include an account of particular ethical duties for everyday living that take into consideration the particular circumstances of one's life. So, where Kant's categorical imperative forbids the telling of lies, given the proper circumstances, virtue ethics would allow for the telling of "virtuous" lies. The question that many contemporary theorists ask is whether virtue ethics necessarily requires any universal moral code whatsoever. But, cleansed of all universals, virtue ethics falls into the abyss of relativism, implying nothing more than a system of values.

As mentioned earlier in this thesis, Aristotle, for one, takes a "relativist consideration" of ethics "only so far" (pp. 60). While he recognizes the importance of maintaining the particular conventions, traditions, and ethical standards of the community, this does not mean there is no place for the universal in the *polis*. As also suggested in Chapter 1, the balance between the particular and the universal is achieved through the practice of *phronesis*.

works such as Philippa Foot's essay "Virtues and Vices" (1979) and Iris Murdoch's *The Sovereignty of The Good* (1970) might also be viewed as foundational. More recent efforts by Kupperman (1991), Hursthouse (1999), and McKinnon (1999) continue along similar lines.

Unlike the essentialist thinkers reviewed in chapter 4 who argue from the unmitigated autonomy of technology, these "revivalists" generally argue that technology dominates individuals and society because, at some point, we gave ourselves and our institutions over to it. While they accept that technology tends to autonomy, advocates of phronesis suggest that this tendency is not overpowering or our fate. For them, it may be possible to take back or extricate ethics and politics from the boundaries of technology and also guide and direct its revealing by renewing the practice of phronesis and virtue in general.

However, as alluded to in my introduction, we should be wary of revived or updated versions of phronesis. The revivalists are not calling for a return to ancient Athenian or Aristotelian conceptions of philosophy or politics. Instead, they are trying to fit phronesis into a contemporary, democratic context. What, I ask, is lost in the translation?

In *The Human Condition* (1958), for example, Arendt argues that while "fabrication" through techne is a

necessary element of human life, only action or *praxis* guided by *phronesis* leads to human fulfillment. In a similar sense as Heidegger, she explains action in terms of unconcealment of essence. By acting and speaking in the public sphere, human beings reveal who they are and, by creating laws and institutions, communities come to reflect human values and concerns.

Unlike technical knowledge, action is unpredictable because of the plurality of conditions or circumstances that make up each individual life and community. Arendt suggests that the lack of certainty associated with public action has compelled philosophers to try to remedy the *vita activa* by way of fabrication. Her main concern, then, is to rescue public action or *phronesis* from the constraints of *techne*.

Importantly, though, her project is founded on an appeal to common sense. Her emphasis on plurality (1978, 187), description of "visiting" (1968, esp. 51 and 241), and proposal for "enlarged mentality" (1963 and 1982) influenced by Kant (see § 40 of Critique of Judgement) all suggest that Arendt's *phronesis* as public action is significantly different from Aristotle's *phronesis* as political judgement. If we recall the distinction between common household *phronesis* and uncommon political *phronesis*, we can understand "common sense" as a capacity to discern what is good and bad but not in and of itself

also a capacity to act upon that discernment. Without uncommon phronesis or, put differently, uncommon sense, the good decisions of the citizenry could not possibly be unconcealed, revealed or articulated in practice. The actions of political leadership (i.e. the creation of legislation and the commanding of armies) provide the context for the activity of all citizens. Without law, order and protection, there simply could be no city and no life of action. So, for Aristotle, the lower or common ends of the citizen are subsumed or guided by the higher or uncommon ends of the statesman. Of course, this does not preclude the possibility that this relationship could function in a democratic context. It does suggest, however, that in and of itself "common sense" is an insufficient basis for the return of phronesis or the aiming at and hitting of good ends.

Similar to Arendt, Hans-Georg Gadamer allies phronesis with thoughts and actions outside of the rigidity of technical knowledge. He describes phronesis as "a mode of knowledge that could no longer be based in any way on a final objectifiability in the sense of science . . . A knowledge within the concrete situation of experience" (1976, 201-2)² and able to " . . . grasp the 'circumstances' in their infinite variety" (1989,

²Cited in Caputo, Radical Hermeneutics, 109.

21). For Gadamer, phronesis is the means for opening new discourse and is an example of knowledge or "truth" obtained outside of scientific method.³

Rather than the dogmatic application of the expert's logic to political life, phronesis allows for the introduction of individual experience and a community based ethics and politics. That is to say, it gives a voice to the unique circumstances of a particular community or person. What are these circumstances? They are given traditions, institutions, laws, and customs. But, one might also say, they are personality, character, and even emotion. As Gadamer writes, "... human passions cannot be governed by the universal prescriptions of reason" (1989, 23). As with Arendt, Gadamer thinks that there is a strong element of unpredictability associated with phronesis. The problem, as it might be put, is how to run a city or political community with such uncertainty.

We already know that Hobbes' answer was to jettison passion from political decision making. However, his call for the methodical purging of the human passions or "circumstances" from judgement referred to political

³In disagreement with the positivists and behaviourlists, Gadamer argues that philosophy and the humanities in general can explicate truths without being scientific. He seeks an inclusive understanding of truth rather than the exclusive understanding perpetuated by natural science.

judgement not necessarily everyday judgements. Hobbes was well aware that the passions of the citizenry were an ongoing if not irremediable fact of life. The question was how to engage in scientific politics along with or alongside the constant presence of the "unique circumstances" of the citizenry. For Hobbes, this demanded a division between the private and public or ethics and politics.

