Platonic Craft and Medical Ethics

by

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Abstract

*Platonic Craft and Medical Ethics* examines the Platonic theory of craft and shows its application to different ethical problems in medicine, both ancient and modern. I begin by elucidating the Platonic use of the term “craft” or “*technē*”, using especially the paradigmatic craft of medicine, and explicate a number of important principles inherent in his use of the term. I then show how Plato’s framework of crafts can be applied to two ancient debates. First, I show how Plato’s understanding of crafts is used in discussing the definition of medicine, and how he deals with the issue of “bivalence”, that medicine seems to be capable of generating disease as well as curing it. I follow this discussion into Aristotle, who, though he has a different interpretation of bivalence, has a solution in many ways similar to Plato’s. Second, I discuss the relevance of knowledge to persuasion and freedom. Rhetors like Gorgias challenge the traditional connections of persuasion to freedom and force to slavery by characterizing persuasion as a type of force. Plato addresses this by dividing persuasion between sorcerous and didactic persuasion, and sets knowledge as the new criterion for freedom. Finally, I discuss three modern issues in medical ethics using a Platonic understanding of crafts: paternalism, conclusions in meta-analyses and therapeutic misconceptions in research ethics. In
discussing paternalism, I argue that tools with multiple excellences, like the body, should not be evaluated independently of the uses to which the patient intends to put them. In discussing meta-analyses, I show how the division of crafts into goal-oriented and causal parts in the *Phaedrus* exposes the confusion inherent in saying that practical conclusions can follow directly from statistical results. Finally, I argue that authors like Franklin G. Miller and Howard Brody fail to recognise the hierarchical relationship between medical research and medicine when they argue that medical research ethics should be autonomous from medical ethics *per se*. 
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1 Purpose

Medicine is referred to 377 times in the Platonic corpus, more even than politics (219 references) or rhetoric (290 references), and is mentioned in every single Platonic dialogue except for the *Hippias Major* and the *Menexenus*. Despite Plato’s nearly ubiquitous use of medicine, few have directly addressed what Plato had to say about it. The origins of this dissertation lay in examining those 377 references to discover what it was that Plato had to say about medicine. What I found was that behind Plato’s use of medicine is a rich theory not only of medicine, but of all the crafts. Plato’s understanding of medicine and his understanding of crafts were so closely intertwined that to understand one was to understand the other. Medicine, like all crafts, is a hybrid of knowledge, power and practical reason, and it is often by using the paradigmatic craft of medicine that Plato examines the relationships between the three. In this dissertation, I focus on those relationships, as well as the implications of these relationships for modern discussions in medical ethics.

Much has been written about Plato and the crafts. Gregory Vlastos, Terry Penner, Terrence Irwin and David Roochnik all provide extensive discussion of what is called the “craft analogy”. According to the craft analogy, virtue either is a craft or is so analogous to a craft that it functions in largely the same way. That this would be the focus of scholarship is not surprising. Evaluating the strengths and weaknesses of the craft analogy is one of the main uses to which Plato puts his own discussion of crafts in his dialogues, and it is a question addressed in almost exactly those terms by Aristotle in *Nicomachean Ethics* VI.

However, this dissertation takes quite a different approach. Crafts are important not only because of their analogy to virtue, but in their own right. Understanding the crafts, their nature, their purpose and their relationships to each other and to other types of knowledge is important to properly understanding professional ethics such as those of medicine, law and even teaching. I focus especially on medicine for two reasons. First,

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1 In order to generate this number, I searched for the roots, “
it is perhaps the profession whose ethics are the most controversial and many of those controversial discussions centre on debates about the proper relationship between medicine, science and politics. Second, it is the craft that Plato uses as his paradigmatic case of a craft.

What I discovered from my examination of Plato’s understanding of crafts and medicine is that crafts play a central role in Plato’s understanding of human action. The crafts are the point of intersection of knowledge and power. With a craft, knowing that turns into knowing how, by the understanding of causal relationships and possible results. The ways in which knowledge of facts transforms itself into power is a central concern of Plato’s, and serves as part of his claim that knowledge is the source of freedom in texts such as the Laws. Plato undifferentiably treats crafts both as a type of knowledge and as a type of power and many of the results of his arguments come from his treating crafts as both simultaneously. Second, crafts are the point of intersection of science and practical reason. They are where knowing how meets knowing when. Understanding causal relationships provides the power to produce certain results, but one still needs the understanding of when one should produce them. Given that crafts serve as a nexus for knowing that, knowing how and knowing when, it is no surprise that discussion of crafts serves a central role in Plato’s discussions of the relationships between knowledge, power and virtue.

An important component of Plato’s understanding of crafts is not only their hybrid nature, but also the relationship between the various crafts. Plato sees that crafts were not autonomous bodies of knowledge that could be understood independently from one another. Instead, crafts are connected in a hierarchical relationship. There would be no flute-makers if there were no flautists and there would be no scalpel-making if there was no medicine. Understanding the nature of a craft requires not only being able to recognize the product and how the craft produces it, but the uses to which the product will be put, something that comes from another craft. This hierarchical relationship guides Plato’s understanding of authority in the crafts and is directly applicable to

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2 This is not intended to mirror Gilbert Ryle’s strict distinction between “knowing how and knowing that” presented in Gilbert Ryle, “Knowing How and Knowing That”, Proceedings of the Aristotelian Society, 46 (1946): 1-16. Rather, the “knowing how” of Plato’s crafts is not distinguishable from the “knowing that” knowledge of causes and the product.
discussions of the relationship between physicians and patients and between physicians and medical research.

This dissertation, then, is about the Platonic understanding of crafts, mediated through his use of the paradigm of medicine. I do not explore in detail the purposes to which Plato puts his theory, that is, to virtue or politics. Rather, I examine his understanding of the crafts themselves. As professional ethics, that is, the ethics of craftspeople, becomes an expanding field of philosophy, it becomes increasingly important to understand the nature of crafts themselves. I therefore examine Plato’s theory of the crafts directly.

2 “Technē” or “Craft”

As “craft” is the primary term that this dissertation will discuss, it is important to clarify what is meant by the term. I will cover the details of Plato’s use of the term in Chapter One, but here I will try to situate the word in English vocabulary. The term translates the Greek word, “technē” (pl. technai), a word that, like many Greek words, does not map on perfectly to any English word. Its intension is basically, “an expert body of knowledge”, though the “expertise” here does not rule out the possibility that everyone might share in the knowledge. The Greek-English Lexicon provides the following meanings: “an art, craft,...trade,...profession”\(^3\). The difficulty is that the Greek word is very broad, and no one English word is broad enough to capture all of the instances while remaining sufficiently grammatically flexible. I will provide some possible translations and describe the strengths and weakness of them:

1. “Craft”: This is the translation I have chosen to use. It has the advantage of having all the right grammatical forms, and even captures the secondary sense of “craftiness” and “cunning”. Its disadvantage is that the word “craft” doesn’t capture non-productive “technai” such as geometry or astronomy, and the word has a quasi-trivial sense, associated with things like summer camp.

2. “Art”: This is English word from the Latin “ars”, the word into which “technē” was translated. It lacks any verb forms, and is easily confused with fine arts. “Art” shares the limitation of “craft” that the word implies productivity.

3. “Expertise”: This word probably comes closer to the meaning of the term “technē”, in that it captures both productive and theoretical “technai”. However, it lacks a verb and, worse, a plural. Its primary intensional weakness is that it implies a relative rather than an absolute meaning. Not everyone can be an expert, while some “technai”, like speaking grammatically, almost everyone has.

4. “Technology”: While obviously etymologically connected to “technē”, technology is too specific in its meaning. It shares the weaknesses of “craft” in so far as it is limited to production, while it shares the weaknesses of expertise in that it lacks most grammatical forms. However, when trying to situate debates about “technē” in a modern context, many of those debates would be described using the term “technology”, such as the relationship of technology to science or of technology to ethics. It is therefore useful for situating the ancient debates, but functions poorly as a translation.

None of these words are perfect. “Expertise” is probably closest in terms of intension, but it is grammatically inflexible. “Craft” is second-best in intension and best for grammatical versatility, though one must be aware that “technē” includes non-productive activities like geometry. Therefore, I have chosen to translate the term “technē” as “craft”.

3 Philosophical Issues

Plato’s theory of crafts opens up different types of philosophical issues that should be kept distinct, despite their overlap in practice. First, Plato’s theory of crafts can help settle definitional questions. In Chapters Two and Three, I show how resolving these definitional questions was vital to understanding ancient debates around the craft analogy and around freedom. Chapter Two, for example, is dedicated to addressing the question of whether or not poisoning by a doctor should be considered medicine. In Chapter Four, I show how resolving these definitional questions is vital to understanding
some contemporary biomedical debates. The second and third parts of Chapter Four include discussion of the distinction between the craft of medicine and the knowledge of causation that underlies it.

Second, Plato’s theory of crafts can help resolve ethical discussions, especially those in the professions. Two conclusions arise from the Platonic theory. First, crafts are not independent entities. Most importantly, crafts that produce the tools of other crafts need to be guided by the crafts that employ their products in several ways. Crafts are both interdependent and incomplete. Flute-makers are not only dependent on flautists to play their products, but they are dependent on flautists for the form of their products and to evaluate the quality of their work. I will discuss this hierarchical relationship in detail in Chapter One. Second, if a kind of activity is one that admits of expertise, that activity will best be performed by someone with that expertise. Conversely, unless someone has the relevant expertise in a case where expertise is required, one will be powerless. This raises the question of what kind of knowledge someone ought to have in order to be “in charge” in a particular craft-related decision. This question is very important in understanding the kind of knowledge that a person would need to have in order to act freely in the strong sense of the word, that is, to act autonomously.  

4 Interpreive issues

As in any discussion of Plato, several interpretive issues must be discussed. After all, Plato wrote dialogues, not treatises, and one must provide some summary of one’s approach to the dialogues. Moreover, certain interpretive problems arise as I am often not using Plato’s arguments to discuss the issues with which he was ultimately concerned.

Discussing what Plato has to say about medicine often pits one against the intention of the dialogues, which leads to some interpretive difficulties. Despite the ubiquitous medical references, Plato does not appear to be interested in medicine per se. There is no dialogue called “The doctor”, and there is no dialogue whose main theme is medicine. Medicine is a “paradigm” in the sense of the term used in the Euthyphro: it is

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4 I discuss the relationship between the meanings of the Greek term “eleutheria” (freedom) and the English term “autonomy” in Chapter Three.
something looked at for the sake of evaluating other cases. It is not, however, examined for its own sake. This requires me to approach the texts obliquely. Quite often, what Plato has to say about medicine often serve as premises for analogous arguments about something else. It is the premise, after all. Because I am swimming against the current of the argument, I do one of two things in order to better understand these premises:

1. If I can extrapolate from some other argument in another dialogue why Plato says what he says about medicine, I will do so.

2. If I can find no source at all, I will simply report what Plato has to say and note that I have done so.

Since Plato’s discussion of crafts and medicine often serves in the role of premises for other arguments, I will be required to examine what he has to say about medicine by examining only parts of the arguments presented.

This approach requires me to jump from dialogue to dialogue quite a bit, as I search for explanations as to why Plato might assume a certain premise for an argument in another dialogue. This assumes a unitarian approach between the dialogues. If I were to treat the various dialogues as completely independent from one another, the statements from one dialogue would be irrelevant to the other. Fortunately, the presuppositions of the arguments in Plato’s dialogues are often far more unified than their conclusions. In many dialogues in which the main characters disagree, they continue to agree on their basic use of terms. For example, despite their strong disagreement about what kind of craft constitutes justice, Thrasyilmachus and Socrates seem to be in agreement about what constitutes a craft, and it is this very agreement that undermines Thrasyilmachus. Even when Plato provides different sides of arguments, his premises are often the same, and it is these that I am examining. Between dialogues, too, this same unity of presuppositions is often stronger than the variation between the conclusions.

On another interpretive question, I’ve taken something of a controversial stance: Plato’s use of jokes. Often, Socrates and other interlocutors make quite comical statements, and this leads to some reasonable doubt as to how seriously the reader is expected to take the arguments in which they are present. In trying to understand Plato’s

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5 For example, Socrates appears to shift his position between the Phaedrus and the Gorgias, concerning whether or not rhetoric is a craft. The characteristics of craft, however, stay largely the same.
approach to crafts, I often take portions of these jokes at face value. My reasoning is that Plato quite often includes his serious premises and presuppositions in his more humorous passages. In fact, the presuppositions are often a part of the “set up” of the joke. For example, in the Republic, Socrates argues that soldiers need to be trained in mathematics, so that they can count the troops they have and not get lost. The passage seems quite comical. However, a similar claim appears in the Philebus, in which Socrates argues that all crafts need measurement and are only craft-like in as much as they include measurement. This passage seems serious. Here is an example of Plato using a presupposition as a part of humour, without it implying that we should therefore not take the presupposition itself seriously. This approach to humour is very important to how I approach the division passages in the Sophist and Statesman, which I take to provide serious discussion of how to collect and divide, while at the same time making some divisions that are deliberately humorous.

5 Chapters

The chapters in this dissertation introduce the Platonic understanding of crafts, and then attempt to apply that understanding to various problems that arose in the ancient world and arise in the modern one. Chapters Two through Four are not an exhaustive survey of the kinds of problems that one could use the Platonic understanding of crafts to discuss. Rather, they are examples of the kinds of applications that Plato’s understanding of crafts and the craft of medicine did and can have.

Chapter One includes a summary of Plato’s understanding of crafts. Much of the material here is uncontroversial. However, I have dedicated extra space to discussing Plato’s use of hierarchy and the special role that the understanding of causal relationships plays in a craft. The discussion of hierarchy is important for understanding how the various relationships between craftspeople ought to be established.

Chapter Two is a discussion of an important theoretical debate about the nature of crafts that concerned both Plato and Aristotle. Considered as knowledge, crafts seem to make people capable of contraries, that is, a good doctor is also a good poisoner. However, considered as a power, crafts can only do one thing. Plato and Aristotle take quite different routes and arrive at the same conclusion that medicine, strictly speaking,
can only heal. This debate has modern resonance in discussions of the justification and purpose of ethical rules such as the World Medical Association’s 1948 Geneva Declaration’s precept that, “The health of my patient should be my first consideration.”  

Chapter Three is a discussion of Plato’s discussion of the relationship between freedom, power and knowledge. In the Gorgias and other dialogues, Plato raises concerns that the democratic paradigm that to be free is to be persuaded rather than forced does not provide sufficient protection for people from the manipulative rhetoric of people like Gorgias. Instead, Plato puts forward a new criterion of freedom: knowledge. This chapter examines the arguments he presents for this new criterion and the sorts of knowledge that is required to be considered free. The term for freedom, “eleutheria”, shares much in common with our modern understanding of autonomy, and Plato’s discussion of the knowledge that is necessary for freedom is important for understanding modern discussions of autonomy in medicine.

In Chapter Four, I apply the Platonic framework directly to modern problems in biomedical ethics. First, I will discuss the weakness of the current paradigm for the discussion of paternalism and autonomy. Currently, the physician is treated as the expert in health, while the patient can only contribute non-health goals that can only compromise their health. I will argue that, when one applies Plato’s hierarchy of crafts, it becomes clear that medicine is incomplete, and that patient guidance is actually a part of the medical craft, properly understood. I then discuss the difficulties with recommendations in meta-analyses such as those in the Cochrane Review, and the kinds of confusions that arise when one conflates understanding of causal relationships with understanding of how to apply them. Finally, I look at the “therapeutic misconception” in research ethics described by Franklin Miller and Howard Brody, arguing that, while there are indeed numerous problems with confusing research and therapy, the two are so closely intertwined that the former should not have autonomous ethical standards, as Miller and Brody suggest.

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Chapter 1: Plato on Crafts

1 Introduction

Instead of dealing with medicine directly, Plato uses it almost exclusively as a paradigmatic example of what he calls a “craft” or “technē” (pl. “technai”). In order to understand what Plato has to say about medicine, and then to discuss its relevance to both ancient and modern medical ethics in future chapters, one must therefore explain what Plato means by a “technē”. Fortunately, given both the wide use of medical examples and other discussions of crafts per se, there is no shortage of evidence from which to draw such conclusions. In this section, I will discuss several of the key elements of crafts that Plato describes throughout his works. First, I will discuss the nature of crafts themselves, showing how Plato uses the term “technē” to describe any definite set of knowledge surrounding a given subject matter. Second, I will discuss the different types into which Plato divides crafts, especially his distinction between acquisitive crafts and productive crafts, of which medicine is the latter. Third, I will discuss the crafts’ relationship with two meta-crafts that are pertinent to any craft, dialectic and measurement. Finally, I will discuss the relationships among the crafts, as Plato arranges the crafts in a hierarchy based on which crafts use the products of which other crafts as tools. In addressing these topics, I will highlight seven principles that I will refer to in future chapters to discuss the application of Platonic use of “technē” to both ancient and modern medical ethical issues. These characteristics of and relationships between crafts will provide the theoretical foundation that will guide the ethical conclusions I will develop in the second through fourth chapters.

2 Texts

While Plato discusses the nature and relationships of technai in many of his dialogues, in some dialogues he deals with the crafts in great detail, often in the context

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7 I discuss the reasoning behind the choice of “craft” as a translation of “technē” in the introduction to the dissertation.
of discussions of politics or rhetoric. As I primarily will be using these texts, I will introduce them here:

*Phaedrus (257c-279c):* In an extended debate concerning whether or not rhetoric can properly be considered a craft, Socrates provides and defends a long description of the methodology of medicine and its relationship to dialectic.

*Sophist (216a-237a):* In trying to find the definition of a sophist, a putative craftsperson, Socrates provides a number of ways of classifying the crafts, defining medicine as a productive rather than as an acquisitive craft.

*Statesman (passim):* In a detailed search for the political craft, Socrates considers several important questions about the nature of crafts, including whether therapeutic crafts such as medicine should be divided according to their subjects or their methods, and how different sorts of measurement are relevant to the various crafts.

*Philebus (23c-27c):* This dialogue provides an extended discussion of generation by productive crafts. Socrates provides a further discussion of the art of measurement and its relationship to the products of crafts.

### 3 Plato’s Use of “Technē” Compared to Aristotle’s Definition

Unfortunately, Plato never provides a clear definition of a craft in any of his dialogues. Despite 774 uses of “technē” or one of its derivatives in the Platonic corpus, at no point does any interlocutor provide a clear definition of what a craft is.\(^8\) This does not, however, stop Plato from using the term regularly nor does it stop him from making claims about crafts. Instead of speaking of Plato’s “definition” of craft, then, I will discuss his “use” of the term.\(^9\) For discussing his use of the term, Aristotle’s clear

\(^8\) In order to generate this number, I searched for the root “τεχνή” on University of California, "Thesaurus Linguae Graecae" [http://www.tlg.uci.edu/] [accessed 22 September 2009].

\(^9\) I do not wish to take quite the strong position of John Lyons, that we ought “...to accept everything that the native speaker says in his language, but to treat with reserve anything he says about his language, until
definition in the *Ethics*\(^{10}\) and *Metaphysics* provides an extremely helpful starting point for four reasons: first, as Plato’s student, he uses some of the same terms as Plato, helping to illuminate Plato’s usage; second, Aristotle does, in fact, provide a clear definition of “*techne*” that can serve as a starting point for discussion of Plato’s use; third, Aristotle’s definition of “*techne*” has been sufficiently influential that it is often the conception that one brings to the discussion of Plato; finally, Plato’s usage is sufficiently different from Aristotle’s definition that the differences between the former’s usage and the latter’s definition highlights what is distinctive about Plato’s usage. Starting with Aristotle’s definition of “*techne*” is not an uncommon approach to Plato’s dialogues; indeed, Aristotle’s definition is of such clarity that it has been used in the discussion of Platonic dialogues in preference to Plato’s own usage, such as by Terence Irwin in his book *Plato’s Ethics*:

> It is useful, then, to replace the rather imprecise question ‘Does Socrates teach virtue as a craft?’ with the more precise question ‘Does Socrates treat virtue as the sort of thing that Aristotle regards as a craft?’\(^{11}\)

As my intention in this chapter is to elucidate Plato’s usage of “*techne*” itself rather than discuss Plato’s ethical theory of virtue, I will not be following this approach. Rather, I will demonstrate how Plato’s usage of the term “craft” is significantly broader than Aristotle’s definition. In fact, Plato’s use is broad enough that it is ultimately co-extensive with what he calls knowledge or “*epistēmē*”.

Aristotle defines “*techne*” in the *Ethics*, and describes its genus and differentia in the *Metaphysics*. They both have different contexts. In the *Ethics*, Aristotle defines a craft as a “productive disposition with a true account” (1140a9-10).\(^{12,13}\) The context of

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\(^{10}\) As the definition appears in a book common to the *Nicomachean Ethics* and the *Eudemian Ethics*, I will simply refer to the text as the “*Ethics*”, avoiding taking a stand on the book’s original context.


\(^{12}\) ἐξὶς μετὰ λόγου ἄληθος ποιητική.

\(^{13}\) For translations of Aristotle, I will be using Aristotle, *The Complete Works of Aristotle: the Revised Oxford Translation*, ed. Jonathan Barnes (Princeton: Princeton University Press, 1984). However, the translations in those volumes do not use standardized terms (for example, they may not use the same term to translate “*techne*” consistently) and occasionally insert terms that do not appear in the Greek. Therefore, I often modify the original translations.
this definition is Aristotle’s distinction between production and acting, limiting crafts to production:

All craft is concerned with generation, i.e. with crafting and theorizing how something may generate that is capable of either being or not being, and whose principle is in the maker and not in the things made. (1140a10-13)\textsuperscript{14}

Aristotle uses this definition to argue that virtue should not be considered a craft, as it doesn’t produce anything, but is rather a sort of disposition. In the Metaphysics, he categorizes craft as a rational, productive power. All powers can be divided into rational and irrational, and what differentiates them is whether or not they include an account:

Clearly some potentialities will be non-rational and some will be accompanied by an account. This is why all crafts, i.e all productive forms of knowledge are potentialities. (1046b3-5)\textsuperscript{15}

There are some differences between these passages. The first is a definition, while the second is a categorization. In the Ethics, craft is defined as a “disposition” (“hexis”), while in the Metaphysics, it is described as power (“dynamis”). In both cases, reason is relevant. In the Ethics, craft is said to be “with a true account” (“meta logou alēthous”), while in the Metaphysics, the word “true” is not used (“meta logou”). In both cases, crafts are said to be “productive” (“poētike”).

A word should be said here about “production”, given the slightly different semantic field covered by the English word “production” and the Greek word “poēsis”. The English noun “production” is generally limited to artifacts, like beds, or substances, like plants. Instead, for Aristotle, production includes the production of properties in objects that already exist. For instance, in the Metaphysics passage, Aristotle says that medicine can produce health, which is clearly not a substance or an artifact, but a property in an already existing substance. In order to distinguish these sorts of production, as they will be relevant in this and future chapters, I will refer to the creation of artifacts and substances as “essential production” and the creation of properties in already existing objects as “accidental production”.

\textsuperscript{14} ἔστι δὲ τέχνη πᾶσα περὶ γένεσιν καὶ τὸ τεχνάζειν καὶ θεωρεῖν ὡς ἂν γένηται τι τῶν ἐνδεχομένων καὶ εἶναι καὶ μὴ εἶναι, καὶ ὅν ἡ ἁρχὴ ἐν τῷ ποιεῖται ἄλλα μὴ ἐν τῷ ποιομένῳ.