The return of phronesis means a reconnection of these divided or separated spheres. But, it is not as though this means that the problem identified by Hobbes suddenly disappears. Because in a liberal democracy the citizenry engages in political decision-making more directly, their individual passions are not merely a potential problem to the proper running of the state but *the* problem. In response, Gadamer seems to think that every individual must be given the responsibility for self-regulation and self-control. Rather than the state trying to control the "excess of passion" in the citizenry, citizens should be empowered to control themselves. In other words, they should seek out individual remedies or therapies for their own irrationalities. But, if they are truly suffering from an "excess of passion", a citizen cannot also be expected to have enough good judgement to make right and proper choices regarding their behaviour.

This problem of "self-regulation" does not just apply to the citizenry but also to the scientist, technologist, or expert. In *Reason in the Age of Science*, Gadamer writes:

Now the expert is an indispensable figure in the technical mastery of processes. He has replaced the old-time craftsman. But this expert is also supposed to substitute for practical and political experience. That is the expectation the society places on him and which he, in the light of a sober and methodical self-appraisal and an honest heightening of awareness, cannot fulfill (72).

While Gadamer's concerns about technical expertise are familiar, his description of the "self-appraisal" and "awareness" of the expert is new. Is he saying that, in realizing his insufficiencies, the expert will voluntarily relinquish his power and control? If in fact the expert lacks "practical and political experience", he cannot also be expected to have the intelligence, insight, and constraint to abdicate his high position.

Aristotle is clear that the practice of *phronesis* is not directed toward the particular subsuming the universal but the expression or articulation of the particular in the broader context of the "universal prescriptions of reason." Of course, Gadamer does not deny that some "truth" can be wrought from universal reason and science only that some is not. Gadamer is not antirational or antiscience but instead is interested in

challenging the primary place of science in society (Kelly, 484). Yet, if our thinking is clouded by the dominance of science and technical expertise, as he claims, self-appraisal and self-regulation seem unlikely remedies.

What is more, we cannot look to Aristotle's instructions for "reproduction" or strong leadership, law, and regulation as the way to reinstill the bases of the good life in a *polis* gone astray or clouded by *techne* because they simply cannot fit into a liberal democratic context. Aristotle's call for the regulation of marriage partners or birth, for instance, is unacceptable and untenable in our day and age.⁴ In turn, neither Gadamer's nor Aristotle's *phronesis* can return without a radical transformation of political life.

Despite his association with the revival of virtue ethics, Alasdair MacIntyre may agree with this conclusion. He argues that communitarianism could be an answer to the contemporary erosion of ethical certainty and rejection of traditional institutions.⁵ Similar to Arendt and Gadamer, MacIntyre frames Aristotle's virtue ethics within an appeal to contemporary traditions and

⁴This said, there are clear restrictions on the age and sex of marriage partners.

⁵At basis, communitarianism promotes the idea that rights and values are a reflection of collective institutions and practices.

beliefs rather than suggesting we attempt a return to the glories and inequities of ancient Greece. His hope, like their hopes, is that a return to phronesis will breath life back into moral decision making – returning it to households, neighbourhoods, communities, and cities; that the concrete circumstances will displace overemphasis on universal procedures and the blank individual of John Rawl's veil of ignorance.⁶ A return to Aristotle's virtue ethics could allow the traditions of a community to serve as a source of ethical education and political activity for its members.

But, MacIntyre is quite unsure whether a return to virtue is possible. The introduction to *After Virtue* describes a complete breakdown and forgetting of ethical understanding and practice. MacIntyre argues that we cannot simply choose to act with practical wisdom because we are profoundly ignorant of what it takes to engage in its practice. Furthermore, there are prevailing barriers to its return, and, because of a long denial of the legitimacy of cultural and political traditions, we may be hard pressed to identify contemporary sources for virtue. He writes, "Any contemporary attempt to envisage each human life as a whole, as a unity, whose character

⁶In *Theory of Justice* (1971) Rawls argues that just decisions can only be made when everyone involved are equals. The veil of ignorance requires all individuals to set aside their particular character and knowledge.

provides the virtues with an adequate *telos* encounters two different kinds of obstacles, one social and one philosophical" (204).

Both of these barriers reflect contemporary liberal democracy. Socially, the partition of human life into disparate segments which each contain distinct values and expectations makes it very difficult to draw any ethical unity from everyday life. For example, while we are expected to be aggressive and impersonal in our jobs and careers, we have to be caring and open with our family. Philosophically, the predominant position that individual action and individuals themselves are not intrinsically part of a larger set or community also stultifies our ethical growth. He writes, "For a self separated from its roles in the Sartrean mode loses that arena of social relationships in which the Aristotelian virtues function if they function at all" (204). According to MacIntyre, the socially and philosophically atomistic individual cannot serve as a foundation for community wide ethics because the rights of the political community do not necessarily coincide with the rights of the individual. We can take it from MacIntyre that in order to re-engage virtue or to revive *phronesis* both the social and philosophical obstacle must be cleared away. But, such individualism is an intrinsic element of liberal democracy. As the title implies, the real message of

After Virtue may not be the return of virtue but its complete disappearance.

Nonetheless, the popularity of phronesis and virtue ethics has spread beyond political and moral philosophy. Bent Flyvbjerg even suggests that the whole of the social sciences should become "phronetic" (167). Phronesis also is a prevalent theme in communication studies (e.g. Farrell, 1993), educational theory (e.g. Carr and Kemmis, 1986) psychology, biomedical ethics (e.g. Kuczewski and Polansky, 2000) and numerous of other fields. The renewal of virtue has even caught the attention of those outside of the university. There has been quite a bit of talk about the importance of integrity, the development of character, and the general need for common sense.

Curiously, thinkers on the so-called "left" and "right", liberals and conservatives, postmodernists and traditionalists over a wide range of fields and schools commend phronesis because it seems to at once inject discourse and ambiguity into politics and ethics, emphasize the priority of the individual in society, highlight the importance of traditions and institutions, provide a legitimate basis for the actions of our leaders, and, of course, help us out from under the heavy weight of reason, logic, science and technology.

Unfortunately, the popularity of phronesis may be more due to its contemporary revision rather than its

strength as a classical virtue. What is worse, the depth and nuance of thinkers such as Arendt, Gadamer, and MacIntyre are not always replicated in the wider appropriation of phronesis and the problems discussed above are only exaggerated. First, there is often a tendency to pose phronesis as antirational, antiscience, and antitechnology. Because technology stems from the confines of rational thinking, many argue that the only way to get out from under its influence is to sidestep reason. Second, contemporary concerns for equality and freedom lead to a glossing over of some important elements of classical phronesis. Even though phronesis is welcomed, there has not been the same warm reception for the *phronimos*. Simply too much of an elitist, Aristotle's *phronimos* has been disconnected from political judgement and replaced with a homespun decision-maker that makes good decisions only for themselves without infringing upon or barring the rights of others to decide their own course or lifestyle.

My first criticism is that phronesis is portrayed as an antirational rampart against the "hyperrationality" of technology. The French post-structuralist philosopher, François Lyotard probably best exemplifies this version of phronesis. He appreciates the way phronesis is dependent upon the current contexts of cultural and historical conditions rather than on universal,

transcendent, or metaphysical conception of the good, the true, and the beautiful. In *The Postmodern Condition*, he argues that we must refine "our sensitivity to differences and reinforce our ability to tolerate the incommensurable" (1984, xxv). For Lyotard, phronesis "operates in an entirely *ad hoc* manner and without background knowledge" and equates it with speedy imagination, "the capacity to actualize the relevant data for solving a problem 'here and now', and to organize that data into an efficient strategy" (1984, 51), the ability to play the game with inventiveness, to play master strokes (1985, 61; also see Gallagher 1993, 300).⁷

This misapplication or misunderstanding of phronesis is summed up by Jacques Taminiaux's erroneous claim that phronesis "is not concerned with anything universal, but what pertains to the individual" (123-4).⁸ As we know from Chapter 1, phronesis is not so concerned with particulars that it wholly rejects universals. Despite Taminiaux's characterization, phronesis is entrenched in the rational part of the soul as opposed to the

⁷Agnes Heller similarly appropriates "practical wisdom" as a way to overcome the alienation of the everyday. Her work is a good example of an antiestablishment use of phronesis (Heller 1977 and Gardiner 2000).

⁸This is Taminiaux's interpretation of the way phronesis is described in Nichomachean Ethics 1141b15-16. But, the passage clearly indicates that phronesis is not *only* concerned with universals but also particulars. Taminiaux is quoted from Christopher Long's *The Ontological Reappropriation of Phronesis*, note 26.

irrational (NE 1139a1-15). While it does "cross over" to consider particulars, that consideration is made in the context of the universal or, as Aristotle puts it, that which cannot be otherwise. It is as though the authors who subscribe to this description of phronesis are so concerned about the dehumanizing consequences of instrumental rationality that they go to the other extreme and abandon rationality altogether. This preoccupation runs so deep that even when they present phronesis with recognition of its relationship to universals, there is still an overemphasis on its element of uncertainty and "inherent embeddedness in the world" over the "hegemony," "tyranny," and "perverted" influence of reason (Long).

Frankly, this use of phronesis is so unlike the original that it seems an entirely unique concept or idea. If it is not Aristotelian phronesis, then what is it? The capacity for spontaneity and know-how divorced from reason and an understanding of the good seems much more like the cleverness or *deinos* discussed in Chapter 1. Gadamer even calls cleverness the "debased version" of phronesis (1989, 323-4). The clever man may be able to overcome the status quo, contravene the establishment, and introduce original ways of acting, but it is hard to imagine such a thing as a community of cleverness. While a clever person may be able to make good judgements "in

some particular respect", they lack knowledge of "what sorts of thing conduce to the good life in general". Hence, cleverness may deliver an individual wealth or health but not happiness in an Aristotelian sense.

The second appropriation of *phronesis* is more legitimate. It is used to support the idea that everyone is or should become his or her own personal *phronimos*. For example, Richard Blaug argues that because there is an inherently political nature to the average citizen's everyday life (i.e. gender and culture) all of their interactions should be guided by a democratic rendition of Aristotle's *phronesis* (179). In his recent book *Justice and Judgment*, Alessandro Ferrara suggests that we should base decisions upon shared tastes and perceptions – the way artists resolve aesthetic controversies in a common work of art can serve as a model for political judgments (1999). Similarly, Beiner argues for a political community where all citizens are given the responsibility to make good political judgements (esp. 138-152).⁹

The starting point for these authors is the same as Gadamer's: we have handed over decision-making procedures to a range of specialists, experts and managers. This is especially true for Beiner who argues that with "the

⁹We might also look to Habermas who, according to Micahel Calvin McGees, is guilty of "socializing the *phronimos*."

power of human judgment . . . the common citizen can once again reappropriate the right of political responsibility and decision-making that had been monopolized by the experts" and, because "all human beings share a faculty of judgment" (1983, 2), we can renew a common sense of active citizenship.