\textsuperscript{15} δῆλον ὅτι καὶ τῶν δυνάμεων αἱ μὲν ἔσονται ἄλογοι αἱ δὲ μετὰ λόγου· διὸ πᾶσαι αἱ τέχναι καὶ αἱ ποιητικαὶ ἐπιστήμαι δυνάμεις εἰσίν.
Aristotle’s definition of “technē” is useful for clarifying Plato’s use of the term, in part because Plato uses the term differently. Plato’s use is broader than Aristotle’s in two important ways. First, Plato does not limit the crafts to those that are productive; rather, he includes many activities that would fall outside of Aristotle’s definition as crafts. Second, in both the *Ethics* and the *Metaphysics*, Aristotle treats craft as a species of power whose differentia is a (true) account. Plato, on the other hand, often treats crafts as a species of knowledge.\(^{16}\) With a few important exceptions that I will note later, if something was commonly believed to be a craft at the time, the use of “technē” to describe it is left unchallenged in the dialogues, and the conversation continues as though the use of the term is unproblematic. Plato’s use then is largely conventional, accepting as a craft whatever was normally considered a craft. To give a sense of the breadth of Plato’s use of the term “craft” throughout the corpus, the following is a list of all of the activities explicitly referred to as a “technai” by one or more of Plato’s interlocutors:\(^{17}\)

<table>
<thead>
<tr>
<th>activity</th>
<th>activity</th>
<th>activity</th>
<th>activity</th>
<th>activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>speechwriting</td>
<td>lyremaking</td>
<td>cooking?</td>
<td>midwifery</td>
<td>measurement</td>
</tr>
<tr>
<td>imitation</td>
<td>hiring</td>
<td>music</td>
<td>lawmaking</td>
<td>herding</td>
</tr>
<tr>
<td>moneychanging</td>
<td>wool-carding</td>
<td>befriending</td>
<td>appropriation</td>
<td>house-building</td>
</tr>
<tr>
<td>householding</td>
<td>naming</td>
<td>tool-making</td>
<td>love</td>
<td>wrestling</td>
</tr>
<tr>
<td>teaching</td>
<td>persuading</td>
<td>molding pottery</td>
<td>braiding</td>
<td>war</td>
</tr>
<tr>
<td>politics</td>
<td>burning</td>
<td>reciting poems?</td>
<td>rhetoric?</td>
<td>sophistry?</td>
</tr>
<tr>
<td>fishing</td>
<td>deception</td>
<td>slinging</td>
<td>subduing</td>
<td>kingship</td>
</tr>
<tr>
<td>farming</td>
<td>knowing</td>
<td>grammar</td>
<td>writing</td>
<td>gymnastics</td>
</tr>
<tr>
<td>separating</td>
<td>dialectic</td>
<td>image-making</td>
<td>copying</td>
<td>mercantilism</td>
</tr>
<tr>
<td>spinning</td>
<td>cosmetics?</td>
<td>arithmetic</td>
<td>charioteering</td>
<td>hunting</td>
</tr>
<tr>
<td>nourishing</td>
<td>medicine</td>
<td>heraldry</td>
<td>fulling</td>
<td>flattery?</td>
</tr>
<tr>
<td>punishment</td>
<td>embellishment</td>
<td>discerning</td>
<td>reasoning</td>
<td>dancing</td>
</tr>
</tbody>
</table>

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\(^{16}\) I will discuss Plato’s use of “technē” both as knowledge and as power in Chapter Two.

\(^{17}\) The following is a much condensed version of Anne Balansard’s sixty-page list of all craft-terms in Plato from Anne Balansard, *Technè dans les Dialogues de Platon: L’empreinte de la sophistique* (Sankt Augustin: Academia-Verl., 2001), 324-84.
The few cases in which the craft-status of a putative craft is challenged are marked with a “?”. Both of Aristotle’s definitions shared the term “productive”, but notice from the above list that not all of the crafts listed can be considered productive. Plato includes music, politics, hunting, dialectic and measurement in his list of crafts, none of which either creates artifacts or produces anything in some other object.

While Aristotle’s definition of “technē” has been extremely influential, it does not capture the all of the uses of the term in Plato’s dialogues. Plato uses the term in an extremely free way, rarely challenging the status of a putative craft. For the rest of this chapter, I will be discussing this broader, Platonic use of the term “technē”, highlighting as I go the various principles of crafts that recur throughout Plato’s uses of the term.

4 Productive and Acquisitive Crafts

**Principle #1: There are two sorts of crafts: productive and acquisitive.**

As I have shown above, Plato uses the term “crafts” in a broader way than Aristotle. Plato, in fact, pre-emptively denies Aristotle’s claim that all crafts are productive. Instead, productive crafts are only a subset of the crafts, which include all kinds of knowledge. While Plato uses the term “crafts” in a broad, conventional way, he explicitly subdivides the crafts into separate kinds. Plato subdivides the crafts in four dialogues: the *Charmides*, *Euthydemus*, *Sophist* and *Statesman*. These divisions in these dialogues are similar in many ways. He divides the crafts into so-called productive crafts (“poētikē”) and acquisitive (“thēreutikē” or “ktētikē”) crafts. The productive crafts are in many ways similar to what Aristotle will call a “craft”. Acquisitive crafts, however, are quite distinct. Acquisitive crafts include such apparently unrelated activities as war, seduction, hunting and geometry. Among the acquisitive crafts, Plato includes what

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18 There is a terminological difference between the *Euthydemus* and the *Sophist*. In the former, these are called “thēreutikē” (“hunting”), while in the latter they are called “ktētikē” (“capturing”) (For instance, “θηρευτικοί γάρ εἰσί καὶ οὕτω” at *Euthydemus* 290c and “τέχνη τῆς κτητικῆς” at *Sophist* 219c). I have chosen the term “acquisitive” to mark their overlap.

19 David Rocco’s choice to call this latter group of crafts “theoretical” rather than “acquisitive”. However, this creates too much possible confusion between Aristotle’s distinction between theoretical and practical knowledge and Plato’s “theoretical” and productive crafts. While it is strange to call geometry “acquisitive”, it is even stranger to call hunting “theoretical”. In the *Euthydemus*, Clinias explains why we...
Aristotle later will call theoretical knowledge, including dialectic and mathematics\(^{20}\).

However, Plato defends this category, arguing that acquisitive crafts represent a distinct category of crafts.

Plato confronts an Aristotelian definition of crafts in the *Charmides*, in which Critias raises an objection to Socrates’ surprisingly Aristotelian use of the term “techne”.

Socrates attempts to argue against Critias’ definition of temperance by assuming, like Aristotle, that all crafts are necessarily productive:

> And if you should ask me about housebuilding, which is a knowledge of building houses, and ask what product I say that it produces, I would say that it produces houses, and so on with the other arts. So you ought to give me an answer on behalf of temperance. (165d)\(^{21,22}\)

Socrates’ argument here assumes that all crafts are productive, so temperance should also be productive. Therefore, Critias ought to provide the product of temperance. However, Critias does not respond to Socrates in the way that one might expect. Rather than either providing the product of temperance or denying that temperance is a craft, he instead explicitly denies that all crafts are productive:

> For instance…in the crafts of calculation and geometry, tell me what is the product corresponding to the house in the case of house-building and the cloak in the case of weaving and so on – one could give many instances from many crafts. (165e-166a)\(^{23}\)

Critias counters that there are, in fact, many crafts that do not have products, and specifies the mathematical crafts of calculation and geometry. If Plato were committed to the Aristotelian definition, one would expect that Socrates would either try to show that geometry was somehow productive or deny that geometry is a craft. Importantly, he does neither. Rather, Socrates openly concedes the point, saying “you are right”, and allows

\(^{20}\) See, for example, *Metaphysics* E:1.

\(^{21}\) Καὶ εἰ τοὺς μὲ ἔρωτος τὴν οἰκοδομικὴν, ἐπιστήμην ὑσσαν τοῦ οἰκοδομέων, τι φημι ἔργον ἀπεργάζεσθαι, εἰπομι’ ἅν ὡς οἰκίσσας- ὡσαόντος δὲ καὶ τῶν ἄλλων τεχνῶν. χρῆ οὖν καὶ σὲ ὑπὲρ τῆς σωφροσύνης.

\(^{22}\) Translations from Plato will use as a baseline those from Plato, *Plato: Complete Works*, ed. John Cooper (Indianapolis: Hackett, 1997). However, I will change the vocabulary and occasionally the phrasing, so that that it matches the standard vocabulary in the dissertation.

\(^{23}\) ἐπεὶ λέει μοι, ἔργη, τῆς λογιστικῆς τέχνης ἡ τῆς γεωμετρικῆς τί ἐστιν τοιοῦτον ἔργον οἷον οἰκία οἰκοδομικῆς ἡ ἰμάτειον ψυκτικῆς ἡ ἄλλα τοιαῦτα’ ἔργα, ἃ πωλλὰ ἄν τις ἔχοι πολλῶν τεχνῶν δείξω;
for a broader application of the term craft, arguing instead, that while not all crafts have products, they nonetheless have subjects: 24

You are right. But I can point out to you in the case of each of these bodies of knowledge 25 what it is knowledge of, this being distinct from the knowledge itself. For instance, the craft of calculation, of course, is of the odd and even...isn’t that so?

(166a) 26

After this response, both Critias and Socrates continue the discussion, agreeing that not all crafts do have products, contrary to the Aristotelian definition.

However, this raises an important problem. If the subjects of non-productive crafts are not products, what is their relationship to their crafts? The answer is not given in the Charmides. However, in the Euthydemus, the young Clinias provides a description of the relationship between mathematical crafts and their subjects, and the answer is in some ways quite surprising. The relationship is analogous to that between hunter and prey:

No craft of actual hunting, he said, extends any further than pursuing and capturing: whenever the hunters catch what they are pursuing they are incapable of using it, but they and the fishermen hand over their prey to the cooks. And again, geometers and astronomers and calculators (who are hunters, too, for none of these make their diagrams; they simply discover those which already exist), since they themselves have no idea of how to use their prey but only how to hunt it, hand over the task of using their discoveries to the dialecticians... (290b-c) 27

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24 In Plato’s Ethics, Terence Irwin argues that Socrates does not intend to imply in the Charmides that geometry lacks a product. Rather, he argues that the correct answer that arises from calculation is the product of those calculations. However, if this interpretation is correct, it is difficult to see what the point of disagreement between Critias and Socrates is. Critias denies explicitly that a number of arts have product, and Socrates says, “You are right”. When he starts talking about what crafts are “of”, the term “products” disappears completely. Irwin, however, implies that the term “product” appears in 166a, saying “he insists that every science must have a product that is ‘something other than the science itself’ (166a3-7)”, though the word “product” does not actually appear in the text quoted and Critias has just denied their presence in a number of crafts, with Socrates’ agreement (Terence Irwin, Plato’s Ethics [Oxford: Oxford University Press, 1995], 71).

25 The term “epistēmē”, which I will translate as “knowledge”, creates the difficulty that “epistēmē” has a plural (“epistēmai”), while “knowledge” does not. For the term “epistēmai”, I will use the phrase “bodies of knowledge”. Please note that there is no corresponding word in Greek for “bodies”. The alternative translation, “science”, has a plural but lacks a verb, which is worse.

26 Ἀλήθει λέγεις· ἄλλα τάδε σοι ἔχω δείξαι, τίνος ἔστιν ἑπιστήμη ἐκάστη τούτων τῶν ἑπιστημῶν, ὁ τυχάναι ἢ ἄλλο αὐτής τῆς ἑπιστήμης, οἶον ἢ λογιστική ἐστὶν που τοῦ ἀρτίου καὶ τοῦ περίπτου, πλῆθους ὅπως ἔχει πρὸς αὐτὰ καὶ πρὸς ἀλλήλα· ἢ γὰρ:

27 Οὐδεμία, ἤφι, τῆς θερμικῆς αὐτής ἐπὶ πλεον ἔστιν ἢ ὅσον θηρεύεται καὶ χαρώσαβαι· ἐπειδὰν δὲ χαρώσονται τούτο ὃ ἄν θηρεύσωται, οὐ δύναται τούτω χρῆσθαι, ἄλλ’ οἱ μὲν κυνηγόται καὶ οἱ ἄλλης τοῖς
This is a peculiar passage for a number of reasons. One must ask just how literally Clinias expects his hearers to take the comparison of hunting and geometers\textsuperscript{28}. Clinias appears to take the comparison literally, even providing us with reasons to think that they are the same in important respects. First, geometers and hunters do not create anything; like hunters, their crafts have no products. However, this is a negative property and does not tell us what an acquisitive craft’s relationship to its subject is. Second, then, Clinias tells us what exactly the relationship is. Geometers, like hunters, discover their objects through hunting.\textsuperscript{29} The definition of an acquisitive craft is a craft that finds and obtains its subject; the relationship of an acquisitive craft to its subject is like that of hunter to prey. There appears to be an important dissimilarity between hunting and geometry, though, in terms of what they do with the subject once they have discovered it. The geometer does not capture his or her subject in the same way as a hunter does; the word “capture” in the first part of the analogy is replaced with the word “discover” in the second part of the analogy. Further, unlike a hunter, a mathematician does not alter the prey in any way, as, aside from a few types of hunting using non-harmful traps, prey in hunting tends to come out worse for wear.\textsuperscript{30}

Another important aspect of this division is that Plato goes out of his way to highlight this distinction to the reader. The dialogue \textit{Euthydemus} is a report of a conversation between Socrates, Euthydemus, Ctesippus, Dionysodorus, and Clinias by Socrates to Crito. Right after the comparison of hunters and mathematicians quoted

\begin{quote}

\textit{ὅσονοις παραδιδόσιν, οἱ δ’ αὐτοί γεωμετρικοὶ καὶ οἱ ἄστρονόμοι καὶ οἱ λογιστικοὶ—θηρευτικοὶ γάρ εἰσι καὶ οὕτωι: οὐ γὰρ ποιοῦσι τὰ διαγράμματα ἔκαστοι τούτοις, ἀλλὰ τὰ ἄντα ἀναφέροντο——ἄτε οὐν χρῆσθαι αὐτοὶ αὐτοῖς οὐκ ἐπιστάμενοι, ἀλλὰ θηρεύεται μόνον, παραδιδόσαι δήπο τοῖς διαλεκτικοῖς καταχρήσθαι αὐτῶν τοῖς εὑρήμασι, ὅσοι γε αὐτῶν μὴ παντάπασιν ἀνόητοι εἰσιν.}
\end{quote}

\textsuperscript{28} Rosamond Kent Sprague in her translation, for example, takes it to be a simile, even adding the phrase “in a way” after “who are hunters, too” (Plato, \textit{Plato: Complete Works}, ed. John Cooper [Indianapolis: Hackett, 1997], 728). David Roochnik considers hunting to simply be a metaphor used to describe theoretical knowledge: “Socrates uses the metaphor of hunting to describe it” (David Roochnik, "Socrates’ Use of the Techne-Analogy", \textit{Journal of the History of Philosophy}, 24 [1986]: 298). There is no need to reduce the \textit{Euthydemus} passage (and the \textit{Sophist} passage) to mere metaphor, however, if theoretical knowledge is simply a subset of acquisition.

\textsuperscript{29} There is something puzzling about Socrates’ claim that geometers do not create their figures. In one sense, of course they do. Each individual figure is drawn by the geometer. However, the claims they make are not about the images, but that of which they are images: “They make their claims for the sake of the square itself and the diagonal itself, not the diagonal they draw, and similarly with the others” (\textit{Republic} 510d). Perhaps the figures are to geometry what traps are to hunting and words are to learning.

\textsuperscript{30} Strictly speaking, this may not be a weakness in the analogy. The hunter \textit{per se} only captures the prey, and killing the prey is not a part of the definition of hunting.
above, the reporting of the conversation is suddenly broken, and Crito asks Socrates, “What do you mean, Socrates? Did that boy utter all this?” (290d). Curiously, Socrates becomes confused as to whether or not it was Clinias who actually made the comparison. Instead, Socrates says that it may not actually have been Clinias, but rather some sort of superior being (“tis tōn kreittonōn parōn”): “Do you suppose, my good Crito, that some superior being was there and uttered these things – because I am positive I heard them” (291a). He then proceeds to rule out all of his interlocutors by name. Rosamond Kent Sprague hypothesizes that Socrates is here putting his own words in Clinias’s mouth and Crito’s response that “I certainly think it was some superior being” (291a) is intended to indicate that Crito knows this. Another possibility is that Plato is introducing an idea of his own into a dialogue that cannot plausibly be attributed to any of the interlocutors. Regardless of Plato’s purposes in using this strange interjection into the dialogue, it serves to highlight the passage for the reader, marking the passage as especially important. Crito gives special praise to Clinias or whoever it was who made the comparison, saying that whoever made such a comparison is in no need of education: “Because, in my opinion, if he [Clinias] spoke like that, he needs no education, either from Euthydemus or anyone else” (290e). This comparison of mathematics to hunting, then, is something that Plato wants the reader to notice, and even goes out of his way to use the intersection of the two narrative levels to highlight the comparison.

The distinction between productive and acquisitive crafts is further elaborated in the *Sophist*. In the *Sophist*, the Eleatic Visitor divides all the crafts (“tōn ge technōn pasōn”) into two types (“eidē”) (219a). The first type of craft he calls the “productive” crafts, which closely accords with how Aristotle uses the term “crafts” as a whole:

VISITOR: There’s farming, or any sort of caring for any mortal body; and there’s also caring for things that are put together or fabricated, which we call equipment; and there’s imitation. The right thing would be to call all those things by a single name.

THESAETETUS: How? What name?

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31 ΚΡ. Τι λέγεις; σὺ, ὁ Σώκρατες; ἐκεῖνό τοῦ μειράκιον τουαῦτ’ ἐφθέγξατο;
32 ἄλλ’ ὁ δειμόνις Κρίτων, μὴ τις τῶν κρειττόνων παρῶν αὐτά ἐφθέγξατο; ὅτι γὰρ ἡκουσά γε ταῦτα, εὗ ὁδό.
33 τῶν κρειττόνων μέντοι τις ἐμοὶ δοκεῖ, καὶ πολὺ γε.
35 Μά Δι’ σὺ μέντοι. ὁμια γὰρ αὐτὸν ἐγώ, εἰ ταῦτ’ εἶπεν, οὔτ’ Ἐυθυδήμου οὔτε ἄλλου οὐδὲνος ἔτ’ ἀνθρώπου δεῖσθαι εἰς παιδείαν.
VISITOR: When you bring anything into being that wasn’t in being before, we say you’re a producer and that the thing you’ve brought into being is produced…Let’s put them under the heading of production (219a-b).\textsuperscript{36}

The list of crafts here is in some ways quite striking, as Plato uses the language of production, just as Aristotle will, but includes in production a number of activities that don’t seem productive. For instance, he includes caring for a mortal body and repairing of equipment. In both of these cases, no new object is produced. Like Aristotle, he is including “accidental production”, that is, the production some property in an already existing object, such as the production of health in an ill body or of repairs in a broken tool. The Visitor explicitly says that both caring for bodies and repairs “bring something into being that wasn’t in being before”, indicating that he does not intend to limit production to the creation of new objects, but rather to \textit{any} kind of production, including accidental production.

The Visitor then discusses the acquisitive crafts. The passage is in many ways quite similar to the passage in the \textit{Euthydemus}, but there are some slight differences:

VISITOR: Next, consider the whole type that has to do with learning, recognition, commerce, combat and hunting. None of these creates anything. They take things that are or have come into being, and they take possession of some of them with words and actions, and they keep other things from being taken possession of. For that reason it would be appropriate to call all the parts of this type acquisition. (219c)\textsuperscript{37}

In this passage, the Visitor repeats the distinction made previously in the \textit{Euthydemus}. The type of Aristotelian theoretical knowledge that has been included here has extended beyond merely knowledge. In the \textit{Sophist}, the Visitor includes all “learning” ("\textit{to mathēmatikon}") as acquisitive which would include a broad range of sciences. There are two other additions to this definition that were not in the \textit{Euthydemus}. First, the Visitor

\textsuperscript{36} \{ΞΕ.\} Γεωργία μὲν καὶ ὅση περὶ τὸ θνητὸν πᾶν σῶμα θεραπεία, τὸ τε αὖ περὶ τὸ σύνθετον καὶ πλαστὸν, ὃ δὲ σκεῦος ὀνομάκαμεν, ἢ τε μιμητική, σύμπαντα ταῦτα δικαίωτα ἢν ἐνὶ προσαχορέιοις ἢν ὑνόματι. \{ΘΕΑΙ.\} Πῶς καὶ τῖς;

\textsuperscript{37} \{ΞΕ.\} Πᾶν ὁπερ ἃν μὴ πρῶτον τις ἢν ὅστερον εἰς οὕσιαν ἀγη, τὸν μὲν ἁγονα σειλεῖν, τὸ δὲ ἁγόμενον ποιεῖταί ποιοφαμ. Ἡ πιθηκηκῆ̱ τοῖν τοῖν ἀυτὰ συγκεραλωσάμενοι προσείπουμεν. 

\[\textit{Ε.} \] Τὸ δὴ \textit{μαθηματικὸν} αὐτὶ ποιοτὸ εἰδος ὅλον καὶ τὸ τῆς γνωρίσεως τὸ τε \textit{χρηματιστικὸν} καὶ \textit{ἀγονιστικὸν} καὶ \textit{θρησκευτικὸν}, ἐπειδὴ ἐκμορφεῖ μὲν αὐτὸν τοὺς, τά δὲ ὄντα καὶ \textit{γεγονότα} τὰ μὲν \textit{χρησουτά} λόγοις καὶ πράξεις, τὰ δὲ τοις χερσομπένοις οὐκ ἐπιτρέπει, μάλιστ’ ἢν ποι διὰ ταῦτα συνάπαντα τὰ μέρη τέχνης τῆς κτητικῆς λειτουργίας ἤν διαπρέπειν.
mentions “taking possession” of the object sought, while in the *Euthydemus*, the analogy between hunting and mathematics only extended as far as “discovery”. The “taking possession” of the learning crafts here is said to take place with “words” (“*tois logos*”).

The second curious element is that Plato includes “keeping other things from being taken possession of” as a part of the acquisitive crafts. It is not immediately obvious that keeping something safe ought to be considered an acquisitive craft; after all, one does not actually acquire anything by keeping it safe. *Republic* I may provide some clue as to why he considers guarding to be an acquisitive craft. In that dialogue, Socrates points out that the person who is best at guarding something is also the best at stealing (that is, acquiring) something:

> And the one who is best guardian of an army is the very one who can steal the enemy’s plans and dispositions?

Certainly.

> Whenever someone is a clever guardian, then, he is also a clever thief.

Probably so.

> If a just person is clever at guarding money, therefore, he must also be clever at stealing it. (334a)

In the *Republic*, Socrates claims that guarding and stealing are somehow the same craft.39

In summary, Plato provides a division of all crafts into the productive and the acquisitive. Not only does Plato not use the Aristotelian definition of “*techne*”, but he explicitly denies it. The productive crafts include all production of artifacts, but also all therapeutic crafts, including medicine, as they produce properties in objects. The acquisitive crafts include all hunting crafts, protection crafts and also intellectual crafts. This division of all crafts will be important in ascertaining their relationships.

38 Ἀλλὰ μὴν στρατοπέδου γε ὁ σώτος φύλαξ ἄγαθός, ὅσπερ καὶ τὰ τῶν πολεμίων κλέψαι καὶ βουλεύματα καὶ τὰς ἄλλας πράξεις;

Πάνυ γε.

Ὅτου τις ἄρα δεινός φύλαξ, τοῦτον καὶ φῶρ δεινός.

"Εσουκεν.

Εἰ ἄρα ὁ δίκαιος ἁγίωτερὸν δεινός φιλάτειν, καὶ κλέπτειν δεινός.

39 I will discuss in detail the senses in which this might be true in Chapter Two.
5 Crafts as Knowledge

While Plato uses the term “techne” in a very broad, conventional way, a common claim reoccurs in several dialogues: crafts are knowledge. That crafts are considered to be knowledge will be very important to understanding the relationships between the crafts discussed in other dialogues, as well as their relationships to the meta-crafts of measurement and dialectic. In fact, in many dialogues, the term “techne” or “craft” and the term “epistēmē” or “knowledge” are actually used interchangeably. In this section, I will first show how Plato on numerous occasions throughout his corpus uses the terms “techne” and “epistēmē” synonymously, and then will focus on the discussion of the teachability of crafts in the Protagoras, in which both Socrates and Protagoras agree that virtue can only be a craft if it is teachable.

5.1 The Co-Extensivity of “Techne” and “Epistēmē”

(Principle #2: Crafts and Knowledge are co-extensive.)

On more than one occasion, Plato slips back and forth between the use of “techne” (craft) and “epistēmē” (knowledge) as though they were synonymous. In the Charmides, Socrates uses the terms “techne” and “epistēmē” virtually interchangeably. At some points, he calls what one might expect to call a craft “epistēmē” instead. For instance, he refers to medicine as a kind of knowledge: “‘Then medicine, too,’ I said, ‘is knowledge of health’” (165c). Similarly, a few lines later, he calls housebuilding a kind of knowledge as well: “And if you ask me about housebuilding, which is knowledge of building houses…” (165d). As medicine and housebuilding are paradigmatic examples of crafts, for Socrates to here refer to both of them as kinds of “knowledge” is especially interesting. The use for housebuilding is a curious construction. He calls housebuilding “knowledge of housebuilding” or “epistēmēn tou oikodomein”, attaching

40 David Roochnik, who normally translates the term “epistēmē” as “science” finds the interchangeability sufficiently awkward that he chooses to leave “epistēmē” untranslated when discussing the Charmides (David Roochnik, “Socrates’ Use of the Techne-Analogy”, Journal of the History of Philosophy, 24 [1986]: 298).