However, we need to remember that there is a difference between the "human judgment" Beiner portrays, and the good judgment and good political judgment considered by Aristotle. Everyone, or almost everyone, has the capacity to judge, fewer have the capacity for good judgment, and a far fewer still have the capacity for good political judgment. It may be that humans have a natural capacity to judge. As Beiner writes, "Everyone is constantly making judgments, whether political, moral, aesthetic, or simply cognitive judgments (whether to describe something in this way or that)" (11).¹⁰ There is no disagreement that "Judging is what we do when we read politics in our morning newspaper, when we discuss politics during family or friendly conversation, and when we watch politics on television" (8). But it is certainly also the case that there are both good and bad judgements. What is more, "political judgment" is of a different sort than everyday opinions we have about what

¹⁰Kant's *Critique of Judgment*, for example, considered how and why humans are able to do this.

we read and what we see on television. So, even if humans are "judging animals," it simply does not follow that we are all persons of good judgement.

Furthermore, while some people may make good judgements about works of art, culture, and gender this does not also mean that they are able to make right and proper decisions regarding law, political institutions, and political life in general. Surely, political education and experience is a better source for good and just law, institutions, and government than reading the newspaper, sculpting, or painting. Rather than investigating the "human faculty for judgment" like Beiner and others, public life would be better served with an investigation of good political judgment.

II Political Judgement in a Technological Age

With this brief review of phronesis complete, it seems as though the return or revival of "Aristotle's answer" is in doubt. Yet, I am not arguing that it is impossible to practice political judgement or phronesis. Nor do I think that, in order to do so, we must radically transform political life. But I do think that the opportunity for its practice is rapidly closing. To explain why and how this is, I need to reconsider my

earlier analyses of Aristotle, Hobbes, and Heidegger in the context of contemporary technologies.

Overall, I yield to Heidegger's analysis of technology with the exception of one critical point. While he argues that technology has precedence over human beings, I side with Aristotle that it can, should and must be regulated. I do not mean "regulated" in a technological sense. Rather than trying to make technology more humane or more conducive to human values like Marcuse, Mesthene, and Feenberg, we must have the confidence to keep elements of our lives and communities unbound by technological thinking.

Virtue and Technology

As I have said, but not really explained, technology tends to autonomy. Aristotle is clear that technical knowledge is a virtue and that part of being human is needing its products. Because of this, our essence is intertwined with production or, as it was put in the introduction, humanity is irrevocably tied to technology. But this is only one part of being human. Remember Aristotle's straightforward observation about the products of techne from the *Politics*, " . . . it is for the sake of the soul that these other things are desirable, and should accordingly be desired by every man

of good sense – not the soul for the sake of them" (Pol. VII, i, 9). Again, there is no disagreement from Aristotle that human beings need the products of techne. Not only is it senseless to suffer from cold, hunger and pain but these deprivations bar us from attaining happiness. The virtue of techne is that it clears "the way" of these sorts of distraction or limitation and, therefore, participates in the achievement of higher human goods – the alleviation of basic bodily needs is "for the sake of" the higher things of the soul (good, beautiful, and noble things).

This means that technical innovation must be directed by the higher virtues such as those associated with family, community, education, politics and philosophy. Of course, these things may also require techne. As discussed in chapter 1, certain aspects of politics are technical in character. But, because it has a higher end, politics determines or subsumes the lower ends of production rather than production determining or subsuming the ends of politics.

Maintaining the proper place of production in this hierarchy is very important. For instance, Aristotle's discussion of virtue asserts that technical production has to be preceded by the ethical mastery or self-discipline of the desires. As he says, only a man a "good sense" should desire "these other things." Basic bodily

needs and appetites should be subordinated and directed toward good ends by virtues such as temperance, courage, and good judgement or phronesis. If the bodily needs and appetites that inspire technical production remain unvirtuous, undisciplined, defective or excessive, then the products of techne will not be in proportion with the right and proper needs of the citizenry. Indeed, a man of "bad sense" will necessarily desire products detrimental to himself and his community. However, even in such an instance, if his community has "good sense" on the whole, then good laws and other regulation will limit the unvirtuous desire of this man. That is to say, he will not be given the opportunity to articulate his bad sense into harmful products.

Arguably, only when the higher virtues subordinate techne do we need not worry about quarantining areas of our lives off from technology. That which is most essential to being human will remain unencumbered, undetermined or unbound by mere products because those products will be determined by those essential things. For example, research and development in medicine will be determined by our want for happiness rather than our happiness being determined by medicine. When this order is upset, and the lower takes precedence over the higher, technical production comes to dominate our lives and our thinking. And, at present, this order has indeed been

upset. Just as the judgement of the Athenians during the Peloponnesian war was clouded by the exhilaration of technical control, we may be in a similar position of great peril without fully grasping or realizing it. Our technicians, unrestrained by ethics, politics, and law, are creating products inspired by unvirtuous desire and that, although posed as beneficial, may ultimately be harmful to human beings and our communities.

Virtue and Technologies

How might an Aristotelian analysis of technology help us identify the technologies that may be harmful in this way? A rule we can use is that any of the technologies that circumvent Aristotle's hierarchy of virtues, ends, and goods requires guidance, regulation, and limitation. This might mean restrictions on use, legislation on research and development, or, in some cases, an outright ban. Three technologies that probably qualify for some such measures are psychopharmaceuticals, thinking computers, and genetically engineered organisms.

Psychopharmaceuticals such as Prozac circumvent the natural growth and formation of good people, ethical adults, and responsible citizens. Peter Kramer in his important book *Listening to Prozac*, observes the

tremendous effect of the best-selling drug on personality:

It is all very well for drugs to do small things: to induce sleep, to allay anxiety, to ameliorate a well-recognized syndrome. But for a drug's effect to be so global-- to extend to social popularity, business acumen, self-image, energy, flexibility, sexual appeal-- touches too closely on fantasies about medication for the mind (13).

He worries that the "global" affect of Prozac might come to replace traditional ways of personal development and understanding such as ethics, family, community, education, and politics. We get this sense from his observations about the general lack of "self-knowledge" and "self-understanding" patients gain from the treatment:

. . . the medication had done what she would have wished to accomplish with psychotherapy: it had facilitated an improvement in the family dynamics. The problem, for the social worker, was that this change came about without any increased self-knowledge on Julia's part . . . She believed that medication-induced change, unaccompanied by growth in self-understanding, was inferior to what psychotherapy has to offer (32).

By this account, Prozac clearly places the lower end of good action above the higher end of self-knowledge. Instead of coming from Julia herself, the drug provides an external source for her right and proper action or ethical behaviour. While those who design

psychopharmaceuticals must have a technical understanding of why and/or how things such as anxiety must be disciplined or mastered, she does not. The pill regulates her emotions and fears. While her actions may be good and expedient, they do not reflect her character, upbringing, community or understanding of the good but merely the design of a drug. Consequently, she will not learn or know what it takes to act properly and yet she will appear to act in a good way. To put it into Aristotelian terms, because she has an external efficient cause, her ethical action is not a practice but a product or artifice.

Prozac and other psychopharmaceuticals create a barrier between action and self-understanding. In turn, the very idea of ethical education or moral growth is brought into question. First, as just mentioned, we can no longer look to good action as an indication of good judgement. In turn, students imitating these actions will be habituating themselves to a standard imposed by a drug rather than an ethical example developed by a man. Furthermore, if a citizen fails to develop good judgement, he will be unable to engage in public discourse about the creation of good laws and institutions that direct others to similar good action. Again, while they may seem to know how and when to act in a right and proper way, their action does not stem from

self-understanding but from an external maker. Finally, bear in mind that the *phronimos* distinguishes or reveals himself to his community by the way he responds to the challenges of city living. Julia no longer has to face these sorts of challenge. Her opportunity to develop "self-understanding" is taken away by the power of the drug. So, while there is little doubt that psychopharmaceuticals successfully clear away anxiety and depression, allowing some individuals to live fuller lives, they also replace an important stage of ethical and political development.

Of course, this is less of a problem for adults who are struck down by biochemical imbalances or other such disorders. But, for a child to take similar behaviour modifying drugs at an early age means that they will fail to learn to master their emotions, gain self-discipline, and self-understanding. Although non-psychotropic, Ritalin is still designed to influence a child's biochemistry; allowing them to concentrate in the classroom. Compared to the virtually instantaneous results achieved by this drug, traditional methods of education seem inefficient. Yet, is not the point of education to teach a child things such as concentration, patience and moderation? To simply impose these attributes on a child in pill form is, to say the least, contradictory to these ends.

Ritalin circumvents ethical education by imposing an external efficient cause to regulate the body, mind and the soul rather than allowing the child to develop an internal efficient cause. Admittedly, this type of circumvention may be absolutely necessary in some cases. But, the ever-widening use of Ritalin forebodes some serious ethical and political difficulties for future generations.

I think this problem of circumvention applies to many new drugs. The development of other non-psychotropic drugs like Viagra suggests that such things as sexual arousal can be regulated by external means. Anti-anxiety drugs such as Benzodiazepines allow for the external regulation of shyness or paranoia providing courage to function in society. Newly developed Nootropic drugs provide an external enhancement for learning acquisition. The cardinal virtues of temperance, courage, and intelligence have become or are becoming products and not practices. Again, all of this is not to say that we should ban psychopharmaceuticals, similar drugs, or the research and development of new and better drugs. I am saying that their widespread use has less than obvious ethical and political consequences.

The problem of circumvention is also fairly clear in the case of thinking computers. For Aristotle, when the intellect is cut off from desire and city living,

thinking is removed from human concerns about the good life. Because artificial intelligence (AI) is without desire and does not reflect a life lived in the city, its thinking remains unvirtuous. AI circumvents the earlier stages of the growth of rational capacity because it can have no experience satisfying the appetites, seeking that which is pleasurable and avoiding that which is painful, or habituating its actions to virtue by following the example of the *phronimos*. It creates a barrier between action and thinking. For this reason, AI is calculation based on brute force or maybe cleverness but not human intelligence.

People like Mark Weiser and William Joy worry about "compromising our intelligence, our opportunities or our freedom" and "empowering individuals for extreme evil" because they recognize that, despite its potential benefits, AI also has a great destructive potential. In a way, thinking computers are like citizens of "bad sense" that might produce harmful products in the city because they lack good judgement. Or, perhaps, they are more like Aristotle's *deinos* who knows how to achieve ends but not good ones. In either case, we must recognize that human beings have to provide ethical guidance for these machines because the machines cannot themselves be ethical.

Of the three technologies mentioned above, genetic engineering is the most obvious example of the problem of circumvention. Consider the slogan of the global agricultural technology giant, Archer Daniels Midland (ADM): "THE NATURE OF WHAT'S TO COME." Their business is to use nature to find solutions for poverty, hunger, disease and human suffering in general. As they say, "we use technology to unlock the potential of nature. In doing so, we are true to our mission – and our responsibility – to improve the quality of life for everyone on our planet." There is an important distinction to be made between this effort and the modern project for the "conquest of nature." Whereas modern thinkers worked over nature so that it surrendered products for our protection, satisfaction and commodious living, companies such as ADM pose themselves as working *with* nature – their function is one and the same as nature's. Where before nature was locked up, sealed, or closed, ADM says it is able to unlock it. They are the "nature" of what is to come – they bring into being solutions for human problems in the same sense as nature unconceals. In other words, the products they create, such as genetically modified plants, are not essentially different from the natural but simply include technological intervention. In this case, production as bringing into being that which could not have existed

otherwise is interfused with nature as that which cannot be otherwise. In the most fundamental way, genetic engineering is technology circumventing natural growth or techne replacing *physis*. Unlike earlier products of techne, genetic engineering forever circumvents the natural characteristics or essence of material so that nature cannot "shine through" the imposition of the craftsman. Conceivably, all that "is to come" into being will be determined by radical productive technology. No plant, animal, human being or being of any sort will be brought into existence without this kind of assistance or working *with*. This is a case of the lower ends of production subsuming the ends of all other things.