41 ὡσκοῦν καὶ ἵπτρικῇ, ἔρην, ἐπιστήμη ἔστιν τοῦ ὑγεινοῦ;

42 Καὶ εἰ τοῖνυ μὲ ἐρώτῃ τὴν οἰκοδομηκὴν, ἐπιστήμην οὖσαν τοῦ οἰκοδομεῖν.

43 In fact, the use of “techne” to describe housebuilding is so traditional that the term “techne” actually has its etymological roots in the word “tekton” or carpenter.
an infinitive to knowledge. This indicates that housebuilding may somehow be or be of something active (it is, after all, an infinitive of a verb), but at the same time, it ought to be considered a form of knowledge. The dialogue of the *Charmides* slips back and forth between the words “*tekhne*” and “*epistēmē*” as though they had them same meaning.\(^{44}\)

This same interchangeability reappears in the *Statesman*. In that dialogue, the Visitor purports to be dividing all knowledge (“*epistēmē*”): “…we must make our minds think of all sorts of knowledge there are as falling in two classes” (258c). However, a little while later, when dividing knowledge, he divides all knowledge exhaustively into two sorts of craft:

VISITOR: Well then: isn’t it the case that arithmetic and some of the other crafts that are akin to it don’t involve any practical knowledge?”

YOUNG SOCRATES: That’s so.

VISITOR: Whereas for their part, carpentry and manufacture as a whole have their knowledge (“*epistēmēn*”) as it were naturally bound up with practical actions… (258d-e)\(^{45,46}\)

Notice how the Eleatic Visitor recharacterizes the division here. He had at first said that he was dividing all types of knowledge (“*epistēmē*”), but when he actually divided that knowledge, he divides into two sorts of crafts: first, arithmetic and crafts akin to it, and then into carpentry (“*tektonikēn*”) and other sorts of manufacture. It appears, then, that there is no knowledge that is not itself a craft.\(^ {47}\) Moreover, a page later, the Visitor uses the same sort of interchangeability between crafts and knowledge that Socrates made use

\(^{44}\) John Lyons discussed this interchangeability in detail in his book *Structural Semantics: an analysis of part of the vocabulary of Plato*. He concluded that the phrases “Socrates is a housebuilder” (“Σωκράτης εἶναι οἰκοδόμος”), “Socrates has the housebuilding craft” (“Σωκράτης ἔχειν τὴν οἰκοδομικὴν τεχνὴν”), “Socrates knows housebuilding things” (“Σωκράτης ἐπίστασθαι οἰκοδομικα”), and “Socrates knows [how] to build houses” (“Σωκράτης ἐπίστασθαι τὸ οἰκοδομεῖν”) were transformable in Plato, and that Plato would regularly switch between them (John Lyons, *Structural Semantics: An Analysis of Part of the Vocabulary of Plato* [Oxford: Basil Blackwell, 1963], 173).

\(^{45}\) \{ΞΔ.\} Ἀρ’ ὁνὶ οὐκ ἀρκήμην ἐκ καὶ τινες ἔτεραι ταύτη συγγενεῖς τέχναι υποί τῶν πρᾶξεων εἰσι, τὸ δὲ γνώσιν παρέσχεντο μόνον;

\{ΝΕ. ΣΩ.\} Ἐστιν οὖντος.

\{ΞΕ.\} Αἱ δὲ γε περὶ τεκτονικῆς ἀδὴ καὶ σύμπασαν χειρουργίαν ὡσπερ ἐν ταῖς πράξεσιν ἐνοθισαν σύμφωνα ἐκ τῆς ἐπιστήμης κέκτηται, καὶ συναπτελοῦσι τὰ γεγονόμα τὰ αὐτῶν σώματα πρὸς ὅ τὸν δὲ γνώσιν ὀνὴν.

\(^{46}\) I have deviated from Rowe’s translation here, as he has Socrates explicitly say that carpentry and manufacture are crafts, while the Greek is more ambiguous.

\(^{47}\) That carpentry and manufacture are “*epistemē*” but not “*tekhne*” is an interpretation compatible with this passage. However, such a category would be odd, as a category of non-craft, manual *epistēmē* would be otherwise unprecedented.
of in the *Charmides*, when he characterizes his earlier claim as being one of division of *technai* rather than *epistēmai*: “And I suppose it [calculation] belongs absolutely to the theoretical sorts of craft” (259e).\(^{48}\) However, earlier it was *knowledge* that he was dividing into theoretical and practical, *not* crafts; instead, he now says that what he had been doing is dividing crafts. The Visitor here is using the terms “*technē*” and “*epistēmē*” interchangeably, just as in the *Charmides*. Even in the late dialogues, then, Plato continued to treat “*technē*” and “*epistēmē*” largely interchangeably.

### 5.2 The Teachability of the Crafts

** Principle #3: Crafts are teachable**

In the *Protagoras*, Socrates asks Protagoras what it is that he claims to teach. After Protagoras gives a somewhat longwinded explanation, Socrates summarises what Protagoras has just claimed: “You appear to be talking about the art of citizenship, and to be promising to make men good citizens.” (319a). Protagoras agrees that this is exactly what he is claiming. However, Socrates says that he has doubts about whether or not virtue is teachable. In his argument that virtue is not teachable, Socrates explicitly contrasts what he calls “technical” skills with good citizenship:

> And I observe that when we convene in the Assembly and the city has to take some action on a building project, we send for builders to advise us…and so forth for everything that is learnable and teachable (319b)\(^{49}\)

However, he argues that non-crafts including citizenship are not teachable:

> But when it is a matter of deliberating on city management, anyone can stand up and advise them...The reason for this is clear: They do not think that this can be taught. (319d-e)\(^{50}\)

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\(^{48}\) Τὸν γνωσικὸν γε οὕμα παντάπασι τεχνῶν.

\(^{49}\) ὁρῷ οὖν, ὅταν συλλειγόμεν εἰς τὴν ἐκκλησίαν, ἐπειδὰν μὲν περὶ οἰκοδομίας τι δὲ ἐπέρξατο τὴν πόλιν, τοὺς οἰκοδόμους μεταπεμπομένους συμβουλέως περὶ τῶν οἰκοδομημάτων, ὅταν δὲ περὶ ναυπηγίας, τοὺς ναυπηγοὺς, καὶ τάλα πάντα οὕτως, ὅσα ἤγονταν μαθητά τε καὶ διδακτά εἶναι.

\(^{50}\) ἐπειδὰν δὲ τί περὶ τῶν τῆς πόλεως διοικήσεως δὲ βουλεύσασθαι, συμβουλεύει αὐτῶς ἀνιστάμενος περὶ τούτων ὁμοίως μὲν τάκτων, ὁμοίως δὲ χαλκεῖς σκυτότομος, ἣμορος ναύκληρος, πλούσιος πάνης, γενναῖος ἄγγενης, καὶ τούτων οὕτως τοῦτο ἐπιπλήττει ὅσπερ τοῖς πρότερον, ὅτι οὐδεμόθεν μαθόν, οὖδὲ ὅντος διδασκάλου οὕδενος αὐτῷ, ἐπειτὰ συμβουλεύειν ἐπιχειρεῖ· δήλων γὰρ ὅτι οὕτω ἤγονται διδακτά εἶναι.
Socrates’ argument depends on the claim that all crafts are teachable. The first list is of the crafts, and he claims that people believe that crafts can be taught, which is why they listen to experts. However, good citizenship cannot be taught, and therefore is not a craft and does not admit of specialization. As a result, the assembly allows anyone to speak on matters of good citizenship.

When Protagoras defends his claim to be able to teach virtue, he at no point denies that crafts can be taught (in fact, he cannot deny this without putting himself out of business, as he claims to be a teacher of a craft). Instead, he argues that good citizenship is taught, it is just that it is a craft taught universally, much as grammar is taught universally. In his myth of the distribution of the crafts by Zeus, Protagoras claims that Zeus distributed the craft of virtue to everyone, rather than to just a few:

Hermes asked Zeus how he should distribute shame and justice to humans. 'Should I distribute them [shame and justice] as the other crafts were?' …'To all,' said Zeus, 'and let all have a share.' (322c-d)

As a result, the crafts of shame and justice (which Protagoras is equating with the craft of citizenship) are distributed to all, but that does not imply that they are not teachable. Rather, they are crafts that everyone is taught, right from an early age, and the whole society is constantly teaching virtue to one another, especially to children:

When so much care and attention is paid to virtue, Socrates, both in public and private, are you still puzzled about virtue being teachable? The wonder would be if it were not teachable” (326e)

51 Note that this is not exactly the same issue as whether or not crafts are learnable. John Lyons notes, in Plato’s Greek, “learning” has the same consequential relationship to “knowing” as “becoming” has to “being” (“μαθαίνω”:“επισταται”:“γίνεσαι”:“είναι”), and therefore, it is analytic that becoming a craftsman requires learning a craft. However, learning does not necessarily imply teaching. One could, for example, learn from experience or through calculation (John Lyons, Structural Semantics: An Analysis of Part of the Vocabulary of Plato [Oxford: Basil Blackwell, 1963], 155).

52 It is counter-intuitive to call shame and justice crafts, and there isn’t space to justify Protagoras’ use here. It is tied to Protagoras’s claim that beliefs about what are just and shameful are both themselves taught.


54 Protagoras slips back-and-forth between justice and virtue a few times in this speech.

55 τοπασάτης σὺν τῆς ἀπεμελείας ὁδής περὶ ἀρετῆς ἰδιὸς καὶ δημοσίως, θαυμάζεις, ὁ Σώκρατες, καὶ ἀπορεῖς εἰ διδάκτων ἕστιν ἀρετή; ἄλλ’ οὐ χρῆ θαυμάζειν, ἄλλ’ πολὺ μᾶλλον εἰ μὴ διδάκτων.
Protagoras disagrees with Socrates that something’s being teachable implies that it is specialized. However, he agrees with Socrates that all crafts are teachable. While the *Protagoras* is an extremely complex dialogue ending in *aporia* (confusion) and in which it is not clear that Socrates leaves the victor, that *both* interlocutors in a dialogue agree on a shared claim, in this case that crafts are teachable, provides strong evidence that it is a view that Plato thinks has rational support.

In this section, I have provided both several examples of near-co-extensive use of “technē” and “epistēmē” by Plato and also an explicit argument that crafts must be teachable because they are knowledge in the *Protagoras*. That crafts are a form of knowledge is important to understanding their relationship with each other and with meta-crafts (those crafts that are included in all crafts) that I will discuss in the next section.

6 Crafts and Dialectic

**Principle #4:** Crafts are dependent on dialectic for a determinate subject matter and to systematically approach causal relationships.

**Principle #4a:** Crafts have a determinate subject matter

**Principle #4b:** Crafts depend on the understanding of causal relationships.

The crafts have a special relationship with two meta-crafts, dialectic and measurement. These meta-crafts are required for any crafts to function. The relationship with dialectic is introduced in the *Gorgias* and discussed in detail in the *Phaedrus*. By dialectic, I am referring to the craft of collecting things into unified kinds and then dividing those unified kinds according to appropriate divisions. This relationship between other crafts and dialectic is especially important to medicine, as the relationship described in the *Phaedrus* putatively derives from medicine and is in fact called “the method of Hippocrates”. In the *Phaedrus*, Socrates asserts that all productive crafts depend on dialectic in order to properly function. They are dependent on dialectic for two reasons. First, through collection, dialectic provides the crafts with an intelligible object; without it, they would not be able to differentiate between the possible ends of a craft. Second, dialectic provides appropriate divisions within its subject matter, allowing
the producer to discover the causal relationships between its parts. Dialectic then serves as the first of two of what I shall call “meta-crafts”, crafts that, according to Plato, any craft must use in order to be considered properly a craft at all.

The Gorgias, like the Protagoras, includes a very important passage in which the craft-status of a particular practice is challenged. Since Plato uses the term “technē” in such a broad, conventional way, passages where something’s status as a craft is directly challenged are especially important. These challenges allow us to determine positive criteria for a craft by taking note of the bases on which characters deny that something is a craft. In the Gorgias, Socrates explicitly excludes four practices from being considered crafts: rhetoric, sophistry, pastry-baking and cosmetics. As he argues directly against the craft status of pastry-baking and cosmetics for his argument, I will focus on these latter two. He criticizes pastry-baking and cosmetics for two reasons, each of which appears to be sufficient to exclude them as crafts: they aim at pleasure rather than the good and they lack an understanding of their objects.56

First, he argues that pastry-baking and cosmetics are kinds of flattery (“kolakeia”) that do not have any knowledge, but only guess as what is most pleasant, rather than knowing what is best:

Now flattery takes notice of them, and – I won’t say by knowing, but only by guessing – divides itself into four, masks itself in each of the parts, and then pretends to be the characters of the masks. It takes no thought at all of whatever is best; with the lure of what’s most pleasant at the moment, it sniffs out folly and hoodwinks it, so that it gives the impression of being most deserving. (464c-d)57

The contrast here is two-fold: on the one hand, pastry-baking is flattery while medicine is a craft, because pastry-baking tries to produce pleasure, while medicine tries to produce

56 As Raphael Woolf notes, not aiming at a good and lacking an account are not simply two independent necessary conditions for something’s being a craft as opposed to a practice. They are connected. A practice without a good cannot be systematic. His approach is different from mine, however, as he seeks an explanation of the connection within the Gorgias itself, while I seek the explanation by using the Phaedrus to tie the two criteria together (Raphael Woolf, "Why is Rhetoric Not a Skill?", History of Philosophy Quarterly, 21 [2004]: 119-30). David Levy, on the other hand, treats the Socratic claim that rhetoric is unsystematic as an empirical, historical claim about contemporary rhetors rather than a theoretical claim (David Levy, "Technē and the Problem of Socratic Philosophy in the Gorgias", Apeiron, 38 [2005]: 205-8).

57 ἡ κολακευτικὴ αἰσθημένη—οὐ γνώσα λέγο ἄλλα στοιχασμένη—τέτραχα ἐωτὴν δυνατόσα, ὑποδύσα ὑπὸ ἔκαστον τῶν μορίων, προσστέτηται εἶναι τοῦτο ὅπερ ὑπέδω, καὶ τοῦ μὲν βελτίστου οὐδὲν φροντίζει, τὸ ὑπὸ ἡδίστω θηρεύεται τὴν ἀνοιαν καὶ ἐξαπατᾶ, ὡστε δοκεῖ πλείστου ἄξια εἶναι.
what is best; on the other hand, flattery *guesses* while medicine *knows*. The pleasure is produced because pastry-baking *pretends* to be medicine, in the sense that it fools the tongue into enjoyment that is properly reserved for food that is healthy. Cosmetics is similar; it makes someone appear beautiful, while gymnastics makes him or her truly beautiful. As such, Socrates excludes pastry-baking and cosmetics because they do not have a unique subject matter. They are logically parasitic on medicine and gymnastics and seek to imitate their objects, and produce pleasure in as much as they are able to successfully manipulate the pleasure naturally associated with health and beauty.\(^{59}\)

However, Socrates goes further than merely chastising pastry-baking and cosmetics for being parasitic and imitative.\(^{60}\) He also says that they lack *knowledge* of their objects, claiming that as a result, it is not a craft, but rather a kind of “practice” or “*empeiria*”:\(^{61}\)

> And I say that it isn’t a craft, but a practice, because it has no account of the nature of whatever things it applies by which it applies them, so that it’s unable to state the cause of each thing. (465a)\(^{62}\)

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\(^{58}\) Though the quoted portion of the passage doesn’t mention medicine, it is the craft being contrasted with the *kolakeia* of pastry-baking.

\(^{59}\) My solution differs from that of Woolf in the following important respect. He allows that there might be a systematic craft of producing pleasure, but that the problem with pastry-bakers and sophists is that they pretend to be doctors and politicians to the hearers. The problem, then, isn’t with their activity, but with what they pretend their activity is (Raphael Woolf, “Why is Rhetoric Not a Skill?”, *History of Philosophy Quarterly*, 21 [2004]: 119-30). However, the problem with this interpretation is that it allows for the possibility of a pure confectionary craftsman who clearly places health warnings on his or her tasty products. Socrates intends to rule out even this, because the pleasure from food doesn’t simply fool the taster but the tongue. It is not only the pastry baker who is imitating a doctor, but the pastry that is imitating food. The practice of pastry baking lacks any product of its own because its product is merely an imitation of the product of another craft.

\(^{60}\) For an interesting account of in just what way pleasure is parasitic on the good state of the body, see Lee Franklin, "Technē and Teleology in Plato’s Gorgias", *Apeiron*, 38 (2005): 229-55.

\(^{61}\) Note that this is not the distinction between “crafts” and “practices” made by Alasdair MacIntyre. He uses the term “practices” to refer to social practices whose end is virtue: “By a practice I am going to mean any coherent and complex form of socially established co-operative human activity through which goods internal to that form of activity are realised in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended” (Alasdair MacIntyre, *After Virtue*, 3rd ed. [South Bend: University of Notre Dame Press, 2007], 187).

\(^{62}\) τέχνην δε αὐτὴν οὐ φημι εἶναι ἄλλ᾿ ἐμπερίαν, ὥστε ὃς ἔχει λόγον οὐδένα ὃ προσφέρει ἢ προσφέρει ὁποῖοι ἄττα τὴν φώσιν ἔστιν, ὥστε τὴν αἰτίαν ἑκάστου μὴ ἔχειν εἰσεῖν.
This lack of knowledge is two-fold and connected: first, it lacks an account of the nature of what it applies to, and second, it is unable to state the causes of each thing. This leaves the reader with two significant puzzles. First, how is this connected to his earlier discussion of knowing what is best and seeking what is best? Socrates excludes the possibility that someone might know the nature of something, but not seek what is best, or alternatively, seek what is best but not know its nature. Somehow, seeking what is best and knowing the nature of something are connected, yet we are not told why. Second, how does knowing the nature of something relate to knowing the cause of each thing? Given the “so that” in the above quotation, the inability to state causes is somehow a result of not knowing the nature of something, but it is not immediately obvious that this should follow.

Fortunately, these puzzles are addressed in detail in the *Phaedrus*, when Socrates describes what he calls the “Method of Hippocrates”. In that dialogue, Socrates addresses the same question that is being addressed in the *Gorgias* passage quoted above: is rhetoric a craft? In the *Phaedrus*, Socrates opens up the possibility that there is a kind of rhetoric that might be considered a craft, but sets a series of strict conditions. Importantly, these conditions are set as conditions for any craft, and fortunately for the purposes of this dissertation, the example is a medical one. In order to be considered a craft, a craft must follow the “Method of Hippocrates”, which depends on a method of collection and division referred to as dialectic. In the rest of this section, I will describe this method of collection and division and how Socrates argues that the crafts depend on dialectic.

63 David Levy raises the interesting possibility that Socrates, at least in part, criticizing the method of developing crafts that Polus provides at *Gorgias* 448c, in which Polus claimed that craft comes from practice (“*empereia*”) (David Levy, "Technē and the Problem of Socratic Philosophy in the Gorgias", *Apeiron*, 38 [2005]: 201). If one translates the word “*heurēmenai*” as “discovered” rather than Zeyl’s “devised”, the unsystematic nature of Polus’ claim becomes apparent.

64 This question is also raised by Lee Franklin in “Technē and Teleology in Plato’s *Gorgias*”. He too argues that knowledge of causal (“*aitia*”) relationships depends on knowing the essential property of something: “Generally, the regular behavior of a property – the full range of its law-like relationships – results from what it is, i.e. its essence”. Even if this is seems correct, we do not hear from Plato in the *Gorgias* why this is the case (Lee Franklin, "Technē and Teleology in Plato’s *Gorgias*", *Apeiron*, 38 [2005]: 238).

65 I will not take a position on which dialogue was written first. However, the *Phaedrus* does appear to significantly flesh out some of the assumptions of the *Gorgias* passage. This could be a result of the *Phaedrus* being written to clarify portions of the *Gorgias*, but it could equally be the result of the *Gorgias* being written with the assumption that the reader was already familiar with the “Hippocratic method” described in the *Phaedrus*. 
In the *Phaedrus*, Socrates elaborates on the requirements presented briefly in the *Gorgias*. First, he explains the connection between seeking the good in a craft and knowing the nature of one’s subject. In order to explain this connection, he provides the example of a physician who manipulates the body without reference to its good, using the comic example of someone who is able to induce vomiting or bowel movements to no end:

Socrates: Suppose someone came to your friend Eryximachus or his father Acumenus and said: ‘I know treatments to raise or lower (whichever I prefer) the temperature of people’s bodies; if I decide to, I can make them vomit or make their bowels move, and all sorts of things. On the basis of this knowledge, I claim to be a physician; and I claim to be able to make others physicians as well by imparting it to them.’ What do you think they would say when they heard that?

Phaedrus: What could they say? They would ask him if he also knew to whom he should apply such treatments, when and to what extent. (268a-c)

Socrates’ point here is a straightforward and obvious one: the ability to manipulate the body in various ways is not medicine; one needs to do so with some sort of purpose in mind. Socrates does have a place for the sort of knowledge that the mere technician has. He calls these, instead, the “preliminaries” of medicine. That is, they are techniques that one learns prior to learning medicine proper, and include the ability to manipulate the body in various ways. Medicine itself allows the physician to manipulate the body in the right way.

It is this connection between preliminaries and medicine proper that provide the connection missing in the *Gorgias* between knowing what is best and knowing the nature of one’s object. In the *Gorgias*, Socrates claims that pastry-baking and cosmetics are not crafts on the grounds of not caring for the best and not understanding the nature of their object. The *Phaedrus* makes this connection explicit. Here, Socrates argues that dialectic allows the craftsperson to use appropriate collection and division to discover the

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66 {ΣΩ.} Εἰπέ δὲ μοι ἢ τὶς προσελθὼν τῷ ἑταίρῳ σου Ἐρυξιμάχῳ ἢ τῷ πατρὶ αὐτοῦ Ἀκουμένῳ εἶποι ὅτι “Ἐγὼ ἐπιστέματι οἰκεῖ, ἢ τὶς σύμμοιρος προσφέρειν, ὅπως θερμαίνει τ’, ἢ τὸν βούλομαι καὶ ψύχειν, καὶ ἢ τὸν δὲ μοι ἐμεῖν ποιεῖν, ἢ τὸν δ’ αὖ, κάτω διαχωρεῖν, καὶ ἄλλα πάμπολλα οἰκεῖαι καὶ ἑπιστήμην τὸν ἀστὸν ἵατον ἰατρικὸν ἐτέλεσε καὶ ἄλλον ποιεῖν ὃ ἄν τὴν τούτων ἐπιστήμην παραδόῃ, τί ἢν οἷον ἀκούσαντας εἶπεῖν; {ΦΑΙ.} Τί δ’ ἄλλο γε ἢ ἔρεσθαι εἰ προσεπίστηται καὶ οὐσίαν δεῖ καὶ ὑπότε ἐκείστα τούτων ποιεῖν, καὶ μέχρι ὀπὸςον;
nature of the whole subject of his or her own craft. When discussing rhetoric, which he
describes as “psychagōgé” or “soul-leading”, Socrates argues that one cannot understand
the subject unless one understands the nature of the whole soul: “Do you think then that it
is possible to reach a serious understanding of the nature of the soul without
understanding the nature of the whole?” (270b).67

What is meant by “whole” in the above passage is contentious, and there are
various interpretations.68 Paul Woodruff interprets it to mean, “the whole universe” and,
in fact, translates this phrase “…the nature of the world as a whole?”, despite there being
no Greek to correlate to the phrase “the world as.”69 Jacques Jouanna translates it in a
similar way: “…the nature of the universe.”70 This interpretation is incorrect, as it is not
consistent with other portions of the text, which indicate that Socrates is referring to the
product or subject of the craft, considered as a whole. Socrates considers the case of
what I shall call the “pulp fiction” author, who is analogous to the mere technician in
medicine: he or she knows how to manipulate emotions, but does not know how to put
those emotional manipulations together into a whole work of tragedy:

PHAEDRUS: Oh, I am sure they too would laugh at anyone who
thought a tragedy was anything other than the proper
arrangement of these things: They have to fit with one another
and with the whole. (268d)71

Phaedrus here is referring to the arrangement of the parts in the whole work of tragedy,
not the whole universe. The word “whole”, then, has already been used just a page
earlier, and what is meant by it is the product of the craft, considered as a whole, not the
whole world.72

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67 {Ω.} Ψυχής σον φύσιν ἀξίως λόγου κατανοήσαι οἷς δυνατον εἶναι ἄνευ τῆς τοῦ ἄλου φύσεως;
68 G.E.R. Lloyd notes that this dispute goes back to the ancient world, and he finds the dispute so
intractable that he seeks separate textual antecedents in the Hippocratic corpus for each interpretation. He
himself takes no position (G. E. R. Lloyd, Methods and Problems in Greek Science [Cambridge:
70 Jacques Jouanna, Hippocrates (Baltimore: Johns Hopkins University Press, 1999), 6. Much of the debate
about to which text Plato is referring assumes that the Phaedrus ought to be interpreted in this way. If my
interpretation is correct, it would open possible alternative sources for the “Hippocratic method” in the
Phaedrus.
71 {ΦΑΙ.} Καὶ οὗτοι ἄν, ὃ Σωκράτες, ὦμαι καταγελώνει τις ὥστε τραγῳδίαν ἄλλη τί ἐστε ἡ τούτων
σύστασιν πρέποισαν ἄλληλοις τε καὶ τῷ ἄλῳ συνισταμένην.
72 Woodruff and Jouanna’s translations were perhaps influenced by a peculiar claim made by Socrates a
few interchanges earlier, that all crafts require ethereal speculation about nature: “All the great arts require
endless talk and ethereal speculation about nature” (270a). However, Socrates does not mean the whole of
One needs to understand that subject or product as a unity, or else the craft has no product and is reduced to a series of techniques, like the mere medical technician or the pulp-fiction playwright. In this way, the introduction of wholes and natures connects the two parts of Socrates’ charge against pastry-baking and cosmetics in the *Gorgias*. The pastry-baker is unable to consider the good, because the good of medicine is the body, considered as a whole. Since the pastry-baker does not understand the nature of the body, he or she is forced instead to simply appeal to its surrounding pleasures, unable to consider the body’s good because he or she is unable to consider the body’s nature.