The replacement of our bodies, emotions, thoughts, and nature itself with artifice is what Leon Kass means when he writes about dehumanization. However, "dehumanization" is a somewhat misleading term. In truth, technology empowers the most common of human concerns to the highest of positions. Technologies such as Prozac, "self-replicating nanotechnology", and genetically modified plants all reflect the same basic concern that also leads us to develop stem cell therapies and cloning: we want to combat viruses and bacteria, cure disease and save lives, end human suffering and death itself. The lesson from Aristotle is that the "common concerns" shared by every human being have to be tempered by deeper,

higher and wider concerns. This means that individuals cannot judge from "common sense" what technologies they want because this means that they will always choose survival, increased pleasure, or decreased pain without regard for some so-called greater good, beautiful, or noble thing.

All of this said, Aristotle's discussion of lower and higher goods and virtues may seem foreign if not unconvincing. Really, is not life just bodily needs, appetites and desires? We have become convinced that humans are made up of nothing more than the waxing and waning of "passions". Neuroscientists tell us that we are composed of a complex network of electrical impulses, transmitters, receptors, and rising and falling brain chemicals. By providing physical explanations for the vagaries of human action and thought, neuroscience seems to prove that we are nothing but "matter in motion" just as Hobbes theorized. If this is the case, the technical knowledge associated with "lower ends" is, in fact, the only kind of knowledge we can have. As Hobbes argues, all we really know is survival, pleasure and pain. In turn, our bodies and our minds are nothing more than "human material" and our comfortable existence is entirely contingent upon production.

If all we are is matter or material then it is our most basic right to have access to any product that contributes to our further survival, increased pleasure and decreased pain. We simply need not worry about good, beautiful, and noble things. But if this is all that life is, then it also means that the potential for survival, pleasure and pain are in everything and everywhere. Our cities must be designed to maximize safety and security, our time is to be spent seeking wealth, entertainment and bodily satisfaction, bad habits are to be understood as syndromes and disorders, and a lack of restraint is to be blamed on imbalance and disease. Reconsider the Nussbaum quote from chapter 1 about the curative power of techne.¹¹ We "turn ourselves over to a new art" not just when our very survival is at stake but at any ordinary inconvenience or possibility of bodily satisfaction. Yes, without some "cure" or without production, human life would be nasty, brutish and short. But, with too much, human life loses all connection to nature and essence.

¹¹Quoted again for the sake of convenience:

In a time of deep need, feeling that our very survival is at stake, we may turn ourselves over to a new art. Sometimes this art will simply do what we ask of it, providing efficient instrumental means to the ends that we already have. Sometimes, however . . . the art will so deeply transform ways of life that we will feel that it has created a new type of creature. If, then, we contemplate curing our current ethical diseases by a new art, we must imagine, as well, and with the utmost care, the life that we will live with this new art and the aims and ends that go with it. For we may not want a radical solution, if its cost will be to be no longer human. This would hardly count as saving our lives (1986, 106).

The Twenty-First Century Phronimos

Our society is marked by a reversal of Aristotle's hierarchy – we live our lives "for the sake" of products not the other way around.¹² It is not surprising that we give companies such as ADM such "responsibility" and leave them unencumbered by ethical, political, and legal restraints. For us, good judgement has been replaced by technical knowledge as a "directing faculty". This is the reason why techne appears as technology in the full Heideggerian sense: technology is not only unconcealed in the proliferation of technologies, but also in the transformation of the planet and everything on it.

As has been argued, the rise of technology is precipitated by the discreditation of phronesis. Importantly, this discreditation did not just have an affect on "the way" human beings understand the world and act in it but also upon our laws and institutions. Even if we were now to attempt to reassert the place of

¹²On the most obvious level, this reversal is articulated by the fact we are motivated by material gain rather than the goods of the soul. In an environment characterized by excesses, there is little opportunity for individuals to learn and practice virtues such as temperance. More generally, the often noted decline of civic responsibility, public service, and political awareness stems from the long-standing failure to educate or pass down these higher "human goods". Any discussion of the public education of virtue or politically aware populous must be preceded by virtuous political leadership.

ethics, family, community, education, and politics in the face of technology, the potential ways for this reassertion are so wrapped up in technical thinking and the facilitation of production that they cannot possibly assist us. Once again, politics has been relegated to either administering to further technological advances or streamlining the integration of new technologies into society. In the end, Aristotle's answer or Aristotelian analysis of technology may be untenable.

But, I argue that just because technology has this tendency does not mean we must also have to accept it is our "fate". In fact, many technologies may now be announcing or revealing in undisguised form the essence of technology. In other words, by understanding the affect of these particular technologies, we can come to grasp the meaning of technology as a whole. For the time being, then, there is still the opportunity to think and act outside of technology.

But, what also of Heidegger's conclusion that there is no human project for the destruction of or escape from technology? Arguably, for us, the link between generations has been broken, we have no *phronimos*, no repository for the good life to restore or return us to the right and proper way to be. Even if we wanted to restore the virtues, we must relearn all that has been forgotten with no teacher or exemplar to point us in the

right direction. We are like archeologists trying to piece together a lost civilization from shattered artifacts. As Heidegger says, the enframing character of technology has inculcated our very thinking, human life is a product or standing-reserve. At best, we must wait a thousand years for a new exemplar that teaches us an entirely new way of being. The existence we had is forever lost.

While technology may enframe, it is simply not true that there is no tradition, no teacher, and no *phronimos* for us to turn to. While there has been a decline in the practice of phronesis, if we look in the right places and to the right people, it can be found. I think this is why Berlin calls political judgement "a particular gift" (1996, 27) and "the special understanding of public life ... which successful statesmen have..." (1996, 28). Where others may excel in different areas, there are also those that have a natural talent for politics. And, as Berlin straightforwardly explains, "Those who lack this, whatever other qualities they may possess, no matter how clever, learned, imaginative, kind, noble, attractive, gifted in other ways they may be, are correctly regarded as politically inept..." (1996, 28). It may be that there a people who can meet challenges of our time in similar manner to Aristotle's *phronimos*. If they have a knack for understanding and articulating human goods, if they have

the "particular gift" of phronesis, they could also create laws and institutions that will then instill or, more precisely, re-instill this understanding into the populace as a whole.

Even if Heidegger is right in concluding that our institutions and laws are enframed by technology, there is still a chance for the coming into being of this gift. Aristotle is clear that along with habituation, education, and reason, virtue also requires a certain natural endowment. As things stand, nature may still imbue a human being with the bases for the practice of phronesis or, in Heideggerian terms, authentic existence. The question is whether we are able to clear "the way" for his or her development into the *phronimos*. That is to say, can we nurture and educate children, men and women, to become the type of statesman that Berlin describes.

Admittedly, the practice of phronesis is not an easy fit with a liberal democratic political community.¹³ I think part of the reason why the "revivalists" argue otherwise is that they glean their conception of phronesis from the *Ethics* much more than from the *Politics*. The result is a focus on the more prevalent faculty of good judgement rather than the much rarer

¹³Ruderman notes that the "key difference between the many advocates of political judgement and Aristotle is that they, but not he, insist that all citizens exercise it" (412).

capacity for good political judgement.¹⁴ At basis, the success of Aristotle's "political *phronimos*" pivots on his being recognized as superior to all other citizens and, obviously, the idea of natural superiority or inferiority is an anathema to democratic politics (Newell, 1991).¹⁵ Nonetheless, *phronesis* is not merely about knowing good ends but also the ability to ascertain those ends. It is described as an uncommon virtue, a "supreme directing faculty," found only in a few members of any political community (Newell 1991, 192). The Arendt/Gadamer/Beiner "common sense" approach to political judgment falls short. Not common at all, a person of political judgment is rare indeed. So, rather than a revival of *phronesis* in the form a widespread public movement, more likely is a return of the *phronimos* as statesman.

Phronesis can be revived and abate dehumanization in a technological age but it cannot be conceived of as a private remedy or means of self-regulation. If, as Aristotle writes, *phronesis* is the capacity to act in

¹⁴ As discussed in chapter 1, the concerns of these two are quite different. The revivalists go even farther to portray *phronesis* as a common trait or virtue of all humans where in *Ethics* Aristotle is fairly clear that it is not.

¹⁵ For an excellent discussion of Aristotle's view of democracy see Barry S. Strauss, "On Aristotle's Critique of Athenian Democracy." In *Essays on the Foundation of Aristotelian Political Science*. Edited by Carnes Lord and David K. O'Connor. Berkeley: University of Berkeley Press, 1991.

regard to human goods, we must accept that some citizens are better equipped and positioned than others to both envision and achieve good ends. And, really, this position does not have to contradict the tenets of liberal democracy. Berlin's discussion of political judgement is not framed in terms of natural superiority or elitism. He simply calls political judgement "a particular gift." Framed in this way, the idea may be somewhat acceptable to a liberal democratic sensibility. We still accept, although perhaps grudgingly, that people are born with athletic gifts, beauty, personality, and musical talent. And, it is hoped that our society accommodates and facilitates all of its members to fulfill their dreams and goals. Everyone needs good parents, education, laws and other institutions to guide us to good ends and away from bad ones.

For this very reason, we need legislators and political leaders that can regulate technologies. We should practice a political judgement that restrains technology from dehumanization and ensures that it contributes properly to human flourishing. Only those who understand what is good for their community as well as what is good for all communities, who can balance the particular with the universal, will be able to subordinate production to higher virtues.

I put forward that our circumstance is not very different from that of the ancient Greeks. For the time being, we are as human as they were. Just as it was possible for them to be distracted by the immediate satisfaction and happiness that technical knowledge brings, we are distracted by the infinite possibilities of technology. The very idea of ending the limitations of hunger, poverty, suffering, sickness and death is not something that can or should be easily ignored. But, this also highlights how our circumstance differs in an important way. Because we have no limits on our making, everything, the bad or the good, the base or the noble, destruction or greatness, has become possible. All chimera, whether dreams or nightmares, are accessible in a world of endless production. As Heidegger realized, when all limitations are eliminated, we have no standard to choose happiness over depression or intelligence over stupidity. The full potential of technology will be realized when all is accessible – all emotions, actions and thoughts and even things "beyond our hopes" – without ethical, legal, political, or natural limitations. We should not forget Aristotle's radical realization that when control is "extended to all" every tradition including the limitation that prohibits cannibalism must be put aside. We should make the connection between unrestrained techne, technology and dehumanization.