Understanding of the nature of the subject matter is what allows the crafts to use their techniques in tandem so as to produce a whole product. This connects the two concerns of the *Gorgias*, by requiring understanding of the functioning of the body as a whole as a condition of attending to its good.

Dialectic is that craft that allows a crafts-person to understand this whole and the relationship between its parts to each other and to outside causes. The method of dialectic described in the *Phaedrus* is the method of collection and division. Dialectic is what Socrates calls a “systematic art”, and it enables one to perform the two tasks of collection and division: “…there were in it [love] two kinds of things the nature of which it would be quite wonderful to grasp by means of a systematic art” (265c-d).

The first nature, as he immediately tells us, but rather, the nature of the subject of the craft. Pericles had studied with Anaxagoras, who had said a great deal about the nature of the soul, the proper subject of rhetoric (a kind of soul-leading):

> “Anaxagoras…understood the nature of mind and mindlessness – just the subject on which Anaxagoras had the most to say. From this, I think, he [Pericles] drew for the art of rhetoric what was most useful to it” (270a)

The whole that is understood in learning a craft is the whole subject or product of the craft. The playwright understands the whole product of his or her work, while the rhetorician understands the nature of the soul, the subject of his or her craft.

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73 Franklin holds that there are actually two different levels of causal relationships, teleological and material relationships: “Within certain limitations, the craftsman must understand both levels, teleological and material, and the way they interact. Indeed, although the crafts-person’s primary concern is the law-like relations in the teleological system of the technē, the work of the technē is accomplished by harnessing the non-teleological law-like relations of the underlying phenomena” (Lee Franklin, “Technē and Teleology in Plato’s Gorgias”, *Apeiron*, 38 [2005]: 253). However, though both the *Gorgias* and the *Phaedrus* make a distinction between technique and proper application, neither says anything about two distinct, law-like bodies of causal knowledge. On the contrary, both the reference to the pastry-baker as “guessing” and the reference to the vomit-inducer as having a “few” potions imply that there is not law-like understanding at all without understanding of the good of the whole subject.

74 ηνύησλ δέ ηηλσλ ἐθ ηύρεο ῥεζέλησλ δπν άλ ιδν δυλακηλ ηέρλ ηιαβε άχρι, τοτον δε τινων έκ τύρης ρηθέντων δυοιν ειδοιν, ει αυτοιν την δυναμιν τέχην λαβειν δυνατο τις, ουκ άχαρι.
part of dialectic, collection, is what enables one to understand wholes. Socrates explains this near the beginning of the discussion of wholes:

Socrates: The first consists in seeing together things that are scattered about everywhere and collecting them into one kind, so that by defining each thing we can make clear the subject of any instruction we wish to give. (265d)

Without collection into kinds and therefore dialectic, it would be impossible to appreciate one’s subject as a whole and therefore to have a definite product. The single subject and its good are what give these techniques their unity.

The second part of dialectic is equally important to the development of all crafts, as it is what enables the craftsperson to understand the causal relationships necessary for production in a craft. This second part of dialectic is division, which Plato likens to cutting up the world like a good butcher: “This, in turn, is to be able to cut up each kind according to its species along its natural joints and to try not to splinter any part, as a bad butcher might do” (265e). Only by correctly “cutting up” the parts of the subject of the craft, can the craftsperson systematically understand the causal relationships between those parts. In the Phaedrus, Socrates is more explicit about the kind of causes that a craftsperson must know. Having used dialectic to divide the subject into parts, the craftsperson then examines the relationships between the parts.

The passage of the Phaedrus discussing the utility of division to crafts is complex, so I will quote it in its entirety:

First, we must consider whether the object regarding which we intend to become experts and capable of transmitting our craft is simple or complex. Then, if it is simple, we must investigate its power: What things does it have what power of acting upon? By what things does it have what natural disposition to be acting upon? If, on the other hand, it takes many forms, we must enumerate them all and, as we did in the simple case, investigate how each is naturally able to act upon what and how it has a natural disposition to be acted upon by what. (270d-e)

75 {ΣΩ.} Εἰς μιὰν τὰ ἰδέαν συνορᾶντα ἄγειν τὰ πολλὰ ἃ δεικνύειν ἰνα ἡκαστὸν ὡριζόμενος δῆλον ποιῆ περὶ οὗ ἀν ἂν διδάσκειν ἐθέλη.
76 {ΣΩ.} Τὸ πάλιν κατ’ ἐνδὺ δύνασθαι διατέμεναι κατ’ ἄρθρα ἢ πέρικες, καὶ μὴ ἐπιθυρεῖν καταγνώσῃ μέρος μηδέν, κακὸν μαγείρου τρόπῳ χρώμενων.
77 πρῶτον μὲν, ἀπλοῦν ἢ πολυειδῆ ἠστὶν οὗ περὶ βουλησόμεθα εἰναι αὐτοὶ τεχνικοὶ καὶ ἄλλον.
Using collection, one is able to understand the nature of the object, but that is not sufficient for understanding a craft. In addition to understanding the nature of the object, productive crafts require the understanding of causal relationships in order that the desired goal can be produced. The Hippocratic method has two steps. First, one must systematically divide the subject into parts if it is complex. Then, one must examine the causal interaction of those parts with the parts of everything else. I will discuss each of these parts of division’s relationship with subjects in turn.

An appropriate division of the subject of a craft into parts is required in order that the understanding of causal relationships be systematic. When describing the would-be physician earlier, who knew how to make a person throw up or have a bowel movement and thought that made him a physician, Phaedrus criticizes him for not understanding the whole, but afterwards, Phaedrus adds a second criticism, that this physician’s knowledge is incomplete: “I think they’d say the man’s mad if he thinks he’s a doctor because he read a book or happened to come across a few potions; he knows nothing of the craft” (268c). The putative physician who does not understand dialectic not only lacks understanding of when to use those techniques he has, but he lacks complete techniques, consisting only of a “few potions”. Division is what allows craft knowledge not to be simply a “few potions”. With appropriate division of its subject into parts, medicine is able to be systematic. It is not enough to simply say that medicine should understand causal powers; without understanding how to properly divide the body into parts, one would not even know what relationships one is looking for. Dialectic allows the physician to understand the separate parts of the body in such a way that the search for the causal relations that might benefit the body can be begun systematically.

Despite using medicine for his initial analogy, the extended discussion which Plato provides is not about medicine, but rhetoric. He seeks to divide souls into different types (genē), and then divide speech into different types (genē), and see what the causal relationships are between each of them. Once all of these relationships have been noted, one has understanding of the causal relationships required for understanding rhetoric.

δυνατοὶ ποιεῖν, ἐπειτα δὲ, ἂν μὲν ἄπλοῦν ἦ, σκοπεῖν τὴν δύναμιν αὐτοῦ, τίνα πρὸς τί πέφυκεν εἰς τὸ δρᾶν ἔχον ἢ τίνα εἰς τὸ παθεῖν ὑπὸ τοῦ, ἄν δὲ πλείον εἰδὴ ἔξη, ταῦτα ἄριθμησάμενον, ὅπερ ἐφ’ ἐνός, τοῦτ’ ἱδεῖν ἐφ’ ἑκάστου, τὸ τί ποιεῖν αὐτὸ πέφυκεν ἢ τὸ τί παθεῖν ὑπὸ τοῦ;

{ΦΑΙ.} Ἐπείν ἂν οἴμαι ὅτι μαίνεται ἀνθρώπος, καὶ ἐκ βιβλίου ποθὲν ἀκούσας ἢ περιτυχόν φαρμακίας ἰατρὸς οἴεται γεγονέναι, οὐδὲν ἔπαιρεν τῆς τέχνης.
This could become quite an involved process, as the total number of interactions to be studied would be the product of the number of types of souls and the number of types of speech, and Socrates does not provide a detailed analysis of these relationships here. However, dialectic is necessary to this method in order to even start the process: without an appropriate division into types, it would be impossible to know which interactions to look for.\textsuperscript{79}

One puzzle in this section, however, is that Plato is using the term “\textit{genē}” in two different ways: as types and as parts. When discussing the types of souls, he talks about the different types of souls and the different types of speech. Each then has a certain kind of result: for instance, insults to a vain person generally create the same response. However, when discussing medicine, the division described is not a division into kinds but a division into \textit{parts}. Understanding how the body works is not simply a matter of classifying people and determining what effects things have on different kinds of bodies, but of actually understanding the parts of the body and how each of them is affected by various treatments. In fact, his metaphor of “cutting up nature according to its natural joints” is clearly a metaphor of parts. Despite this apparently obvious difference, Socrates uses exactly the same language to describe them: he calls them “types” or \textit{genē}. He uses an interesting phrase to describe the body in contrast with the soul: he says that the shape of bodies “\textit{take many genē}”: “whether it [the soul] is one and homogeneous by nature or takes many \textit{genē}, like the shape of bodies…” (271a).\textsuperscript{80} The body has many different \textit{genē}, because it has many different shapes, which together compose the shape of the body. These shapes are referred to as “\textit{genē}”, which is strange given that one would expect them to be called “parts” rather than “types”.

However, when one considers “types” and “parts” relative to the Hippocratic method being described, they are in many ways equivalent. Each \textit{genos} is divided in order to discover its \textit{dynamis} or power relative to other things. On the one hand, different “types” of personalities would be expected to react in similar ways to similar types of speech, or different “types” of liquid, for example, might be expected to react in similar

\textsuperscript{79} This is an important insight into a problem in scientific understanding \textit{per se}: though we might be able to use the scientific method to inform us of the causal interaction between particular events, one could not even know what to look for without first appropriately dividing up one’s subject so as to know what possible causal interactions there might be.

\textsuperscript{80} ποτέρον ἐν καὶ ὅμοιον πέρικεν ἢ κατά σώματος μορφήν πολιειδῆς.
ways to different temperatures. On the other hand, different parts of a body would react in different ways to different effects or, considered as organs, would themselves have different powers or functions within a body. In both cases, whether one is considering “types” or “parts”, one would need to have a proper division into types or parts so as to begin a process of discovery of powers relative to different effects. In terms of their relevance to the “Hippocratic Method”, then, what one might call “types” or “parts” are largely equivalent, and it should not be too surprising that Socrates uses the same term, “genē” to refer to both. In both cases, proper division of a subject into genē allows the process of discovering the causal relationships necessary for the creation of a product.

In the Phaedrus, Socrates provides us with a detailed description of what he calls the “Method of Hippocrates” that underscores the importance of dialectic to any productive craft. First, the collective part of dialectic provides crafts with an understanding of their subjects as a whole, and without it, the craft would have no product and be unable to seek any sort of end. Second, the divisive part of dialectic allows the crafts-person to begin the process of discovering causal relationship between types or parts, and without it, the craft would be unsystematic and incomplete. As a result, any craft that intends to either be productive or understand causal relationships requires dialectic in order to proceed.

7 Crafts and Measurement

Principle #5: Productive crafts are dependent on measurement to generate their products.

The second meta-craft is measurement. Measurement has a special role in all crafts, but particularly in productive ones. An extended example of the utility of measurement for the military craft is provided in the Republic VII, though the explanation for the connection is provided in the Philebus and the Statesman. Plato

81 Kenneth Dorter hypothesizes that the use of measurements in the crafts serves as a means of drawing the philosopher from the realm of pure contemplation to the realm of practical action within the cave (Kenneth Dorter, "Philosopher-Rulers: How Contemplation Becomes Action", Ancient Philosophy, 21 [2001]: 335-56). Nonetheless, this is not the kind of utility I have in mind. I refer instead to the way in which the crafts require measurement to function at all.
identifies two parts of the craft of measurement, which have an important role in any craft in order for them to be “most craft-like”. The first art of measurement is purely comparative measurement, through which one determines the relative value of particulars on a continuum. The second craft of measurement is unit measurement, though which one determines the values of an object relative to certain ratios or units. This second craft of measurement takes slightly different shapes in the *Philebus* and in the *Statesman*: in the *Philebus*, any type of measurement using units is considered a part of unit measurement, but in the *Statesman*, unit measurement is always relative to an ideal proportion. This unit measurement is especially important to productive crafts, as Plato argues in the *Philebus* that the affixing of ratios using units is an important part of the *genesis* or “coming-to-be” of anything. In this section, I will detail the two types of the art of measurement, and discuss the relevance of the arts of measurement to *genesis*, especially with reference to medicine.

Socrates makes clear the need for mathematics in the crafts in *Republic* VII. In that book, Socrates defends the teaching of mathematics to the military in his *kallipolis*. Socrates clearly claims that all crafts and knowledge require calculation:

> That inconsequential matter of distinguishing the one, the two and the three. In short, I mean number and calculation, for isn’t it true that every craft and body of knowledge must have a share in that? (522c)

Curiously, in order to defend this claim, Socrates does not provide a long list of examples, as one might expect, but rather an extended example from war. He shows several different ways in which soldiers use mathematics in their field. First, he cites an example of Palamedes bragging about his contribution to war through the development of numbers: “He [Palamedes] says that, by inventing numbers, he established how many troops there were in the Trojan army and counted their ships and everything else…”

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82 This passage in the *Republic* is at least in part comedic. However, Plato often uses comic passages to elucidate important principles.

83 Τὸ φαύλον τούτο, ἡν δ’ ἐγώ, τὸ ἐν τε καὶ τὰ δύο καὶ τὰ τρία διαγιγνώσκειν· λέγω δὲ αὐτὸ ἐν κεφαλαίῳ ἀριθμῶν τε καὶ λογισμῶν. ὡς οὖν οὗτο περὶ τούτων ἔχει, ὡς πάσα τέχνη τε καὶ ἐπιστήμη ἀναγκάζεται αὐτῶν μέτοχος γίγνεσθαι;

84 The use of war examples shows the Plato does not intend to limit the need for mathematics to productive crafts. War is described as an acquisitive craft at *Sophist* 222c.
Geometry along with arithmetic is required in order to organize one’s own troops into formations and even to successfully set up a military camp, one requires geometry:

Insofar as it pertains to war, it’s obviously appropriate, for when it comes to setting up camp, occupying a region, concentrating troops, deploying them, or with regard to any of the other formations an army adopts in battle or on the march, it makes all the difference whether someone is a geometer or not. (526d)

Finally, knowledge of the especially mathematical craft of astronomy is needed in order to understand the seasons, months and years:

And what about astronomy? Shall we make it the third? Or do you disagree?

That’s fine with me, for a better awareness of the seasons, months, and years is no less appropriate for a general than for a farmer or navigator. (527c-d)

Though Socrates and Glaucon aren’t specific here as to the utility of knowing seasons, months and years to a general, they are likely making reference to the obvious need to know in which direction one is travelling as well as such less obvious needs such as knowing the date so as to properly meet with other armies and be aware of possible weather difficulties in a battle.

Though the connection between measurement and crafts is stated in the Republic, the connection is explained in more detail in the Philebus and in the Statesman. Two types of measurement are defined in the Philebus. The first sort is a purely comparative kind of measurement, not involving any units at all. The second includes ratios between different lengths:

SOCRATES: Whatever seems to us to become ‘more and less’, or susceptible to ‘strong and mild’ or to ‘too much’ and all of that kind, all that we ought to subsume under the genus of the unlimited as its unity...But look now at what does not admit of these qualifications, but rather their opposites, first of all ‘the

85 ἢ οὐκ ἐννενόηκας ὅτι φησιν ἁρμιθῶν εὑρὼν τὰς τε τάξεις τῷ στρατοπέδῳ καταστήσας ἐν Ἡλιῳ καὶ ἐξαρθημένας ναούς τε καὶ τόλμα πάντα.
86 Ὑσον μὲν, ἐφη, πρὸς τὰ πολεμικὰ αὐτοῦ τείνει, δῆλον ὅτι προσήκει: πρὸς γὰρ τὰς στρατοπεδεύσεις καὶ καταλήψεις χωρίων καὶ συναγωγῶν καὶ εκτάσεις στρατιώτων καὶ δότα ἡ ἄλλα σχηματίζοντο τὰ στρατόπεδα ἐν αὐτὰς τε τὰς μάχαις καὶ πορείας διαφέροι ἀν αὐτὸς αὐτοῦ γεωμετρικός τε καὶ μή ὄν.
87 Τί δέ; τρίτων θόμεν ἀστρονομίαν; ἢ οὐ δοκεῖ; Ἔμοι γοῦν, ἐφη· τὸ γὰρ περὶ όρας εὐπαθητοτέρως ἔχειν καὶ μηνῶν καὶ ἐνταυτῶν οὐ μόνον γεωργία σοῦδὲ ναυτιλία προσήκει, ἄλλα καὶ στρατηγία οὐχ ἤτον.
equal’ and ‘equality’ and, after the equal, things like ‘double’, and all that is related as number to number or measure to measure: If we subsume all these together under the heading of ‘limit’, we would seem to do a fair job. (24e-25a)

Note that Plato is not talking about measuring something with a ruler, determining that one stick is six and the other eight inches, and then concluding that the eight-inch stick is larger than the six-inch stick because the number eight is greater than the number six. This would involve “comparing measure to measure”, which will fall under the second art of measurement. Rather, this part of the art of measurement seems like it may be some sort of sensory power, as one is simply aware of the comparative sizes without using anything like multiples. This sensory power would allow me to say, “this car is faster than that car” or “this cat is larger than that cat”. However, when I do this, I have not yet reasoned about “how much” faster or larger the one is than the other. To do this requires more reasoning, specifically the mathematical reasoning that is involved in ratios.

The second part of this art of measurement, as described in the *Philebus* specifically includes the awareness of these ratios. Any measurement involving number would involve the use of ratios. For instance, in order to determine a wall’s length, I might count the number of paces or feet that would be required to go from one end to the other, thereby determining the multiple of one object (my foot) to the other (the wall). Rulers or other measuring devices allow us to skip steps, as some of the measurement has been done for us on the ruler itself. However, the ruler could not function without having done this work of laying one “inch” next to another so that we can measure the multiples of one object by another. Other measurements are more complex, but require a similar use of ratios. Measuring velocity requires measuring time and distance and, since the development of special relativity, an inertial plane to treat as stationary. Before the discovery of absolute zero, temperature was difficult to find units for, but discovery of
the rate of liquid expansion ultimately allowed the creation of the thermometer. In all of these cases, the same point applies: measurement using units requires measurement using ratios; one must select some perhaps arbitrary unit and then measure everything else in proportion to it. Once this has been done, one is able to discuss the ratios independently of the objects, and consider their relationship, while the first art of measurement only allows the ability to determine a few sensory objects and their comparative values.

In the *Statesman*, Plato discusses an additional element to this second art of measurement: he considers it to be intrinsically normative. The contrast between the two sorts of measurement is that between a non-normative type and a type of measurement compared to a normative unit, the *metrion*:

> It’s clear that we would divide the art of measurement, cutting it in two just the way we said, positing as one part of it all those sorts of expertise that measure the number, lengths, depths, breadths and speeds of things in relation to what is opposed to them, and as the other, all those that measure in relation to what is in due measure, what is fitting, the right moment, what is as it ought to be – everything that removes itself from the extremes to the middle. (284e)

This is a curious claim for Plato to make, as it has the strange effect of building normativity into the art of measurement, something that sounds quite strange to the modern ear, accustomed to thinking of the “facts” of measurement as being distinct from the “values” of normativity. Plato, however, defends the addition of normativity in two ways: first, he allows that certain crafts require normativity as a part of their definition, and would in fact be unintelligible without it. Second, he argues that measurement with

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89 Note that Plato may not have believed a unit of temperature to be possible. None of his examples of unit measurement involve temperature, while temperature examples are quite common when he discusses purely comparative measurement.

90 I will leave the term “metrion” untranslated in the body of the text, though it is translated as “due measure” below. Note that “metrion” is not the term that is translated as “mean” in Aristotle’s ethics. That is the term “meson”, which is translated as “middle” below. Though in this passage, Plato lists a number of normative units (“due measure...fitting...the right moment...what is as it ought to be”), at 284b he had introduced this argument referring to all of these under the single term, “metrion”: (“οὕτω καὶ νῦν τὸ πλέον αὐτὸ καὶ ἐλαύνον μετρητὰ προορισθηκαςέκετέντο γένεσθαι μή πρὸς ἄλλα μόνον ἄλλα καὶ πρὸς τὴν τοῦ μετρίου γένεσιν,”).

91 {ΞΕ.} Δὴμήν ὅτι διαπροέμεν ἀν τὴν μετρητικήν, καθάπερ ἐρρήθη, ταύτῃ δόχα τέμνοντες, ἐν μὲν τιθῆνες αὐτῆς μόρον συμπάσας τέχνης ὁπόσα τῶν ἀριθμῶν καὶ μῆκης καὶ βάθης καὶ πλάτης καὶ ταχύτητας πρὸς τούναντιν μετροῦσιν, τὸ δὲ ἔτερον, ὁπόσα πρὸς τὸ μέτριον καὶ τὸ πρέπον καὶ τὸν καιρόν καὶ τὸ ὅσον καὶ πάνθ᾽ ὁπόσα εἰς τὸ μέσον ἀποκισθῆ ὁπόσα τῶν ἐσχάτων.
relationship to some sort of metrion is required for any productive craft to be truly productive. I will address both of these points in turn, in order to show how Plato’s normative measurement can constitute a proper craft under his use of the term.

First, Plato argues in other places that some crafts are necessarily normative, and would be completely unintelligible without normativity. In the *Sophist*, Plato divides up division into two kinds, a non-normative kind and a normative kind: “In fact in what we’ve called discriminations one kind separates what’s worse from what’s better and the other separates like from like” (226d). The normative kind of separation he calls *cleansing*, and he includes in this a number of different crafts. Cleansing, as a craft, is simply unintelligible without normativity; it makes no sense at all to say that something is being cleaned without making normative claims about what is bad and therefore ought to be removed. He includes a number of crafts as cleansing, some of which might sound surprising: gymnastics and medicine\(^{92}\) cleanse the inside of the body, while bathing cleanses the outside of the body; winnowing separates wheat from chaff; retributive punishment can cleanse society of its bad members, and so forth. All of these crafts, however, are simply unintelligible without considering them not simply as separation of something into kinds, but also, declaring some of those kinds bad and actively removing them. Plato therefore has the theoretical space for a normative sort of craft. Just as cleansing is normative when distinguishing between good and bad, metrion measurement is normative when it discriminates between appropriate and inappropriate.

However, the primary reason why Plato argues for a normative kind of measurement is that measurement in productive crafts is always normative. The reasons for this are detailed in the *Philebus*, in which Plato gives an account of generation or *genesis* that is highly dependent on number and therefore measurement. In that dialogue, he separates all things into kinds: unlimited, limit, mixtures (of limit and unlimited), and causes.\(^{93}\)

\(^{92}\) That medicine appears here under cleansing is surprising, as medicine is considered a productive rather than cleansing craft in nearly every other context. One interpretive possibility is that the Visitor is speaking loosely and that medicine uses cleansing (among other means) to produce health, but is not a type of cleansing, *per se*.

\(^{93}\) There is currently a great deal of discussion about the proper interpretation of the four greatest kinds described in the *Philebus*. As there is insufficient space to defend a position in this debate, I have adopted the interpretation of Dorothea Frede in her introduction to Plato, *Philebus*, ed. Dorothea Frede (Indianapolis: Hackett, 1993).
SOCRATES: As the first I count the unlimited, limit as the second, afterwards in third place comes the being which is mixed and generated out of those two. And no mistake is made if the cause of this mixture and generation is counted as number four? (27b-c)

To briefly summarise Socrates’ claim here, all things are divided into four types: unlimited things, limit, mixtures of the unlimited and limit and causes of these mixtures. By unlimited things, Socrates is referring to various continua, such as hot and cold, dry and wet and so forth. Limit refers to the various mathematical proportions in which those continua might be placed. Mixtures are what occur when the two are brought together, such as in the temperature of an actual body. Causes are whatever it is that puts the limits into the continua. An example follows:

- **Unlimited:** Heat and Cold
- **Limit:** The proportion of heat and cold appropriate to the body.
- **Mixture:** The actual correct temperature of this patient here.
- **Cause:** Medicine

Plato claims that *everything* may be divided into these categories; I will not address this claim here. Instead, I will discuss how this four-fold division is relevant to productive crafts.

Plato puts the productive crafts into the fourth category of causes. Plato argues that a craft is only craft-like in as much as it is capable of using measurement in its process of generation:

SOCRATES: But as to building, I believe that it owes its superior level of craftsmanship over other disciplines to its frequent use of measures and instruments which give it high accuracy. 

*(Philebus 56b)*

Since generation is defined as the putting of measurement into matter, and since productive crafts are productive in so far as they are able to generate a product,
productive crafts are successful and “craftlike” in as much as they are capable of measurement. Without successful measurement, they rely on guesswork:

SOCRATES: If someone were to take away all counting, measuring, and weighing from the arts and crafts, the rest might be said to be worthless.

PROTARCHUS: Worthless, indeed!

SOCRATES: All we would have left would be conjecture and the training of our senses through practice and knack. \textit{(Philebus} \textit{55e)}

When something is produced, ratios are put into some subject. In the case of something like medicine, something that is out of harmony is put back into harmony, and that harmony is constituted by the appropriate, measurable properties in a sick body. This process of putting shape into something shapeless or returning shape to something corrupted is what Plato calls \textit{genesis} or “production”. For instance, in designing a house, one uses some sort of blueprint to form a house into a certain shape.\textsuperscript{97} When healing a body, one looks for a particular measurement that has deviated from its \textit{metrion}, and return the body to that \textit{metrion}; for instance, if a patient had hypothermia or a fever, the patient should be returned to a point of homeostasis of approximately 37°C. Without measurement, however, there would be no reliable way to ensure that one is shaping what one is producing, nor would there be any reliable way to ensure that one is returning one’s subject to its \textit{metrion}. Measurement is therefore required for any productive craft, as Plato defines production itself as the process of putting measurements into matter.

\textsuperscript{96} \{ΣΩ.\} Οἶνον πασῶν που τεχνῶν ἃν τις ἀρκητικὴν χωρίζῃ καὶ μετρητικὴν καὶ στατικὴν, ὡς ἔπος εἰπεῖν φαῦλον τὸ καταλειπόμενον ἐκάστης ἃν γίγνοιτο.
\{ΠΡΩ.\} Φαῦλον μὴν δῇ.
\{ΣΩ.\} Τὸ γοῦν μετὰ ταύτ’ εἰκάζειν λείποιτ’ ἃν καὶ τὰς αἰσθήσεις καταμελεῖται ἐμπειρία καὶ τινὶ τριβῇ.

\textsuperscript{97} One difficulty with Frede’s interpretation is that it is difficult to explain the building of a house as a blending of opposites in a subject. This may represent a problem with Frede’s interpretation, a tension in Plato’s own thought, or it may fall under one of the things that are “left” to discuss as the dialogue breaks off mid-discussion at 67b. Perhaps in construction, the continua of large and small, and strong and pliant are bound in proportions of size (large and small) of compound materials (strong and pliant) so as to create a sturdy and functional building.
8 The Hierarchy of Crafts

Principle #6: Crafts are arranged in a hierarchy, in which tool-supplying crafts are subordinate to those that use their tools.

Plato also had a great deal to say, not only about the intrinsic properties of crafts, but also about the relationship of one craft to another. Crafts are interrelated, and they are interrelated in a very specific way. Some crafts produce or capture the tools of other crafts. As a result, crafts are ordered in a hierarchy. The higher-order crafts are those that use the results of the lower-order crafts.\(^9^8\) There are three reasons for this: first, the higher-order craft, by using the result of the lower-order craft, makes that result useful and therefore good; second, the higher-order craftsperson is the only person qualified to evaluate the results of the lower-order crafts; finally, the higher-order craft is required in order to provide a blueprint or a function for the lower-order craft. The higher-order craft directs the lower-order craft. In this section, I will discuss the various relationships between the higher- and lower-order crafts in Plato’s corpus.

In the *Gorgias*, Socrates ridicules Callicles’ claim that the more intelligent person ought to have a greater share of goods, “Perhaps the cobbler should walk around with the largest and greatest number of shoes on” (490e).\(^9^9\) This farcical image of the cobbler futilely trying to wear and tripping over dozens of over-sized shoes carries an important message: no matter how excellent the shoe, its goodness is somehow relational. The cobbler has no use for excess or over-sized shoes. Even a “good shoe” can be a “bad thing” in the wrong context. In fact, should he try to wear them, they would be obstacles; they would fail to function even as shoes. Unfortunately, Plato does not use a consistent vocabulary for the two types of goodness implied here. Since this distinction runs through almost everything that Plato says about the hierarchy of crafts and since the vocabulary can be inconsistent, some introduction is required. The first is the sense of goodness in which an excellent shoe is good, regardless of whether or not it is worn and

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\(^9^8\) I use the term “result” here because Plato does not limit the hierarchy only to productive crafts. A hunter (an acquisitive craftsperson) captures something for use by a cook, for example. The term “ergon” has this double meaning of result and product: for example, a rabbit is the *ergon* of hunting while a house is the *ergon* of building. I will translate it therefore as “result”.

\(^9^9\) τὸν σκυτωτόμον ἵσος μέγιστα δεῖ ὑποδήματα καὶ πλείστα ὑποδεδεμένον περιπατεῖν.
whether or not someone is tripping over it. This is what would today be called “attributive” goodness, a kind of goodness whose content depends entirely on what kind of thing “good” is modifying and whose conditions are entirely determined by that kind of thing. Plato’s use of the term “aretē” (excellence or virtue) consistently has this attributive meaning, though he also sometimes also used the term “agathon” (good) in an attributive way. When discussing this first kind of goodness, I will use the term “excellent” and “excellence” in order to mark the way in which the term “aretē” always has this sense. At other times, Plato uses the term “agathon” in a predicative way, not simply to refer to something’s quality as a member of a kind but something’s goodness simpliciter. On occasion, he even has characters insist that only this latter sense of “goodness” is true goodness. This can create some confusion and even apparent contradictions. Plato both uses “agathon” in attributive and predicative ways and insists that only predicative goodness is true goodness.100

In the Euthydemus, Socrates argues that attributively good tools are not necessarily predicatively good. A carpenter, for example, does not derive any benefit from his or her tools unless he or she uses them: “For instance, if a carpenter were provided with all his tools and plenty of wood but never did any carpentry, could he be said to benefit from their possession?” (280c-d).101 Something that is attributively good requires something else to be made predicatively good. Such things are evaluated for their consequences. Further, excellent things are capable of actually being predicative evils in the wrong hands: “Now I suppose there is more harm done if someone uses a thing wrongly than if he lets it alone - in the first instance there is evil, but in the second neither evil nor good” (280e-281a).102 An excellent tool, then, can be predicatively good, bad or neutral, depending on who uses it. As a result, in the Euthydemus, Socrates ultimately denies that tools are predicatively good, no matter how excellent they might

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100 I am using Peter Geach’s “attributive” goodness, in which the truth conditions of goodness are entirely determined by the type of thing predicated from Peter Geach, “Good and Evil,” in Theories of Ethics, ed. Philippa Foot (New York: Oxford University Press, 1967), 64-73. Geach’s attributive goodness allows me to continue to reflect Plato’s use of “goodness” in both cases, while accurately capturing the distinction. The alternative, which is to distinguish between “excellence” and “goodness” would provide the impression that Plato does not sometimes use the terms synonymously, which he does.

101 οἶνον τέκτον, εἰ παρεσκευασμένος εἶ Ἱ τῇ ὁ ὁ ὁ ὁ γάρ ἀπάντα καὶ ἔξολος ἰκανά, τεκταίνοις δὲ μὴ, ἐσθ’ ὅτι ὄφελοῖτ’ ἐν ἄπο τῆς κτήσεως;

102 πλέον γάρ ποιοῖ ὥσις ἔστιν, ἐὰν τὰς χρήσεις θαυμάσαν μὴ ὁρθῶς πράγματι ἢ ἔδω ὅ· τὸ μὲν γὰρ κακόν, τὸ δὲ οὔτε κακόν οὔτε ἄγαθόν. ἢ οὐχ οὔτω φαμέν;
be. It is predicatively good if used by someone with wisdom, predicatively bad if used by someone without wisdom, and neutral if used by no one:

So to sum up, Clinias, I said, it seems likely that with respect to all the things we called good in the beginning, the correct account is not that in themselves they are good by nature, but rather as follows: if ignorance controls them, they are greater evils than their opposites, to the extent that they are more capable of complying with a bad master; but if good sense and wisdom are in control, they are greater goods. In themselves, however, neither sort is of any value. (281d-e)  

So, tools, which first appear to be predicative goods (in fact, Socrates and Clinias refer to them as simply “goods” until this point), are not really goods “by nature”, but only in light of their consequences, which can be good or bad.

This list of goods in the *Euthydemus* that are tools and therefore are not necessarily predicatively good includes health: “...wealth and health and beauty - was it knowledge that ruled and directed our conduct in relation to the right use of all such things as these, or some other thing?” (281b). Health and the body of which it is an attributively good state are tools for use by wisdom that are only made good by good use. Plato presents this position most clearly in the (doubted) *Alcibiades* I, where he has Socrates argue that the body is used by the body in the manner of a tool: “ Doesn’t a man use his whole body, too?” (129e). Even if the dialogue is not genuinely Platonic, the approach is. Because the body can be either used or misused, depending on the wisdom of the user, the body is not necessarily predicatively good. Rather, the body is only predicatively good in so far as it is used properly. Even its attributively good state, health, can be bad in the hands of a “bad master.” The body is a tool that can be used or misused, depending on a person’s wisdom.

The property of a tool that makes an attributively good tool only attributively good is that it may be used for different ends. As a result, a particular tool can be called

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103 Ἐν κεφαλαίῳ δ’, ἔφην, ὁ Κλεινία, κινδύνευεί σύμπαντα ἃ τοῖς πρῶτον ἐφαμέν αἰσθὴτα ἐστὶν, οὐ περὶ τούτων ὁ λόγος αὐτοῖς εἶναι, ὥστε αὐτὰ γε καθ’ αὐτὰ πέρακεν ἀἰσθὴτα [ἐστὶν], ἀλλ’ ὡς ἔκοκκεν ἐδ’ ἐξε, ἢ ἐὰν μὲν αὐτῶν ἔχεται ἀμαθία, μεῖξικα κακὰ εἶναι τῶν ἐναντίων, ὅσα δυνατότερα ὑπερτείνῃ τῷ ἠγουμένῳ κακῷ ὄντι, ἢ ἐὰν δὲ φρονήσῃς τοι καὶ σοφία, μεῖξο ἐκαθα, αὐτὰ δὲ καθ’ αὐτὰ οὐδέτερα αὐτῶν οὐδένος ἄξεια εἶναι.  
104 πλούτου τοι καὶ ὑγείας καὶ κάλλους, τὸ ὀρθὸς πᾶσα τοῖς τοιοῦτοις ἁμαθία ἐπιστήμη ἢ ἠγουμένη καὶ καταρθοῦσα τὴν πράξει, ἢ ἄλλο τί;  
105 {ΣΩ.} Ὅσικόν και παντί τῷ σώματι χρήσθαι ἄθροισθος;  
106 I will return to some of the implications of this for autonomy in Chapter Four.
“good” in so far as it was used to do something good, successfully and skillfully and “bad” in so far as it was used to do something evil, unsuccessfully or ineptly. This includes basic tools, like knives, and even more important tools like beauty, strength and wealth, the fungible tool par excellence. When evaluating whether something was predicatively good for someone, one must examine its consequences, rather than just its powers. For example, beauty can be used to secure a successful marriage or to advance the career of a tyrant. In fact, anything which can have both good and bad consequences can be evaluated according to these consequences.

Here I’d like to answer one common-sense objection to Socrates’ position. Isn’t a knife a good knife just because of its ability to cut, not because of how it is used? For instance, isn’t a pruning knife just as good a pruning knife in the hands of a serial killer as in the hands of a master vine-dresser? In the Republic I, Plato discusses the excellence of a pruning knife. A pruning knife has the excellence of a pruning knife in so far as it has the power of a pruning knife: “I think you’ll understand what I was asking earlier when I asked whether the function of each thing is what it alone can do or what it does better than anything else” (353a). A knife has the same power in the hands of a master chef as in the hands of a serial killer. Should we not then say that the knife has the same goodness in either case? The answer depends on whether one is referring to attributive or predicative goodness. In either case, a functional pruning knife would be equally excellent or attributively good. In the hands of a vine-dresser, the knife is of great benefit; in the hands of a serial killer, it does great harm. As such, a tool should be considered predicatively good or bad by virtue of its use, not simply its abilities. A pruning knife in the hands of a vine-dresser is a good thing, but a pruning knife in the hands of a serial killer is a very, very bad one.

A higher-order craft contributes more to a lower-order craft than merely providing goodness to its results through use. Higher-order crafts are the only source of correct

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¹⁰⁷ Νῦν δὴ οἴμαι ἢμεινὸν ἂν μάθος ὁ ἄρτι ἱρῶτον, πυρηνικόμενος εἰ ὁ τοῦτο ἐκάστου εἰθ ἔργον ὃ ἂν ἢ μόνον τι ἢ κάλλιστα τοὺς ἄλλοιν ἀπεργάζηται.

¹⁰⁸ One can see here a precursor to Aristotle’s distinction between excellence and activity. A person is happy in so far as he or she actualises his or her excellences, not simply by having them. So too a tool is good in so far as it actualises its excellences, not simply by having them. Unused tools are just that, useless. Further, a tool used to do harm is not only not useful, it is bad. Plato here is drawing the distinction that Aristotle will later draw in more detail. Goodness is something that is not merely a matter of capacity, but of actuality.
judgement of the quality of the result of a lower-order craft. Crafts that result in tools are incomplete; the forms of their results are provided by higher-order crafts. What the lower order craft provides is the knowledge of how to produce or acquire the result whose form supplied by the higher-order craft. As a consequence, crafts are not as separate as it might at first seem. Crafts that result in tools are dependent even for their existence and purpose on higher-order crafts. Plato thus provides a hierarchy of evaluation between crafts. The higher-order crafts are the best judge of the success of the lower-order crafts.

Plato presents his position clearly in both the the Republic and the Cratylus. In the Republic, Socrates considers the problem that, since only a flautist will play a flute, the flautist is a better judge of a good flute than the flute maker:

It’s wholly necessary, therefore, that a user of each thing has most experience of it and that he tell a maker which of his products performs well or badly in actual use. A flute-player, for example, tells a flute-maker about the flutes that respond well in actual playing and prescribes what kind of flutes he is to make, while the maker follows his instructions. (601d-e)

This section of the Republic, however, is concerned mainly with imitation, and so there is not much further discussion of the relationship between supplier and user there. More discussion appears in the Cratylus, in which Socrates is interested in arguing that the dialectician is the best judge of language. As they are those who use language, they are the best judge of how well a language is constructed. In order to arrive at this conclusion, he uses an analogy from other crafts, specifically carpentry, lyre-making and weaving. Carpenters produce shuttles for weavers to use, and therefore, a weaver is the best judge of the quality of the shuttle:

SOCRTES: Now who is likely to know whether the appropriate form of shuttle is present in any given bit of wood? A carpenter who makes it or a weaver who uses it?

HERMOGENES: In all likelihood, Socrates, it is the one who uses it. (390b)

109 Πολλή ἄρα ἀνάγκη τὸν χρήσμονον ἐκάστῳ ἐμπειρότατον τε εἶναι καὶ ἀγγέλον γίγνεσθαι τῷ ποιητῇ οἷα ἁγαθὰ ἢ κακὰ ποιεῖ ἢ τῇ χρείᾳ ὃ χρῆται· οἷον αὐλήτης ποιεῖ αὐλοσκεύα εὔσεβείς περὶ τῶν αὐλῶν, οἷον ὑπερετήσειν ἢ τῷ αὐλίν, καὶ ἐπιτάξαον αὐτῷ ὃ οὐδὲν ὁ δ’ ὑπερετήσει.
110 Ἔννοιας ἐπὶ τὸ προσήκον εἶδος κερκίδος ἐν ὕποιον ἐξούσιον κείμεθα, ὁ ποιήσας, ὁ τέκτων, ἢ ὁ χρησόμενος [ὁ] ύφαντις; Ἔπειτα, τῶν χρησόμενον, ὁ Ὅρμιος μὲν μᾶλλον, ὁ Σώκρατες, τὸν χρησόμενον.
The issue can be seen in the phrase “appropriate form of shuttle”. Since a weaver is the one who knows what to do with a shuttle, the weaver is the one who can tell if a shuttle will be able to assist in producing clothing. This is because the weaver is the one who knows about fabric and clothing, and this knowledge is required to know what form in the wood will produce fabric and clothing: “When a craftsman discovers the type of tool that is naturally suited for a given type of product, he must embody it in the material out of which he is making the tool” (389c).\textsuperscript{111} In other words, it would seem that if someone is to know what tool to supply, one must know the result of the tool. However, this is not understood by one’s own craft, but by the next-higher-order craft. For instance, in order to know what tool will best result in clothing, one must know what clothing is. However, clothing is the result of weaving, not of carpentry. Therefore, a carpenter would also be required to know the function of weaving. It would seem that all tool-supplying crafts are pushed into the position where they must know the results of higher-order crafts.

Plato divides the knowledge in a tool-producing craft between the tool producers and the tool users. The “knowing why” is entirely part of the higher-order craft. The “knowing what” must be known by both, but must be provided by the higher-order craft. The blacksmith may know what to make simply because the schematics or the function are provided to him or her by the saddle-maker. The saddle-maker may even hand the blacksmith a schematic or a sample and say, “Make me this widget.”\textsuperscript{112} The knowing how is entirely the province of the lower-order craft. What the lower-order craft provides is an understanding of the causal relationships necessary to supply an object of the given form once presented. If the higher-order craftsman knew how to make the tool, he or she would have no use for the lower-order craftsman. The why then is known only by the higher-order craftsman (he or she knows what stirrups are for), the what is known by both

\textsuperscript{111} τὸ φύσει ἐκάστῳ παρουκὸς ὄργανον ἔχουσιν καὶ ἀποδοῦναι εἰς ἐκεῖνο ἐξ οὗ ἀν ποιή [τὸ ὄργον], οὐχ ὅσον ἄν αὐτός ἔχον ἐπιφύλαξεν, ἀλλὰ ὅσον ἔπιφυλαξε.

\textsuperscript{112} J.E. Tiles raises the interesting possibility that not every user understands enough to “dictate specifications” to a supplier in J. E. Tiles, "Technē and Moral Expertise", Philosophy: The Journal of the Royal Institute of Philosophy, 1984: 56. It may be the case that the user shows up with a function in mind, but the supplier draws up the actual specifications based on those desired functions. The final product is then evaluated on the basis of the function in mind. Unfortunately, Plato does not go into such detail what knowledge exactly is supplied by the user to the producer in either the Cratylus or Republic X. I discuss the different senses in which morphology and function may be dictated by a tool-user in my paper, Daniel Bader, "Using Plato’s and Aristotle’s Craft Analogies to Understand Biological Relationships", Examining Teleology Conference, 26 March 2010.
(though it is provided by the higher-order craft), and the how is known only by the lower-order craftsman (only the blacksmith actually knows how to make stirrups).

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By dividing up knowledge in this way, one can see in what sense a lower-order craftsman is able to make something without knowing the higher-order craft: they receive the form of their result from the higher-order craft, but do not, strictly speaking, know what it is for.¹¹⁴

This position seems to threaten the possibility of therapeutic crafts. Therapeutic crafts are those crafts that have the care of something as their product. Plato’s two favourite examples of therapeutic crafts are shepherding and medicine. The former takes care of sheep and the latter takes care of the body. However, if the things taken care of also serve as tools of a higher-order craft, and only a higher-order craft can identify a good instance of something, how can there be a craft whose explicit product is “the well-being of x”? Since someone with a craft still requires the ability to identify an instance of its product, and the product of these crafts just is the good of their subjects, shouldn’t these crafts be able to evaluate? And wouldn’t this imply that therapeutic crafts are able to evaluate as well as identify their products? Moreover, if the subject of a therapeutic craft is to be used by a higher-order craft, their products may actually be in conflict. Take the following example: veal cattle. Qua cattle, cows are not better off in little cages. Qua tools of food production, they are.¹¹⁵ If cattle are tools of higher-order crafts,

¹¹³ Socrates claims that the producer of the tool, rather than having knowledge (“epistēmē”) of the result has right belief (“pistin orthēn”) (Republic 601e7). This is not the term usually translated belief, (“doxa”). Rather, it is a term for something one believes because someone of someone else’s authority.

¹¹⁴ Though I do not discuss it in detail here, this direction would even apply to the acquisitive crafts. A cook tells a fisherman what sorts of fish are fit for cooking and the fisherman brings back those fishing while throwing back the rest.

¹¹⁵ J.E. Tiles raises the possibility that something analogous might be the case for health in J. E. Tiles, "Technē and Moral Expertise", Philosophy: The Journal of the Royal Institute of Philosophy, 1984: 60. For example, in a warlike society, it might be better to create a citizenry that is twice as strong but lives half as long. I discuss applications of this difficulty in Chapter Four. When a tool has multiple excellences, and trade-offs must be made, the using craft is required to adjudicate.
one produces the best cattle when one sticks them in little cages. However, a cowherd should know that this does not constitute “care for” the cattle in the therapeutic sense. A therapeutic craft, then, seems able to evaluate whether or not something is good independently of higher-order crafts; in fact, this evaluation is so independent, that it might even arrive at a different conclusion than the higher-order craft. Plato would seem to be mistaken.

A solution may be found again in Plato’s distinction between attributive and predicative goodness. In the Republic I, Socrates drew the distinction between “shepherd ing” and “money-making”. The first was taking care of sheep, and the second was butchering the sheep or selling them for butchery. Taking care of sheep, the therapeutic craft, was the craft of producing aretē or excellence in the sheep. If one assumes that excellent sheep are predicatively good, then the paradox of the above paragraph arises. However, if excellent sheep are not necessarily predicatively good, then whether or how many or to what extent excellent sheep should be made and current sheep should be made excellent is subject to direction by another craft. Excellent sheep are not necessarily predicatively good. Shepherding does not contain in it any guiding principle as to how many sheep ought to be made excellent or whether the resources devoted to making excellent sheep might be better used elsewhere. If producing excellent sheep is necessarily predicatively good, how many such sheep should be produced? A world overrun by rogue shepherds, devoted unflinchingly to the excellence of their sheep, trampling and devouring crops, blocking traffic and getting their sheep stuck in every drainpipe would not be a particularly pleasant world. Moreover, even a single excellent sheep might not be of any use to a society of industrious vegans, who would refuse to eat the sheep, wear its wool and would look askance at the strange shepherd who is constantly fawning over his “pet” rather than accomplishing something useful. The aretē of an animal or other therapeutic subject may be related to its

116 See, for instance, Republic 345c-d, where Socrates separates the well-being of the sheep for the uses to which the shepherd might put them: “You think that, insofar as he’s a shepherd, he fattens sheep, not looking to what is best for the sheep but to a banquet...[On the contrary.] Shepherding is concerned only to provide what is best for that which it is set over, and it is itself provided with all it needs to be at its best when it doesn’t fall short in any way of being the craft of shepherding” (“ἄλλα πιαίειν οὖν αὐτὸν τὰ πρόβατα, καθ’ ὅσον ποιμὴν ἐστιν, οὐ πρὸς τὸ τῶν προβάτων βέλτιστον βλέποντα ἄλλ’...πρὸς τὴν εὔοχίαν... τῇ δὲ ποιμενικῇ οὐ δήπορον ἄλλου του μέλει ἢ ἐφ’ ὃ τέτακται, ὅπως τούτῳ τὸ βέλτιστον ἐκποιεῖ—ἐπεὶ τά γε αὐτῆς ὡς’ εἶναι βελτίστη ἱκανος δήπορου ἐκποιόρισται”).
usefulness, just as a healthy horse who would be better able to pull a plough, but it may be completely independent of its usefulness, such as healthy cow who might be a terrible veal cow. Since the predicative goodness of a tool is determined by its usefulness, and not by its excellence, even a therapeutic craft may be subject to its result’s evaluation by a higher-order craft.