Conclusion

The many accounts of a contemporary role for phronesis may help explain the importance of maintaining the particulars of culture and community in a technological age. However, I do not think that they successfully address the most fundamental problems with our relationship to techne, science and technology. In this conclusion, I will try to address these problems and offer some response.

First, because technology is part of us or because its essence is intertwined with our own, it is difficult to criticize or limit it.¹ The questions we have about technologies such as stem cell therapies and other genetic engineering, psychopharmaceuticals, and artificial intelligence only highlight this problem. We ask, 'Does the promise of curing disease and the alleviation of suffering mitigate the possible threat of dehumanization?' The first part of this question is very practical, about life and death, pleasure and pain. It leads us to the advice of doctors, scientists, to the

¹George Grant explains:

"All descriptions or definitions of technique which place it outside ourselves hide from us what it is. This applies to the simplest accounts which describe technological advance as new machines and inventions as well as to the more sophisticated which include within their understanding the whole hierarchy of interdependent organizations and their methods" (1969, 137).

latest and most novel treatments. Yet, the second part of this question is philosophical in that it is about the way we live and, ultimately, what it means to be human. This means that our question about technology cannot be fully answered through an accounting of the many manifestations and/or demonstrations of the technological. If we accept this, we will also realize that scientists and technologists only have a mastery or knowledge of particular manifestations or unconcealments of technology. In order truly to fully grasp technology we need to take a different approach. This approach would probe to the core of our ways of living and thinking. This is why this thesis was not directed to the obvious dangers of new technological discoveries: genetic monsters, homicidal intelligent machines, or a polluted planet. By simply focusing on the "bad" or "negative" or, for that matter, the "good" or "positive" consequences of specific technologies, the deeper character of technology would have been overlooked. This does not mean that examples of the technological cannot be considered. As I have already said and shown, examples illustrate the connection between everyday uses of technologies and a broader discussion of the essence of technology.

Second, because everywhere we are besieged by the problems of the technological, we tend to take these as the problem of technology. That is to say, technical

problems overshadow the fundamental problem of technology. Both Aristotle and Heidegger might agree that the problem is that in a technological society we are dispossessed from our capacity to deliberate about and act toward a fulfillment of human essence. This is the way technology dehumanizes. It bars the practice good political judgement as well as an understanding of the purpose of our communities, human existence, existence as a whole and the problem of technology itself.

Third, we should not distinguish our thinking about technology from earlier generations or ages by claiming that our situation is entirely unique, that the questions we ask are foreign to our ancestors. I think I have shown that both the questions raised by and about contemporary technology are the same in many ways to questions raised by and about ancient *techne*. Sophocles illustrates how the ancient Greeks realized that their capacity to make could get out of control or "beyond hope" as we now realize. Thucydides' account of the Peloponessian War makes clear that, despite their comparatively primitive tools, the Athenians got swept away by the prospect of a complete control of the world as they knew it in the same way we seem to be. Plato, in his discussion of kingly *techne* in *Statesman*, highlights the benefits and difficulties of technical rule of the *polis* just as we now weigh the consequences of our seemingly unlimited

power to control this planet and everything on it. He also points to the possibility that in our drive to control our fates, the way we live and die, we may be transformed into something other than human. Certainly, the technologies discussed in the last chapter indicate that we are being transformed by our efforts to overcome emotional, intellectual, and physical limitations.

Fourth, if our *ethos* is technology then our institutions can only reproduce technology. Therefore, we cannot turn to common sense, populism, or everyday thinking to think and act outside of its bounds. Likewise, parenting, public and post-secondary education, the places we might learn how think and act differently, are equally wrapped up in technology and, for the same reason, even existing laws may not suffice. For us, recovery of "human goods" is difficult. Yet, I think I have also shown that we can look to the origins of our civilization to find ways to guide technology toward human goods. Obviously, we cannot expect the pantheon of ancient Greek Gods to rain down thunderbolts and stir up tidal waves to knock back the hubris of our making. But, divine justice might still be a given standard for our living and thinking that remains outside of technical control. Even though they are increasingly shaped by technology, we could turn to religion and spirituality, to find a moral compass, solace or respite from the

demands of technology. We can also recognize that all civilizations, no matter how great or powerful, will collapse under the weight of constant innovation. At the very least, this tell us to slow down the pace of technological advance, take caution with research and development, and consider whether it is necessary to sacrifice what we have been given with what we will make. We should also remember that legislation ultimately takes precedence over the city and its citizenry. Therefore, even if our technologists may have answers and cures for the worst of human problems and suffering, we must make sure they still abide by our established laws and constitutions.

Religion, tradition, and legislation are all possible avenues for mitigating, limiting and guiding technology. But, I have argued that the practice of politics is the preeminent way for us to guide technology toward human goods and human flourishing. If technology has come to dominate every aspect of our lives, as many now seem to agree, it is no simple matter to think and act outside of its boundaries. Yes, there are places on the planet where traditions are still practiced and people think about ideas undetermined by technological enframing. But, just as surely, they are likely in no position to respond to our crisis. As much as we might admire the uniqueness and fortitude of those outside of

the technological society, they cannot be turned to for answers. Rather than the grass roots, bottom up approach, and rather than seeking unfettered or untainted ground, we need look to our political leadership to stop faltering before the promises of technology, deliberate about what is good for human beings, and, without deviance or corruption, direct our communities toward those goods. I do not know whether this is going to happen. It may be that there is no twenty-first century *phronimos*. But, to conclude that good political judgement is unnecessary or impossible in a technological age only participates in or is a symptom of our dehumanization.

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