In this section, I have set out the various ways in which Plato creates a hierarchy of crafts. Crafts are ranked according to a hierarchy of use. First, using crafts are responsible for the predicative goodness of their tools, rendering them good when they use them properly. Second, they are necessary to direct the tool-producing crafts by providing them with a goal and by evaluating their products.

9 Chapter Conclusion

In this chapter, I have laid out several Platonic positions concerning the nature of crafts and their relationship to one another. As one can see, the Platonic conception of crafts is very complex. In the course of this chapter, I have picked out seven principles that will be relevant in the application of the Platonic conception of crafts to issues in biomedical ethics. They are as follows:

Principle #1: There are two sorts of crafts: productive and acquisitive.
Principle #2: Crafts and knowledge are coextensive.
Principle #3: Crafts are teachable.
Principle #4: Crafts are dependant on dialectic for a determinate subject matter and to systematically approach causal relationships.
   Principle #4a: Crafts have a determinate subject matter.
   Principle #4b: Crafts depend on the understanding of causal relationships.
Principle #5: Productive crafts are dependent on measurement to generate their products.
Principle #6: Crafts are arranged in a hierarchy, in which tool-supplying crafts are subordinate to those that use the tools.
In this chapter, I have explained these principles, and given the Platonic arguments for them. In future chapters, I will apply these principles to problems in biomedical ethics, demonstrating how they can be used to resolve or create important new insights to those problems.
Chapter 2: Crafts and Contraries

1 Introduction

Having set out the Platonic principles of crafts, I will now show their application to various issues in ethics, ancient and modern. The first issue I will address is the definitional problem of what medicine is. Since before the Hippocratic Oath was written, physicians have expressed concern about being asked to use the techniques of their crafts to destroy rather than produce health. This concern is alive today in the debates concerning euthanasia, elective abortion and execution through lethal injections. This is not only a linguistic debate about how the term “medicine” ought to be used, but a conceptual one. The two parts of the concept of a “craft of healing” collide in ways that threaten to make the concept itself untenable or may force the concept to shift to “craft of healing and harming” in order to remain tenable. This problem, which I will call the “bivalence of crafts”, greatly concerns both Plato and Aristotle. If the same body of knowledge allows one to both create and destroy, it threatens the concept of a craft with a single product.

The difficulty lies in **Principle #2: Crafts and knowledge are co-extensive.** There is something odd about saying one knows “how” to do something. Knowledge is generally knowledge of true propositions, and the combination of the term “knowledge” with the indirect interrogative “how” raises some strange puzzles\(^{117}\). Specifically, if knowing the same propositions enables us both to heal and to harm, is there any coherent way to not say that knowing how to harm and how to heal are not exactly the same knowledge? If medicine is knowledge, and knowledge is of a set of true propositionss, then medicine and poisoning are in part the same thing, as they are knowledge of some of the same set of true propositions. And, if they are the same thing, then a craft of medicine whose product is simply healing and not harming does not exist.

One might respond that medicine is the use of that knowledge to heal rather than to harm, but this raises a further difficulty. If medicine is the use of this knowledge to

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\(^{117}\) I do not intend to make a firm distinction, nor do I believe does Plato, between “knowing how” and “knowing that” in the way that Gilbert Ryle does in Gilbert Ryle, "Knowing How and Knowing That", *Proceedings of the Aristotelian Society*, 46 (1946): 1-16.
heal, then medicine is not identical with that knowledge and ceases to be knowledge. Moreover, if medicine is not identical with the knowledge that enables us to harm or heal, then it is difficult to say what we should call that knowledge.

As a result, the concept of a craft whose product is health and not disease may be an incoherent concept. It appears that either one must accept that the same craft has two distinct products or abandon the claim that medicine is knowledge. Both Plato and Aristotle were aware of this difficulty; in fact, they may have been the first to articulate it. However, both Plato and Aristotle did believe that one can indeed construct a concept of a craft of medicine that is knowledge and whose product is health and not disease. To date, however, there has been little substantive discussion of to what extent they think this might be the case and the reasons they think it might be true. Their arguments have both linguistic and substantive parts. Plato develops a mode of strict speaking and then attempts to show that, strictly speaking, crafts always benefit their subject. Aristotle develops essential and accidental predication and then attempts to show that, essentially, crafts are never destructive. In this chapter, I will first develop the problem of craft bivalence as it was understood by Plato and Aristotle and then elucidate their solutions to the problem.

2 Texts

The bivalence of crafts is discussed in many different texts, but some deal with the difficulty at length. I introduce those below:

Republic, Book I: In this book, Thrasymachus and Socrates develop an understanding of crafts, strictly speaking, and also discuss the nature of therapeutic crafts.

Hippias Minor: In this dialogue, Socrates addresses the concern that crafts seem to be capable of contrary effects, and considers the ramifications of this, on the supposition that virtues are crafts.
Statesman: In this dialogue, the Eleatic Visitor develops more clearly the mode of strict speaking discussed in the Republic and also discusses the relationship of mathematics to the crafts.

Philebus: In this dialogue, Socrates provides a definition of “causes” that would rule out the possibility of crafts being destructive.

Nicomachean Ethics, Book VI: In this book, Aristotle divides the intellectual virtues, including crafts. He develops an understanding of the bivalence of crafts so as to show that the virtues are not crafts.

Metaphysics, Book Θ: In this book, Aristotle includes crafts under powers, arguing that they are capable of contraries, but only accidentally, not essentially.

3 Plato on the Problem of Crafts and Contraries

The difficulty that faced Plato and Aristotle is the result of a relatively uncontroversial fact. It would appear that the ability to heal the human body also gives people the ability to harm it. Study in the workings of the human body gives the physician the knowledge of how to poison or otherwise kill a patient efficiently and even secretly. Socrates states this bivalence of medicine most clearly in the Republic I: “And the one who is most able to guard against disease is also most able to produce it unnoticed?” (333e). A bodyguard, for example, is often the best assassin, as Caligula discovered, and one needs to be a good shot to ensure one misses, as was demonstrated by the death of Joan Vollmer. In this section, I will examine Plato’s arguments as to why this sort of bivalence of the crafts exists and then explain in detail how this relates to the problem of saying that one “knows how” to do something. I will examine the arguments for bivalence in the Republic and Hippias Minor, and then argue that the best

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118 ἂρ’ οὖν καὶ νόσον ὄστες δεινὸς φυλάξασθαι, καὶ λαθεῖν οὖτος δεινότατος ἐμποίησας
119 Caligula, like several other Roman emperors, was killed by the Praetorian Guard, whose duty was to protect the emperor (Josephus, The Antiquities of the Jews, Books 18-19, trans. Louis H. Feldman [Cambridge: Harvard University Press, 1965], 212-30). Joan Vollmer was allegedly shot by her husband in a drunken game of William Tell (Brenda Knight, Women of the Beat Generation: The Writers, Artists and Muses at the Heart of a Generation [Boston: Conari Press, 1996], 52-53).
way to understanding how such bivalence might function can be found by examining the
*Phaedrus*.

In the *Republic* I, Socrates gives one of the clearest examples of bivalence, though he does not there provide an argument as to why exactly such bivalence occurs. Polemarchus makes the suggestion that justice could perhaps be useful in financial partnerships concerned with guarding goods:

> In what joint use of silver or gold, then, is a just person a more useful partner than the others?

> When it must be deposited for safekeeping, Socrates. (333c)

However, Socrates responds to this by pointing out that the person best able to guard goods is also the best at stealing the goods:

> If a just person is clever at guarding money, then, he must also be clever at stealing it.

> According to our argument, at any rate.

> A just person has turned out then, it seems, to be a kind of thief. (334a)

This was not the use of justice for which Polemarchus was hoping, and so he abandons his claim. What I will examine, however, is what Socrates may have meant by “clever” (“*deinos*”) in this passage. I will provide and discuss three different senses in which someone who is “clever at guarding money” might be said to be clever at stealing it: opportunity, particular knowledge and general knowledge. A person who has been assigned to guard a particular object would have the best opportunity to steal that object. However, this doesn’t sound like cleverness, exactly. Even the world’s least clever guard would have little difficulty stealing an object placed under his or her unique protection.

The second possibility is particular knowledge. In such a case, the person guarding something would know the details of the security surrounding the object and would be

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120 Ὅηαλ νὖλ ηί δέ ηαξγπξίῳ ἕηρξπζίῳ ἠρξπζίῳ, Ὅ δίκαιος χρησιμότερος τῶν ἄλλων;
> Ὅηαλ παξαθαηαζέζζαη θαὶ ἔνεῆι, Ὡ΢ώθξαηεο.

121 Δἰ ἅξα Ὅ δίθαηνο ἄξγύξηνλ δεηλ Ὅ ο θπιάηηεηλ, θαὶ θιέπηεηλ δεηλόο.
> Ὡο γνῦλ Ὅιόγνο, ἔθε, ζεκαίλεη.

122 Note that the difficulty for Polemarchus is partly the result of Principle #1: There are two sorts of crafts: productive and acquisitive. The apparently independent craft of guarding finds itself a by-product of the acquisitive craft of stealing.
best able to steal the object if he or she were not guarding the object alone or even if he or she were not on duty at the time. Knowledge such as when guards trade shifts, lock codes, locations of keys and so forth could be used in a robbery. The guard would thereby be capable of using his or her knowledge as a part of an “inside job”. It was in this way, for example, that security guard Lou Werner was able to assist in the Lufthansa Heist in 1978, despite not actually being on duty at the time. Unlike the guard with opportunity, some cleverness is involved here, or at least some knowledge. The particular knowledge of the “insider” allows him or her to assist in and even organize thefts. The third way in which Socrates might mean that a clever guard is a clever thief is that someone who has the craft of guarding would also be the best thief. Understanding how security systems work in general would allow the security expert to assist in and plan a robbery based on what he or she knows about how security systems usually work.

Socrates seems to have at least opportunity and general knowledge in mind in the different examples he provides in order to strengthen his case about bivalence. Between 333e and 334b, he cites three different examples that are supposed to demonstrate the principle: a boxer who is best able to land a blow is best able to block one, the one who is best able to guard against disease is best able to produce it unnoticed, and a guard is best able to steal an enemy’s plans. The example of the guard who is best able to steal an enemy’s plans is ambiguous, as it is unclear whether or not Socrates is talking about a corrupt enemy guard currently guarding the enemy’s plans (which would be an example of opportunity) or one of one’s own clever guards who is somehow sent in to the enemy camp to steal the plans (which would be an example of general knowledge). The example of a boxer, however, is a clear instance of general knowledge. No special opportunity or inside knowledge is gained by being an excellent boxer that would allow one to best block against blows. The case of medicine seems to involve both knowledge and opportunity. The physician is best able to produce disease by his or her understanding of medicine; however, the physician is also best able to produce it unnoticed because no one else is checking up on his or her work. The Republic passage

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124 The later cited example of Autolycus, Odysseus’s grandfather, may imply the latter interpretation. Autolycus was “the most accomplished perjurer and thief in the whole world” (Odyssey XIX:394). However, Autolycus is nowhere described as a guardian, only as a thief, and the passage from the Republic 334a-b may only be citing Autolycus as an example of a thief, not as an example of a guardian-as-thief.
therefore makes use of the problem of bivalence, but leaves several problems unanswered, such as in what exactly the cleverness referred to consists and why Socrates believes it exists.

The dialogue *Hippias Minor* explores the same issue and in this case provides more detail to the argument that crafts are bivalent. Socrates starts with a slightly different problem than craft bivalence, truth-telling and lying. The character of Hippias tries to contrast the two protagonists of the *Iliad* and the *Odyssey*, Achilles and Odysseus: “In these lines he clearly shows the way of each man, that Achilles is truthful and simple and Odysseus is wily and a liar...” (365b). However, Socrates disagrees with this claim, arguing that, in fact, the truth-teller and the liar are the same person:

Do you see, then, that the same person is both a liar and truthful about these things, and the truthful person is no better than the liar? For, indeed, he is the same person and the two are not complete opposites, as you supposed just now. (367c-d)

He argues this because someone can only be sure to lie if he or she knows the truth:

If someone were to ask you what three times seven hundred is, could you lie the best, always consistently say falsehoods about these things, if you wished to lie and never to tell the truth. (366e-367a)

For example, if I am asked what two plus two equals, I cannot be sure to speak a falsehood unless I know the answer is four so as not to accidentally answer “four” in my attempt to lie. Since knowledge of the same fact is what makes me able both to tell the truth and to lie, my knowledge of the fact that “two plus two equals four” is what gives me the power to tell the truth and lie about what two plus two equals. Knowledge of the fact “two plus two equals four” is therefore the state corresponding both to the power of telling the truth about and to the power of lying about what two plus two equals.

Therefore the liar and the truth-teller are the same person.

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125 ἐν τούτωι δηλαδὴ τοῖς ἔπεισι τὸν τρόπον ἐκατέρω τοῦ ἄνδρός, ὡς ὁ μὲν Ἀχιλλεύς εὐθὺ ἀληθῆς τε καὶ ἀπλοῦς, ὁ δὲ Ὀδυσσεύς πολύτροπος τε καὶ ψευδής.

126 Socrates doesn’t mean that the same person both lies and tells the truth. Rather, the same person is a “liar” and a “truth-teller” in the sense that he or she has the power to do both.

127 {—ΣΩ.} Ὁρᾷς οὖν ὅτι ὁ αὐτὸς ψευδής τε καὶ ἀληθής περὶ τῶν, καὶ οὐδὲν ἀμείνον ὁ ἀληθής τοῦ ψευδοῦς; ὁ αὐτὸς γὰρ δήμοι ἐστὶ καὶ οὐκ ἐναντιώστατα ἔχει, ὀσύρευτος σὺ ὅμως ἄρτι.

128 εἰ τίς σε ἔρρησα τὰ τρίς ἐπιτακτικὰ πόσα ἔστι, πότερον σὺ ἄν μάλιστα ψευδόμενο καὶ ἀεὶ κατὰ ταύτα ψευδή λέγοις περὶ τῶν, βουλώμενος ψευδεσθαι καὶ μηδέποτε ἀληθῆ ἀποκρίνεσθαι.
Socrates applies this principle not simply to lying and telling the truth, but to all crafts and sciences. Knowing a craft allows us to perform the craft badly:

Well, then. As to the soul that plays the lyre and the flute better and does everything else better in the crafts and the sciences – doesn’t it accomplish bad and shameful things and miss the mark voluntarily, whereas the more worthless does this involuntarily. (375b-c)\(^{129}\)

As in the case of lying, someone can only fail to do something voluntarily by having the craft and knowing how to hit the mark. So, for instance, a poor physician might involuntarily kill his or her patient, but only a good physician can be sure to kill a patient deliberately. A poor physician might even accidentally save a patient while trying to kill him or her. Similarly, a poor flute player might accidentally play a beautiful note while trying to play badly. Socrates generalizes to all crafts from his claim that knowing the truth gives someone the ability to lie, saying that knowing a craft gives the person the ability to perform a craft badly, apparently using Principle #2: Crafts and Knowledge are co-extensive to ground his analogy.

The difficulty with this argument is that Socrates’ claims don’t seem to follow from his examples. The narrow range of examples he uses to begin his case are insufficient to demonstrate his conclusions. In fact, his examples concerning lying are insufficient even to show that only someone who knows the truth can voluntarily lie. Here are two examples to show the difficulty. If I didn’t know how many planets there are, I might accidentally say the true answer of eight (especially if I mistakenly thought there were nine). Because the range of possible answers is so small, it is easy to involuntarily hit the right answer. However, if someone were to ask me the president of Mongolia, I am highly unlikely to accidentally answer “Nambaryn Enkhbayar” in a bid to successfully lie. While the possible answers are not infinite, they are so immensely large that ignorance would be almost one-hundred percent as effective at allowing me to lie as knowledge would be.\(^{130}\) It is true that knowledge would be the only way to be absolutely certain I would not accidentally guess “Nambaryn Enkhbayar”, but Socrates has claimed

\(^{129}\) Τί δὲ; ἢ καθαριστικωτέρα καὶ αὐλητικωτέρα καὶ τὰλλα πάντα τὰ κατὰ τὰς τέχνας τε καὶ τὰς ἐπιστήμας, οὐχὶ ή ἀμείνον ἔκοινς τὰ κακὰ ἐργάζεται καὶ τὰ ἁμαρτάνει, ἢ δὲ ποιητικὲς ἀκούεις;

\(^{130}\) In English, one cannot “lie” unless one knows the truth. However, the Greek verb “ψεύδεσθα” can also mean “to say that which is untrue, whether intentionally or not” (H.G. Liddell and R. Scott, Greek-English Lexicon with a Revised Supplement [Oxford: Clarendon Press, 1996], 2021).
that the ignorant person would *often* accidentally tell the truth: “Don’t you think the ignorant person would *often* (‘*pollakis*’) involuntarily tell the truth when he wished to say falsehoods…?” (367a, my emphasis). "Often" is a far cry from “almost never”.

Moreover, when applied to the crafts, Socrates’ argument seems even more absurd. It makes very little sense to say that one might accidentally build an airplane or even a barn, let alone that one would do it “often”. While there have been several accidental inventions, most of those inventions have been either not especially complex to produce (such as vulcanized rubber) or only discoveries of the principle of the invention (such as photography). While it might be nomologically possible that someone might accidentally build an airplane, it will almost certainly never happen. As a result, it would appear that Socrates’ attempt to generalize to all crafts from lying leads to implausible conclusions.

However, Socrates makes another claim in the *Hippias Minor* that may clarify why such bivalence exists. Socrates argues that only someone with a craft can be said to have the *power* not to produce the product, because only the person with a craft can *choose* not to produce the product: “But each person who can do what he wishes when he wishes is powerful” (366c). This is the same definition of powerful given in the *Gorgias*, where he denies that rhetors have power because they do not do what they want:

I say, Polus, that both orators and tyrants have the least power in their cities, as I was saying just now. For they do just about nothing they want to, though they certainly do whatever they see most fit to do. (466d-e)

If someone lacks a craft, however, that person cannot be said to have the power not to produce the product of that craft, because that person’s desires are irrelevant. They will not produce the product, whether they want to or not. The only time they will produce their product is by accident, which again would be completely independent of whether

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131 ἐν δὲ μὲν ἰμαθής πολλάκης ἄν βουλόμενος ἴκνο εἶποι ἰκην.
132 Quinine, the battery, vaccination, anesthetics, photography, synthetic dye, celluloid, rayon, insulin, antihistamines, the contraceptive pill, L.S.D., artificial sweetener, safety glass, nylon, Teflon, aspirin, vulcanized rubber, cyclosporine, Velcro, corn flakes, and Post-It notes, to name a few (Royston M. Roberts, *Serendipity: Accidental Discoveries in Science* [Toronto: John Wiley & Sons, 1989]).
133 {—ΣΩ.} Δυνάτος δὲ γ' ἐστιν ἐκαστος ἄρα, ὡς ἄν ποιή τότε ὃ ἄν βούληται, ἢ ἄν βούληται.
134 φημὶ γάρ, ὦ Πόλη, ἐγώ καὶ τοὺς ῥήτορας καὶ τοὺς γυναῖκας καὶ τοὺς χράκες μὲν ἐν ταῖς πόλεις συμμετατον, δόμησε νυν αὐτήν ἔλεγον· οὐδὲν γὰρ ποιεῖν ὃ ποιεῖν ὃν βούληται ὃς ἐπειδή, ποιεῖν µέντοι ὃτι ἄν αὐτοῖς δόξης βέλτιστον εἶναι.
they want it or not. Only a person with the craft can be said to choose not to produce the product and therefore to have the power not to produce the product, because only the person who has the ability to produce the product could have done otherwise had he or she wished.135

Adding choice provides some of the explanation of how it is that someone with a craft is capable of contraries. Someone with a craft can choose not to perform the actions that will produce the product. However, this doesn’t necessarily imply that the person with the craft is able to produce the opposite of the product. For example, let us say that a physician notices that performing a particular action, say providing medication y, will allow him or her to produce health in a particular ill patient. The physician can therefore choose not to provide medication y, and therefore health will not be produced. However, this doesn’t necessarily imply that the physician can produce disease in an otherwise healthy patient. A healthy patient would require some overt action to be made unhealthy, such as being poisoned. This second case is not the same as the first case. In the first case, the physician could choose not to cure in a way that a person who did not know to provide medication y could not be said to choose not to cure. In the second case, however, the physician would need some sort of knowledge of a causal connection so as to overtly poison the patient. This isn’t a case of simply choosing not to apply medicine. It seems, rather, to be a case of choosing to apply poison. As a result, demonstrating that a physician can choose not to heal a patient does not demonstrate that he or she can therefore choose to harm a patient.

In order to find a plausible account of how it is that a physician is capable of contraries by virtue of knowing the same set of things, one must look instead to the Phaedrus and Principle #4b: Crafts depend on the understanding of causal relationships. As was discussed in Chapter One, the craftsperson knows two different things. First, he or she knows the product associated with the craft. It is knowledge of this whole that allows the craftsperson to produce something good. Second, he or she knows a web of causal interactions that allow the craftsperson to produce that end. He or

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135 Richard D. Parry argues that crafts are capable of contraries because their products can be either good or bad. This is useful in explaining why someone might choose to destroy rather than to produce, but it doesn’t explain the mechanism that allows crafts to be so capable. To supplement this, I introduce the two mechanisms: choice and knowledge of causal relationships (Richard D. Parry, Plato's Craft of Justice [Albany: State University of New York Press, 1996], 87-89).
she knows how *everything* affects the subject of his or her craft and, if the subject of his or her craft is complex, knows how everything affects each part or type of his or her subject. Once both of these things are known, the product and the causal relationships, the person is said to “have the craft” of medicine. Knowing both the end and the causes leading to that end provides the physician the power and choice not to cure. By knowing what actions would heal the patient, the physician is able to decide not to perform the action that would cure the patient. As such, even knowing simply how to cure patients would provide the physician with knowledge of when to abstain from treatment so as not to cure them.

However, knowledge of the product and *all* of the causal relations would also introduce the physician to knowledge of how to *damage* the body as well as cure it. The description of the Hippocratic Method in the *Phaedrus* would introduce the physician to all sorts of effects that different potential treatments would have on a patient, both positive and negative. That *causal* knowledge that a physician understands may be used *independently* of understanding the good of the body. Once a physician has understanding of that causal knowledge, the physician will learn a number ways of manipulating the body that may be used at times to harm rather than help the health of the patient. For example, a physician might learn how to lower a temperature and how to raise a temperature and also the safe range of a temperature for a human body (36-38°C). The physician might choose to use the *techniques* of medicine to raise a hypothermic body or lower a febrile body to the safe temperature, but he or she might use those exact same techniques to lower a hypothermic body’s temperature even lower or raise a febrile body’s temperature even higher. By separating in-principle knowledge of the ends of medicine from the techniques of medicine, Plato opened up the possibility that they might be separated in practice. Fully aware of the safe limits of the body with the techniques of medicine in hand, the physician would be in the best position not only to heal a sick body, but kill a healthy one. A physician could thereby use the techniques of medicine that move a body to a healthy state to move the body away from that healthy state.

Moreover, when one considers the scope of what Socrates claims to be a part of the “Hippocratic Method” in the *Phaedrus*, it becomes evident that one would discover many interactions that might not be useable in order to heal the body at all. In the case of
the manipulation of raising or lowering temperature, it is the misapplication of an otherwise medical technique. However, understanding all of the causal relationships would lead to the discovery of a number of relationships that are bad for health per se, without merely being a misapplication. The following passage was discussed in detail in Chapter One:

If, on the other hand, it takes many forms, we must enumerate them all and, as we did in the simple case, investigate how each is naturally able to act upon what and how it has a natural disposition to be acted upon by what. (270d)\textsuperscript{136}

This Hippocratic Method would include the discovery not only of what helped the body, but also what would outright harm the body. It would discover that ice brings down a fever but also that hemlock kills a person. The systematic understanding of causation presented in the Phaedrus would include the affective disposition of each part of the body to every possible influence, including those that would destroy it. Therefore, as a result of the systematic understanding of causal relationships between the body and other things, the physician would discover not only techniques that could be misapplied, but also a number of ways of destroying the body that no one else would know.

Therefore, knowing how to cure someone appears to be the same power as knowing how to injure someone. The first account in the Hippias Minor, in which Socrates argues from the need for knowledge so as not to accidentally tell the truth “often”, overestimates the extent to which someone in ignorance might accidentally fall into success in complex cases. However, the second account in the Hippias Minor, in which Socrates argues that only a crafts-person may choose to fail, augments the earlier argument through a definition of choice and its relationship to power: one can only really be said to have the power to do something if one chooses to do it. The account of the methodology of the crafts in the Phaedrus provides some further material for understanding how craft bivalence might function. Not only might a physician choose to withhold care in the way that someone who is not a physician can never be said to choose to withhold care, but a physician would discover in the course of learning the causal relationships in medicine both ways to misapply otherwise medical techniques and also

\textsuperscript{136} ἐὰν δὲ πλείω εἶδή ἐχῃ, ταῦτα ἁριθμησάμενον, ὅπερ ἐφ’ ἐνός, τοῦτ’ ἰδεῖν ἐφ’ ἐκάστου, τὸ τί ποιεῖν αὐτῷ πέφικεν ἢ τὸ τί παθεῖν ὑπὸ τοῦ;
causal relationships that could not even be plausibly considered beneficial in any respect, such as the effect of hemlock on the body, as a physician understands the passive powers of the body with respect to all effects, including harmful ones.

4 Plato’s Solution

Despite this bivalence of craft knowledge, Plato provides arguments to maintain both the position that crafts are capable of contraries and the position that a craft is only, strictly speaking, the power to produce one of those two contraries. His solution has two steps: first, there is a kind of “strict speaking” that may be used in order to divide up something’s powers into those that are essential and those that are accidental. Second, the structure of crafts makes their use for benefiting subjects or generating artifacts ontologically primary over their alternative accidental uses of harming or destroying.

4.1 The Linguistic Space

Plato carves out the linguistic space in which he can separate the craft of healing from the craft of poisoning. He adopts the phrase “strictly speaking” (“akribōs”), and argues that crafts, “strictly speaking”, always benefit their subjects. The use of the phrase in the Republic is somewhat puzzling, but those puzzles are resolved in the Statesman, in which a class is defined according to a strict criterion and other apparent instances that lie outside this criterion are not, strictly speaking, members of a class. Crafts, which are sorts of powers, are defined not according to what knowledge gives a power, but rather according to what power a body of knowledge gives. This means that a craft can be said to strictly speaking only benefit rather than harm. In this section, I will examine some of Socrates’ earlier uses of the term “strict speaking” and then discuss them in light of the definition provided in the Statesman.

The term “strict speaking” appears in Book I of the Republic as an important part of the debate. It is used twice in quick succession by Thrasymachus and then by

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137 What I am translating as “strictly speaking” is the adverb “akribōs”, literally “precisely”. However, the term “precisely” can mean “equivalent to”. Rather, the phrase “strictly speaking” captures better the meaning of this term when used to describe definitions. In addition, sometimes the prefix “akribo-” is attached to a word meaning “speaking” (such as Thrasymachus’s “akriblogēi” at Republic 340d) with no change in meaning.
Socrates. First, Thrasymachus wishes to argue that a ruler, strictly speaking, can never err. He does this by making a distinction between the craftsperson and what one might call the “profession”. The craftsperson is a craftsperson exactly in so far as he or she has knowledge of a craft; the “profession” on the other hand, consists of those who have some sort of official status. Being a craftsperson is a matter of degree, as one is more or less a doctor, for example, in as much as one knows medicine, while being a professional is a boundary condition, as a person is either considered to be a doctor or not. “Strictly speaking”, Thrasymachus claims, a craftsperson can never err, even though a professional might. In so far as a craftsperson errs he or she lacks craft knowledge and therefore is not a craftsperson:

I think that we express ourselves in words that, taken literally, do say that a doctor is in error, or an accountant, or a grammarian. But each of these, insofar as he is what we call him, never errs, so that, according to the precise account (and you are a stickler for precise accounts), no craftsman ever errs. (340d-e)

Thrasymachus is invoking Principle #2: Crafts and knowledge are co-extensive. A craftsperson is only a craftsperson exactly in so far as he or she has the relevant knowledge. Therefore, strictly speaking, argues Thrasymachus, a ruler can never err. Rulership is a craft and therefore, in so far as a professional ruler errs, he or she is not truly a ruler. Analogously, a doctor cannot, strictly speaking, be said to err, since a physician only errs in so far as he or she lacks knowledge of how to heal, that is, in so far as he or she is not really a physician.

Socrates counters that, in this same strict sense, a craftsperson is taking care only of the subject of his or her craft: “Is a doctor in the strict sense, whom you mentioned before, a money-maker or someone who treats the sick? Tell me about the one who is really a doctor?” (341c, emphasis added). Notice that Socrates believes that he is using

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138 According to John Lyons, this isn’t simply something that Thrasymachus believes, but is in fact an analytic part of Plato’s use of Greek. To be a craftsperson is to perform a craft well (John Lyons, *Structural Semantics: An Analysis of Part of the Vocabulary of Plato* [Oxford: Basil Blackwell, 1963], 174).

139 ἀλλ' ὅμια λέγομεν τῷ ῥήματι οὕτως, ὅτι ὁ ἰάτρος ἔχειμαρτεν καὶ ὁ λογιστής ἔχειμαρτεν καὶ ὁ γραμματιστής· τὸ δ' ὅμια ἑκάστος τούτοις, καθ' ὅσον τοῦτ' ἔστιν ὁ προσαγωγός συν αὐτοῖς, οὐδέποτε ἦμαρτάνει· ὡστε κατὰ τὸν ἄκριβη λόγον, ἐπειδὴ καὶ σὺ ἄκριβολογῆ, οὐδὲις τῶν δημιουργοῦν ἦμαρτάνει.

140 “Professional ruler” sounds odd, but what is meant is the person recognized to be ruler.

141 ὁ τῷ ἄκριβει λόγῳ ἰατρός, ὃν ἄρτι ἔλεγες, πότερον χρηματιστῆς ἐστὶν ἢ τῶν καμάντων θεραπευτῆς· καὶ λέγε τὸν τῷ ὡς ἰατρὸν ὑντα.
the term “strict speaking” in the same way as Thrasymachus was earlier. At first, Thrasymachus doesn’t understand the point that Socrates is trying to make, arguing that a shepherd only takes care of sheep so as to eventually eat them and so the purpose of shepherding is meat:

You think that shepherds and cowherds seek the good of their sheep and cattle, and fatten them and take care of them, looking to something other than their master’s good and their own. (343b)\textsuperscript{142}

Using the “strict sense” of shepherding described earlier, Socrates argues that Thrasymachus is mistaken and that the shepherd, strictly speaking, takes care of the sheep and is not trying to profit from them in the form of meat:

Nor would you call wage-earning medicine, even if someone becomes healthy while earning wages?

Certainly not.

Nor would you call medicine wage-earning, even if someone earns pay while healing. (346b)\textsuperscript{143}

What Socrates is invoking here is **Principle #4a: Crafts have a determinate subject matter**. While it may be true that a particular shepherd might eat his or her sheep, others might sell the sheep, or shear the sheep or take care of the sheep as a pet. All of these, however, count as shepherding. Therefore, the shepherd, strictly speaking, simply takes care of sheep. The principle is perhaps even clearer in the case of the physician. Someone might perform medicine for money or for honour or even for love. One might even do it on a lark or under duress or from spite (to upset an unpleasant relative of the patient). None of these further motivations, however, affects the definition of “medicine”. Strictly speaking, shepherding is taking care of sheep and medicine is taking care of bodies.

However, the conception of “strictly speaking” in these two passages remains unclear, and it is not immediately obvious that the term is being used in the same way. In the first instance, Thrasymachus argues that, strictly-speaking, a doctor never errs. In the

\textsuperscript{142} Ὄτι οἱ ἑα τοὺς ποιμένας ἢ τοὺς βουκόλους τὸ τῶν προβίατων ἢ τὸ τῶν βοῶν ἀγαθῶν σκοπεῖν καὶ παρέχειν αὐτοῖς καὶ ἰατρεῖες πρὸς λύκον τι βλέποντας ἢ τὸ τῶν δεσποτῶν ἀγαθῶν καὶ τὸ αὐτῶν.

\textsuperscript{143} Οὐδὲ γ’, οἶμαι, τὴν μισθωτικὴν, ἔαν ὑγεινὴ τὰς μισθαρνήν.

Οὐ δήτα. Τί δὲ; τὴν ἰατρικὴν μισθαρνητικὴν, ἔαν ἰόμενος τὰς μισθαρνῆ;
second instance, Socrates argues that, strictly-speak-
ing, medicine benefits the bodies of
patients. Nonetheless, Socrates and Thrasymachus agree that “strict-
speaking” has the
same sense in both cases:

‘Consider this with the preciseness of language you mentioned.
Is it so or not?’, I said.

‘It appears to be so’, he replied. (342b)\textsuperscript{144}

However, on the face of it, Thrasymachus and Socrates are using the term “strictly
speaking” differently. Thrasymachus uses the term in order to signify whether or not
someone has successfully used his or her craft in order to produce its result or perhaps
whether or not one has the knowledge needed in order to produce its result. On the other
hand, Socrates uses the term on the basis of \textit{which} result one ought to consider to be a use
of the craft. In fact, these seem to be quite separable. A professional physician might fail
to heal a patient, but still consider healing to be his or her goal as a physician.

Conversely, a physician might heal a patient successfully, but still mistakenly consider
his or her wages to have been the purpose of the action. Thrasymachus is introducing a
\textit{success} condition, while Socrates is introducing a \textit{specificity} condition\textsuperscript{145}. Why both of
them believe that the term “strict speaking” has exactly the same sense in both cases is
unclear from the \textit{Republic}.\textsuperscript{146}

The same phrase appears again in the \textit{Statesman}, this time in the context of
discovering what the true statesman is. As in the \textit{Republic}, we do not receive a clear
definition of strictness of speech. We do, however, see this strictness of speech applied
in a systematic attempt to define the statesman. We are told the way in which one can be
said to be speaking strictly. What one looks for is a specific \textit{criterion} by which one can
claim that something is a member of a particular class. Other things, no matter how
much they might resemble the class in question, cannot be considered a member of a

\textsuperscript{144} καὶ σκόπει ἑκάστῳ τῷ ἅκραβτη λόγῳ· οὕτως ἡ ἄλλως ἑρχεται;
Οὕτως, ἐστί, φαίνεται.

\textsuperscript{145} Thrasymachus’ success condition doesn’t necessarily imply a specificity condition. Someone who has a
craft is successful at doing x. Socrates specifies this by limiting the scope of this success by limiting what
sort of x’s would count as crafts if one is successful at them.

\textsuperscript{146} Kenneth Dorter argues that, because Thrasymachus introduced an idealised ruler who never errs,
Socrates was able to argue that an idealised ruler will also take care of sheep. However, this would appear
to beg the question, as Thrasymachus could have easily responded that his idealised ruler has an idealised
craft of exploitation (Kenneth Dorter, \textit{The Transformation of Plato’s Republic} [Oxford: Lexington Books,
2006], 38).
specific class unless they meet that criterion. It serves, then, to reduce the semantic field of a term to a specific set. The way in which strictness of speaking is used in the Statesman helps explain why Thrasymachus and Socrates may have been in agreement in the Republic about the use of the term with reference both to success and to specificity.

In the Statesman, we are first introduced to the term “strictness” (“akribeia”) early on in the dialogue, where the Visitor hopes that the confusion surrounding finding the sophist from the prequel dialogue, the Sophist, might not be repeated when dealing with the statesman. The Sophist had proven so difficult to find because he was an expert imitator, and so appeared to be a great number of other things. The Statesman, on the other hand, rather than appearing to serve so many other roles, rather has a great number of imitators pretending at his or her throne. Strict speech may be used to clear out the crowd of pretenders:

VISITOR: Our fears a little earlier were right, when we suspected that we should prove in fact to be describing some kingly figure, but not yet accurately to have finished the statesman off, until we remove those who crowd round him, pretending to share his herding function with him, and having separated him from them, we reveal him on his own, uncontaminated with anyone else?

(268c)147

We aren’t told yet how strict speaking will do this, but we have some more information on what strict speaking can accomplish. In a case where many things resemble what one is searching for, using strict speech can narrow down the semantic field.

In fact, the way in which the semantic field of the statesman is restricted in the Statesman is substantially the same as the way in which the semantic field of justice is restricted in the Republic. Two moves are made, one of which resembles the move made by Thrasymachus, in which one should only consider something truly statesmanship if it is made on the basis of knowledge, while another move is made resembling that of Socrates, in which one should only consider rulership to be true rulership if it is for the benefit of the ruled. In a way analogous to Thrasymachus’ claim that a person is strictly

147 {ἘΔ.} Ὑπὸ ὃ振动 ὃλον ἔμπροσθεν ἐφοβήθημεν ὑποπτεύομεν μὴ λέγοντες μὲν τι γνώσισμαν σχήμα βασιλικόν, οὐ μὴν ἐπιηρογοφένιος γε εἰμέν ποι ὁ ἀκριβείας τον πολιτικόν. ἐως ὁν τοὺς περικεχεμένους αὐτῷ καὶ τῆς συνομῆς αὐτῷ ἀντιποιούμενους περιελόντες καὶ χορίσασται ὁ ἐκεῖνον καθαρὸν μόνον αὐτὸν ἀποφήνομεν;
only a ruler in so far as he has knowledge, the Eleatic Visitor argues that a constitution is
only a constitution if it is crafted with the knowledge of statesmanship:

Visita: It must be the case, it seems, that of constitutions too
the one that is correct in comparison with the rest, and alone a constitution, is the one in which the rulers would be found truly
possessing expert knowledge… (293c, my emphasis) 148

This mirrors Thrasymachus’s claim in the Republic. There he argued that the ruler who
lacks knowledge of rulership isn’t a ruler. Here a constitution written by a statesman
lacking knowledge of rulership isn’t a constitution.

However, this is not the only criterion used to limit the semantic field of
“statesman”. Just as Socrates added to Thrasymachus’s claim that only a ruler who
knows what is to the advantage of the ruled is truly a ruler, so too does the Eleatic Visitor
add that the criterion for statesmanship is not simply that it is based on knowledge, but
that it is for the benefit of the ruled. He asks: “[Is] the truest criterion of correct
government of a city the one according to which the wise and good man will govern the
interests of the ruled?” (296e) and receives an affirmative answer. 149 Just as in the
Republic, we first learn that correct rulership should only be considered rulership first if it
is from knowledge and second if it is for the benefit of the ruled. Also as in the Republic,
medicine is used as an analogy for this criterion. He asks rhetorically,

If then – to continue with our example – someone does not
persuade his patient, but has a correct grasp of the relevant craft,
and forces child, or man, or woman, to do what is better,
contrary to what has been written down, what will be the name
to give to this use of force? (296b-c, my emphasis) 150

Notice the two phrases in italics above. The Stranger argues that the physician is still
acting as a physician so long as he or she is a) acting from craft knowledge and b) acting
for the health of the patient. These again are the criteria introduced by Thrasymachus and
Socrates respectively in the Republic. Thrasymachus argues that a doctor is only a doctor

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148 {ΞΔ.} Ἀναγκαίον δὴ καὶ πολιτεῖον, ὡς ξοικεῖ, ταύτην ὅρθην διαφερόντως εἶναι καὶ μόνην πολιτείαν, ἐν
η τις ἄν εὑρίσκει τοὺς ἄρχοντας ἄλλην ὑπεστήμονας.
149 τοῦτον δὲ καὶ περὶ ταύτα τὸν ὅρον εἶναι τὸν γε ἀληθινῶτατον ὅρθης πόλεως διοικήσεως, ὃν ὡς σοφὸς
καὶ ἀγαθὸς ἄνηρ διοικήσει τὸ τῶν ἀρχομένων;
150 {ΞΔ.} Ἄν τις ἄρα μὴ πείθον τῶν ἰατροῦμενον, ἔχον δὲ ὅρθος τὴν τέχνην, παρὰ τὰ γεγραμμένα τὸ
βέλτιον ἀναγκάζῃ δρᾶν παῖδα ἢ τινα ἄνδρα ἢ καὶ γυναῖκα, τί τούνομα τῆς βίας ἔσται ταύτης;
in so far as he or she knows how to heal a patient, while Socrates argued that a doctor is acting as a doctor only in so far as he or she is healing the patient.

Strict speaking serves in both the Republic and the Statesman as a way of limiting the semantic field so as to eliminate pretenders to a name. This limitation is done by providing a specific criterion by which one determines what will and will not be properly called by that name. A number of other things may imitate members of that group for a number of reasons: pastry-bakers may imitate doctors or a tyrant may wear a crown. However, once one sets the criteria according to which one divides up the world, these apparent similarities become irrelevant. In the cases of both medicine and statesmanship, characters in Platonic dialogues provide a criterion, that of knowledge that benefits a subject. This use of “strict speech” based on a criterion provides Thrasymachus, Socrates and the Eleatic Stranger with the linguistic space in which to deny that something is a member of a class. However, we do not yet know why this criterion is the proper criterion for dividing off statesmen and doctors from their pretenders, nor do we know why the Eleatic Stranger considers this a single criterion rather than two (knowledge and benefit). To understand why this is, one must turn to the structure of crafts.

4.2 The Substantive Argument

In order to understand why knowledge for the benefit of a subject is not only a criterion but the correct criterion for a craft, one must look at the structure of crafts and causation themselves. Plato makes a number of claims about the nature of crafts and causation that limit crafts only to those things that benefit their subjects. First, because crafts have a power, they are not only knowledge, but also causes. Second, Plato limits causes only to those things that provide “genesis” or “coming-to-be”. Third, genesis occurs only when one puts structure into something that might otherwise have been unstructured. Finally, when one puts structure into something unstructured, one benefits that subject. Therefore, crafts can only benefit their subjects, because they are causes that put structure into their subjects rather than destroy them. As a result, the criterion of knowledge that benefits a subject is not only an arbitrary criterion designed to make a word more precise, but is actually a definition mandated by the nature of causation and coming-to-be.
Part of the difficulty in understanding how there can be a craft of healing that is not also identical with a craft of poisoning is that it appears that the same set of information underpin both capacities: one uses the same set of information to heal a patient as one might use to harm them. However, Socrates argues that powers are not simply divided according to the conditions of a power, but according to what it is that the power can do. In the Republic I, Socrates makes the claim that crafts ought to be divided according to their powers:

Tell me, doesn’t every craft differ from every other in having a different power?...For example, medicine gives us health, navigation gives us safety while sailing, and so on with the others. (345e-346a)\(^{151}\)

Notice what Socrates has done here. Crafts, despite being knowledge, are not divided up according to which facts they contain, but what powers they give to someone. Take the following example: knowing the fact that air will try to escape when pressure is increased is both a part of the craft of fire-building (using a bellow) and also a part of proper singing (exhalation). However, this does not imply that fire-building is partly singing nor that singing is partly fire-building. Nor does it imply that fire-building and singing “overlap”. What it implies instead is that we can divide our knowledge according to the powers given to us by having that knowledge and not according to the sets of facts that underlie those powers. Fire-building and singing do not “overlap” nor are they “partly the same”. They are, instead, knowledge considered as powers and are divided up not according to the particular facts but according to the powers.

How powers should be divided up is explained in a separate section of the Republic that is not actually discussing crafts. In Book V, Socrates is concerned to establish that knowledge and opinion are different because they are powers over different subjects. In order to do this, he explains how it is that powers properly ought to be divided:

A power has neither color nor shape nor any feature of the sort that many other things have and that I use to distinguish those things from one another. In the case of a power, I use only what it is set over and what it does, and by reference to these I call

\(^{151}\) \(\Xi \Delta \cdot \) Ἀν τις ἄρα μὴ πείθων τὸν ἰατρευμόμενον, ἔχων δὲ ὀρθῶς τὴν τέχνην, παρά τὰ γεγραμμένα τὸ βέλτιον ἀναγκάζει ὅραν παῖδα ἢ τίνα ἁγναία ἢ καὶ γυναῖκα, τί τοῦνομα τῆς βίας ἔσται ταύτης...οἶον ἰατρικὴ μὲν ὑγίειαν, κυβερνητικὴ δὲ σωτηρίαν ἐν τῷ πλεῖν, καὶ αἱ ἄλλαι οὕτω.
each the power it is: What is set over the same things and does the same I call the same power; what is set over something different and does something different I call a different one. (477c)\textsuperscript{152}

Here Socrates is making interesting metaphysical claims about powers. Powers do not have color or shape; they are invisible to the senses. Instead, powers can only be defined by what they allow the person with the power a) to do and b) to what. So, for instance, medicine can be defined as what allows someone a) to heal b) the body. In fact, since crafts are powers, medicine and poisoning \textit{cannot} be the same craft because they do not \textit{do} the same thing to the body. Although medicine and poisoning might include many of the same facts, and although medicine and poisoning have the same subject in that they are both “set over” the body, they cannot be considered the same craft because they do not share the same power. They simply do not do the same thing and therefore cannot be considered the same craft despite the overlap in their factual bases.

However, Plato is not satisfied merely to divide up the crafts according to their subjects and their powers. In fact, in many dialogues, characters assert that \textit{all} crafts benefit their subjects and that, in fact, there is only \textit{one} craft per subject, that is, the one that is set over it. For example, in the \textit{Euthyphro}, we see a number of crafts divided up according to what they care for: “So dogs are benefited by dog breeding, cattle by cattle raising, and so on with all the others. Or do you think that care aims to harm the object of its care” (13b-c).\textsuperscript{153} However, in the \textit{Republic}, makes a similar claim:\textsuperscript{154}

\textit{Medicine doesn’t seek its own advantage, then, but that of the body?}

Yes.

\textit{And horse-breeding doesn’t seek its own advantage, but that of horses. Indeed, no other craft seeks its own advantage – for it}

\textsuperscript{152} δυνάμεως γὰρ ἐγὼ οὗτε τινὰ χρόναν ὅρῳ οὗτε σχῆμα οὗτε τι τῶν τοιούτων οἷον καὶ ἄλλων πολλῶν, πρὸς ἐν ἀποβλέψεων ἐναὶ διορίζομαι παρ᾿ ἑμαυτῷ τὰ μὲν ἄλλα εἶναι, τὰ δὲ ἄλλα δυνάμεως δὲ εἰς ἐκεῖνο μόνον βλέπω ἐφ᾿ ὃ τε ἔστι καὶ ἀπεραγάζεται, καὶ ταύτῃ ἐκάστην αὐτῶν δύναμιν ἐκάλεσα, καὶ τὴν μὲν ἐπὶ τὸ αὐτὸ τεταγμένην καὶ τὸ αὐτὸ ἀπεραγαμένην τὴν αὐτὴν καλῶ, τὴν δὲ ἐπὶ ἐτέρῳ καὶ ἐτερον ἀπεραγαμένην ἄλλην.

\textsuperscript{153} {ΣΩ.} Καὶ οἱ κύκες γε που ὑπὸ τῆς κυνηγητικῆς, καὶ οἱ βάσει υπὸ τῆς βοσκητικῆς, καὶ τάλα πάντα ὀσφατότοις.

\textsuperscript{154} This also appears to be an application of \textbf{Principle 4a: Crafts have a determinate subject matter.} Crafts can’t share subject matters, which implies that somehow there is only one craft “of” horses, which, it turns out, is the one that benefits them.
has no further needs – *but the advantage of that of which it is the craft*. (342c, my emphasis)\(^{155}\)

In fact, without this exclusion, Socrates’ argument in Book I simply would not work; it would be possible that there be a craft of exploitation with the kind of success condition that Thrasymachus had introduced, but that does not benefit the ruled.

Given the definition of powers later in *Republic V*, this might seem odd. Take medicine and poisoning, for example. These would seem to be two separate powers rooted in knowledge and therefore, two separate crafts. Each one has a different effect on the same subject. They could be placed on the following table:

<table>
<thead>
<tr>
<th>Craft</th>
<th>Subject</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>Body</td>
<td>Health</td>
</tr>
<tr>
<td>Poisoning</td>
<td>Body</td>
<td>Death</td>
</tr>
</tbody>
</table>

According to Socrates, powers are divided up by a) what they do b) to what. Why then is a craft of poisoning, one that a) kills b) the body not possible? According to what was said in *Republic I* though, such a craft is impossible and that was agreed by both Socrates and Thrasymachus. If all crafts necessarily benefit their subject, poisoning not only isn’t a kind of medicine or a part of medicine, it isn’t even a craft.

Unfortunately, no answer to this question is worked out in the *Republic*. Socrates provides Thrasymachus with some examples, and Thrasymachus accepts them. However, the solution to why all crafts must be beneficial is worked out instead in the *Philebus* and in the *Statesman*. Craft knowledge in those dialogues has a specific metaphysical status as a kind of cause, specifically, a kind of cause that fixes proportion onto the material world. In that dialogue, Plato uses **Principle #5: Crafts are dependent on measurement to generate their products** in order to explain why crafts are necessarily beneficial. This is “applied knowledge” in perhaps the most literal sense of the term. One applies one’s knowledge when one affixes the knowledge of correct

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155 Οὐκ ἀρα, ἦν δ’ ἐγώ, ἰατρικὴ ἰατρικῇ τὸ συμφέρον σκοπεῖ ἀλλὰ σώματι.
Ναι, ἔρη.
Οὐδὲ ἰπτικὴ ἰπτικῇ ἀλλ’ ἵπτοις· οὐδὲ ἄλλη τέχνη οὐκ ἐπεστή—οὐδὲ γὰρ προσδεῖται—ἀλλ’ ἐκείνῳ οὐ τέχνη ἐστίν.
proportion in one’s mind (one’s understanding of form) and applies it to the material world. However, when one affixes correct proportion into the material world, one benefits the subject to which one has affixed the correct proportion. Therefore, application of knowledge in the sense put forward in the Philebus and Statesman cannot harm its subject. Instead, application of that knowledge in the sense of infusing proportion into the world can only benefit. This means that poisoning is not truly a craft as it destroys rather than creates proportion in the body.156

I return here to the discussion of the Philebus from Chapter One, focusing instead on the role that measurement plays in generation or “genesis” within the crafts. In that dialogue, Socrates divides all things into the limited, the unlimited, mixtures and the causes of the mixtures. To recap briefly, the unlimited are the continua of various properties in the material world. The limited are mathematical proportions of various kinds. Mixtures are things in the world to which these mathematical proportions have been affixed and cause is the craftsperson who applies those proportions to the world.

The imposition of these measurements is what allows more complex products to come into existence. For instance, in the creation of a piece of music, the musician weaves together high and low pitch in some sort of proportionate way, both temporally through rhythm and simultaneously through harmony, to produce a piece of music. When proportion arises, harmony arises, creating a piece of music:

And does not the same happen in the case of the high and the low, the fast and the slow, which belong to the unlimited? Is it not the presence of these factors in them which forges a limit and thereby creates the different kinds of music in their perfection?” (Philebus 26a)157

A similar imposition of proportion can be seen in all the other crafts, Socrates argues, which is what accounts for the importance of mathematics and precision in the crafts. For example, housebuilders cut wood into geometrical shapes and align them in such a way: 157 {ΣΩ.} Ἐν δὲ ἐξή καὶ βαρεί καὶ τομεί καὶ βραδεί, ἀπείροις οὕσιν, ἄρ’ οὐ ταῦτα [ἐγγιγνόμενα] ταῦτα-άμα πέρας τε ἀπηργάσατο καὶ μουσικὴν σύμπασαν τελεότατα συνεστήσατο;
way as to use their weight to form walls, balance and connect roofs to the top of houses. If any of these proportions are incorrect or absent, the house is likely to collapse:\footnote{158}

SOCRATES: But as to building, I believe that it owes its superior level of craftsmanship to its frequent use of measures and instruments, which give it high accuracy.

PROTARCHUS: In what way?

SOCRATES: In shipbuilding and housebuilding, but also in many other woodworking crafts. For it employs straightedge and compass, as well as a mason’s rule, a line, and an ingenious gadget called a carpenter’s square. \footnote{159}

Crafts, according to Socrates, apply knowledge in a very direct way, by applying limit directly into the world and imposing order so as to generate a product. If something did not apply that order, one would not be \textit{generating} anything and would not actually be applying in this direct way that Socrates defines as craft-like. Socrates explicitly limits the fourth category of things, causes, to crafts and every example used in this section of the dialogue is a craft example. First, he identified causing with production and producers with causes:

And is it not the case that there is no difference between the nature of what \textit{makes} and the \textit{cause}, except in name, so that the maker and the cause would rightly be called one? \textit{(Philebus 26e)}\footnote{160}.

Moreover, the crafts-person turns out to be another name for this fourth category of things, causes: “We therefore declare that the craftsman who produces all these must be the fourth kind” \textit{(27b)}.\footnote{161} A crafts-person, by definition, serves the metaphysical role as the primary cause of the existence of things, and this role is satisfied only by the imposition of proper proportion onto the unlimited continua.

\footnote{158} We see here an application of \textbf{Principle #5: Productive crafts are dependent on measurement to generate their products}.

\footnote{159} \{Ὡ.\} Τεκτονικὴν δὲ γε οἱμα πλείστοις μέτροις τε καὶ ὀργάνοις χρωμῆν τὰ πολλὰν ἀκριβεῖαν αὐτη

\footnote{160} \{ΠΡΩ.\} Πή:

\footnote{161} \{Ὡ.\} Οὐκόδομον ἢ τὸ ποιοῦντος φύσις οὐδὲν πλὴν ὑνόματι τῆς αἰτίας διαφέρει, τὸ δὲ ποιοῦν καὶ τὸ αἰτίων ὀρθός ἂν εἴη λεγόμενον ἕν;
Imposing these limits can only be beneficial to the subject to which it is applied, and Socrates uses the example of medicine to illustrate this point. For example, health is the result when the opposites in the body are in the appropriate proportion: “Is it not true that in sickness the right combination of opposites establishes the state of health?” *(Philebus 25e).* The claim is made even more clearly in the *Laws* III, in which he directly attributes the lack of proportion to disease:  

If you neglect the rule of proportion and fit excessively large sails to small ships, or give too much food to a small body, or too high authority to a soul that doesn’t measure up to it, the result is disastrous. Body and soul become puffed up; disease breaks out in the one, and in the other arrogance quickly leads to injustice. *(691c)*

As “production” is identical with the imposition of proportion on something that would otherwise be disproportionate, any craft that is set over something else will necessarily benefit that subject. As a result, while powers are divided by a) what they are set over and b) what they do to them, crafts ultimately are only divided by a) what they are set over. Crafts only do one thing, which is to produce a beneficial order in their subjects. Other powers cannot be considered crafts, and therefore, there is only one craft set over each subject, the one that benefits it.

### 4.3 Conclusion

In order to establish that medicine as a craft does not include poisoning, Plato makes two separate moves. First, he establishes the linguistic space for his conclusion, referring to a method of “strict speech” in which a term is used in such a way as to pick out a unique criterion, in the case of medicine, the knowledge that gives the power to benefit the body. Second, he establishes a substantive argument for the priority of the healing craft over poisoning. As powers have no sensible properties, they are divided

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162 {Ω.} Ἀρα οὐκ ἐν μὲν νόσους ἢ τούτων ὀρθή κοινωνία τὴν ύγιείας φύσιν ἐγέννησεν;  
163 Polybus, the likely author of the Hippocratic *On the Nature of Man,* makes a similar claim, indicating that this view of health was not unique to Plato. He argues that, “Health is primarily the state in which these constituent substances are in correct proportion to each other, and are well mixed” *(Hippocrates, Hippocratic Writings,* ed. G. E. R. Lloyd [Middlesex: Penguin Books Ltd., 1978], 262).  
164 {ΑΘ.} Ἕν τις μείζων διὸ τοῖς ἑλάττωσι [ἄνωμαι] παρεῖς τὸ μέτριον, πλοίοις τε ἱστία καὶ σώμασιν τροφῆν καὶ ψυχῆς ἀργάς, ἀνατρέπεται που πάντα, καὶ ἐξυμβρίζοντα τὰ μὲν εἰς νόσους θεὶ, τὰ δ’ εἰς ἔκχονον ὄβρεως ἁδικίαν.
only by what objects they are set over and what they do to these objects. Second, because crafts are causes and causes impose proportion on unlimited continua, and because the imposition of correct proportion necessarily benefits the subject of that proportion, all crafts are only crafts in so far as they benefit their subjects, and therefore, poisoning and other types of destruction cannot be said to be crafts at all.

5 Aristotle on the Problem of Crafts and Contraries

Like Plato, Aristotle is aware of the problem of bivalence. Though Aristotle has a different interpretation of bivalence than Plato, his approach to the solution is heavily influenced by Plato’s own. Examining his solution provides an example of the ways in which Plato’s discussion of the crafts, especially the medical craft, influences contemporary debates. Further, the study of Aristotle’s approach to a problem is always helpful in understanding and clarifying Plato’s own position. Aristotle notices as well that those who have a craft seem best capable of producing the contrary of the product of that craft, and cites medicine as his paradigmatic example. His clearest statement of the principle occurs in *Metaphysics* Θ:

> And each of those [powers] which are accompanied by reason is alike capable of contrary effects, but one non-rational power produces one effect; e.g. the hot is capable of heating, but the medical art can produce both disease and health. (1046b5-7) 165

He and Plato approach the question differently, however. While Plato uses many examples of bivalent crafts with few arguments, Aristotle uses much argumentation but with few examples. In fact, one difficulty in interpreting Aristotle’s passages is that one must try to understand what kinds of examples he has in mind when providing his argumentation. Throughout this section, I will consider two different senses in which someone can be said to be “capable of contraries”. 166

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165 καὶ ἀι μὲν μετὰ λόγου πᾶσα τῶν ἑναντίων αἱ αὐταί, ἡ δὲ ἄλογοι μία ἕνος, οἱ δὲ ἑκατομμύριοι μένον, ἢ δὲ ἰατρικὴ γόνου καὶ ἱγιαίας.

1) The “negative” interpretation: On this interpretation, the physician can be said to cause disease by choosing not to heal a sick person and by choosing to abstain from activities that would cause a healthy person from becoming diseased.

2) The “positive” interpretation: On this interpretation, the physician can be said to cause disease in the sense that he or she can generate disease in a patient who would not have been diseased if not for the physician’s interference.

Aristotle argues that a person with crafts is capable of contraries several times in the *Metaphysics*, in Δ, Z and Θ. In this section, I will argue that, despite his debt to Plato who clearly has a positive interpretation, the negative interpretation is the best interpretation of Aristotle’s claim that crafts are capable of contraries. In Δ, the negative interpretation is the interpretation most compatible with the text. In Z and Θ, the text is compatible with either interpretation, but a negative interpretation is the interpretation that prevents the argument from being unsound.

Aristotle begins his discussion of crafts and contraries in *Metaphysics* Δ, his “philosophical lexicon”. Aristotle argues that crafts are capable of contraries because they are principles and powers whose differentia is choice. Crafts appear in Δ under one of his senses of “principle” or “arché”, sometimes translated “origin”. The fifth sense of an “arché” lists crafts among them:

That by whose choice that which is moved is moved and that which changes changes, e.g. the magistracies in cities, and dynasties and kingships and tyrannies, are called ‘principles’, and so are the crafts, and of these, especially the architectonic arts. (1013a9-14)

The term “architectonic arts” here translates “hai technai...architektonikai”, a term that includes both “arché” and “techne” in its very construction. Crafts appear here as a kind of principle whose differentia is choice:

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167 Christopher Kirwan claims that the intent of this fifth sense is to unite the middle-voiced “archesthai”, meaning “begin”, with the active-voiced “archein”, meaning “rule”, though Aristotle doesn’t himself take any note of the different voices (Aristotle, *Metaphysics, Books [Gamma], [Delta] and [Epsilon]*, ed. Christopher Kirwan [Oxford: Clarendon Press, 1971], *ad loc*).

168 ἡ δὲ οὗ κατὰ προαίρεσιν κινεῖται τὰ κινούμενα καὶ μεταβάλλει τὰ μεταβάλλοντα, ὡσπερ αἱ τε κατὰ πόλεις ἀρχαι καὶ αἱ δυναστείαι καὶ αἱ βασιλείαι καὶ τυραννικὲς ἀρχαὶ λέγονται καὶ αἱ τέχναι, καὶ τούτων αἱ ἀρχιτεκτονικαί μάλιστα.
Because *choice* is involved in the use of a craft, the craft can be considered a principle and, not only this, but a principle akin to other sorts of leadership. In this category, Aristotle puts *all* the crafts. Though he says it is “especially” (“*malista*”) architechtmonic arts, by which he likely means people who command other craftspeople, all craftspeople are included under this sense of principle. All crafts, therefore, are a kind of principle because they allow actions that follow from choice.\(^{169}\)

Crafts also appear under the heading of “power” or “*dynamis*”. The first two senses are connected, so I will cite them both. Crafts appear explicitly under the first sense of power, which he defines as:

> …a source of movement or change, which is in another thing or in the same thing qua other, e.g. the art of building is a capacity which is not in the thing built, while the art of healing, which is a capacity might be in the man healed, but not in him *qua* healed.

(1019a15-18)\(^ {170}\)

Crafts are a kind of power as well as a kind of principle, in this case as a principle of motion in another.\(^ {171}\)

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\(^{169}\) Note also Plato’s use of choice as a source of power in the *Hippias Minor*, as discussed above.

\(^{170}\) Λόγος *λέγεται* ἣ μὲν ἄρχῃ κινήσεως ἢ μεταβολῆς ἢ ἐν ἑτέρῳ ἢ ἐν ἑτερον, οὐδὲν ὀικοδομική δύναμις ἐστιν ἢ ὑπάρχει ἐν τῷ οἰκοδομημένῳ, ἀλλ’ ἢ ἱστορικὴ δύναμις οὕσα ὑπάρχει ἐν ἐν τῷ ἱστορικόμενῳ, ἀλλ’ οὕσα ἢ ἱστορικόμενος.

\(^{171}\) Kirwan notices an ambiguity in the “*qua other*” here: “Is he doctored *qua other* (1) because his patient does not have to be himself or (2) because his patient does not have to be a doctor?” (Aristotle, *Metaphysics, Books [Gamma], [Delta] and [Epsilon]*, ed. Christopher Kirwan [Oxford: Clarendon Press, 1971], *ad loc*). This is the result of a larger puzzle in this classification. Some changes can only take place in oneself (growth), some can take place only in another (fire cannot heat itself) and some can take place in either (healing). Why he chooses to combine the last two into a single category is a puzzle in its own right.
A power in this sense is a source of motion or change in some patient (or in the craftsperson qua other, by which Aristotle is referring to cases where a doctor uses his or her knowledge for self-healing). Notice that this sense of power would include non-rational powers as well, despite all of Aristotle’s examples being craft examples. Fire, for example, is a source of movement or change in another thing. Crafts, then, are powers of the sort that produce change in another, that is, they are a making or “poiēsis”. However, since it would apply to any power, including non-rational powers that are not capable of contraries, it cannot be qua powers in this first sense that crafts are capable of contraries.

The second sense of “power” ties together Aristotle’s claim that crafts are principles because they involve choice and his claim that crafts are powers because they involve making. In the second sense, one can be said to have a “power” because one has “choice”:

The capacity of performing this well or according to choice; for sometimes we say of those who merely can walk or speak but not well or not as they choose, that they cannot speak or walk. (1019a23-25)\(^\text{172}\)

Several things about this passage are worth noticing. This has similarities to the fifth sense of “principle” mentioned earlier. In the fifth sense of principle, a principle is “that by whose choice that which is moved is moved and that which changes changes”. In the second sense of power, it is “the capacity of performing this [i.e. being a source of movement or change, which is in another thing] well or according to choice”. There are some differences. The definition of “principle” mentions “others”, while the definition of

\(^{172}\) ἐτὶ ἢ τοῦ καλῶς τοῦτ’ ἐπιτελεῖν ἢ κατά προαίρεσιν· ἐνίοτε γάρ τοὺς μόνον ἄν πορευθέντας ἢ εἰσόντας, μὴ καλῶς δὲ ἢ μὴ ὡς προείλοντο, οὐ φαμεν δύνασθαι λέγειν ἢ βαδίζειν· ὁμοίως δὲ καὶ ἐπὶ τοῦ πάσχειν.
“power” mentions “well”. Nonetheless, it appears that Aristotle means quite similar things by his fifth sense of principle and his second sense of power: having the choice to cause change. Second, notice that the two examples here, walking and speaking, are not crafts. While in one sense, one needs to learn to walk and speak, one does not learn them in the same way as one learns to practice medicine or build a house. Walking does not even require reason; a newborn foal can walk. Though craft examples have recurred throughout Aristotle’s definitions of “principle” and “power”, none of his definitions have so far restricted themselves to crafts. Crafts are principles and powers not qua crafts but qua including choice.

Choice, then, is a plausible place to look for an explanation of Aristotle’s claim that crafts are capable of contraries. After all, choice, among other things, is a choice between contraries. One sense each of both principle and power is that which has choice as its differentia. Nonetheless, while this might provide some explanation of why Aristotle thinks that crafts are capable of contraries, it does not solve the problem of the sorts of contraries of which a craftsperson is capable. After all, both the positive and negative interpretations of bivalence include choices. However, there is more evidence in Δ that implies the negative interpretation, rather than the positive interpretation. The first piece of evidence is in his discussion of “priority” and “posteriority”, which he defines together. The fourth sense of “priority” and “posteriority” is priority and posteriority in power, in which “choice”, “power”, “motion” and “principle” all appear173:

Others are prior in power; for that which exceeds in power, i.e. the more powerful, is prior; and such is that according to whose choice (“prohairesin”) the other – i.e. the posterior – must follow, so that if the prior does not set it in motion the other does not move, and if it sets it in motion it does move; and here choice is a principle. (1018b21-26)174

This sense of priority has a great deal of overlap with the fifth sense of principle and the second sense of power. One thing is said to be “prior” to another in “power” when the “choices” of the first thing are a “principle” of “motion” in the second thing. Especially

173 Notice, too, just how well this definition maps onto both rulership and crafts, and Aristotle could have just as easily provided a rulership example as a craft example. Curiously, it is the only sense of priority for which he does not provide an example.

174 τὰ δὲ κατὰ δύναμιν (τὸ γὰρ ὑπερέχειν τῇ δύναμει πρῶτον, καὶ τὸ δυνατότερον· τοιοῦτον δ’ ἔστιν ο郤 κατὰ τὴν προαίρεσιν ἀνάγκη ἀκολουθεῖν θάτερον καὶ τὸ ὑστερον, ὥστε μὴ κινοῦντος τε ἐκείνου μὴ κινεῖσθαι καὶ κινοῦντος κινεῖσθαι· ἢ δὲ προαίρεσις ἀρχῆ).
interesting for the purpose of understanding whether Aristotle intends a negative or positive understanding of bivalence, is his characterization of the type of choice here. Notice that Aristotle does not characterize the choice as being *between* different motions that he or she might induce in a subject. Instead, the choice is characterized as being between *whether or not* to set something in motion. In the case of the bivalence of crafts, this favours the negative interpretation. If the positive interpretation were correct, then there would be *two* motions that a physician might initiate, and three possible actions: healing, harming and letting be. However, Aristotle characterizes choice as between initiating a motion and not initiating a motion.

A further piece of evidence from Α that Aristotle intends a negative interpretation is in his definition of "cause". Perhaps the most obvious objection to the negative interpretation is that, when Aristotle claims that a physician can "cause disease", it is simply implausible to interpret this claim as "does nothing and allows disease to happen", so therefore the positive interpretation must be correct. However, Aristotle includes almost exactly this in his definition of "cause". Specifically, he describes a way in which something can be "of contraries" or "τὸν ἐναντίον", the exact same phrase used in Θ: 175

Again, the same thing is sometimes the cause of contraries; for that when present causes a particular thing, we sometimes charge, when absent, with the contrary, e.g. we impute the shipwreck to the absence of the steersman, whose presence was the cause of safety; and both – the presence and the privation – are causes that move. (1013b12-16) 176

This claim is perhaps the best evidence for a negative interpretation of bivalence in Aristotle, and certainly the best evidence against the view that a positive interpretation is the obvious interpretation of *Metaphysics* Δ. Here, Aristotle argues explicitly that the same cause can be considered a cause of contraries, even a cause of contrary *motions*,

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175 Kirwan argues that this paragraph also implies that we ought to blame a present steersman for a crash *qua* (failed) steersman, because of the term "αἰτιόμεθα" may have the sense of "blame", implying that there is actually a steersman to blame for the accident (Aristotle, *Metaphysics, Books [Gamma], [Delta] and [Epsilon]*, ed. Christopher Kirwan [Oxford: Clarendon Press, 1971], *ad loc*). However, it is clear from the passage that the steersman’s *absence* is what causes the shipwreck, not his or her poor performance, and if there is any blame, it would be for a steersman’s failing to show up rather than failing to steer correctly. On the contrary, the term "αἰτιόμεθα" may simply have the sense of "we attribute causation", thereby not implying that there is any particular steersman who is "blameworthy" for the crash.

176 ἐπὶ δὲ ταύτῳ τῶν ἐναντίων ἐστίν· ὅ γὰρ παρὸν αἰτίων του· τοῖς· ἀπὸν αἰτιόμεθα ἐνίοτε τοῦ ἐναντίονν, οἷον τὴν ἀποστασίαν τοῦ κυβερνήτου τῆς ἀνατροπῆς, οὐ ἢ παρουσία αἰτία τῆς σωτηρίας· ἀμφότερος δὲ, καὶ ἡ παρουσία καὶ ἡ στέφησις, αἰτία ὡς κινοῦντα.
both when it is present and when it is absent.\textsuperscript{177} Aristotle’s own example is the lack of a steersman causing a boat to crash. In fact, the claim is so strong here, it would apply to non-rational as well as rational causes. For example, the absence of rain causes trees to die or even the absence of sufficient gravity causes moons to escape orbit. So, one says that the absence of rain causes trees to die because the presence of rain causes them to flourish, and the absence of sufficient gravity causes the moon to escape orbit because the presence of sufficient gravity causes moons to stay in orbit. Absences are causes of motion exactly insofar as the presence of their positive term would have been a cause of the opposite motion.

When one connects this characterization of absences as causes, a negative interpretation of bivalence becomes plausible. A physician has the power to heal (the first sense of “power”). However, because the physician is rational, he or she has the choice whether or not to exercise that power. If the physician chooses to heal the patient, then the doctor initiates the motion of healing in the patient. However, if the physician chooses instead not to heal the patient, the patient remains ill. The absence of the activity of healing from the physician when he or she decides not to heal the patient is analogous to the absence of the steersman. As it is true that a ship can crash because it lacks a steersman, it is also true that a ship can crash because the steersman chooses not to steer. By choosing not to heal, a physician chooses an absence of healing, and that absence of healing can be said to be the source of motion for the absence of whatever it is that activity of healing would have caused had it been initiated. Thus, a person might say that he or she is sick because no physician is willing to perform a cure, which is not uncommon for highly expensive procedures. People with choices then are capable of contraries in the sense that the absence of an activity can be considered the cause of the absence of its effect.

In \textit{Metaphysics} \textit{Z.7}, Aristotle again discusses crafts and contraries, and again his claim is best understood with a negative interpretation. Aristotle makes the point in \textit{Z} that understanding something and understanding its privation are exactly the same:

\begin{quote}
For even contraries have in a sense the same form; for the substance of a privation is the opposite substance, e.g. health is
\end{quote}

\textsuperscript{177} At the end of this passage, Aristotle mentions privation (“στέρησις”), but earlier in the passage simply uses the term absense (“ἀλαζνήσις”). In this passage, he treats the two as equivalent.
the substance of disease, for it is by its absence that disease exists; and health is the formula and the knowledge in the soul. (1032b2-5)

I will return to the metaphysical implications of this passage in Section VI below, but for now, I will examine its epistemological implications. Contraries have the same form (eidos) and formula (logos). Specifically, they have the form of the positive term. In the case of health and disease, health is the formula by which one understands disease, in much the same way that sight is the formula by which one understands blindness. Therefore, the knowledge (epistêmê) of them is the same.

Curiously, for the rest of Z.7, Aristotle does not again mention privations. However, he does give a description of the way according to which crafts work and the relationship between “thinking and making” (“noësis and poiësis”):

Of productions and movements one part is called thinking and the other making, -that which proceeds from the principle and the form is thinking, and that which proceeds from the completion of the thinking is making. (1032b15-17)

When one understands the principle and the form of something, one “thinks” about it, Aristotle claims. “Principle” (“archê”) here implies understanding of causal connections; it literally means “origin”. One can see that this is the case when Aristotle provides an example from medicine as to the relationship between thinking and making: “…as in healing, the principle is perhaps the production of warmth, and this the physician produces by rubbing” (1032b25-26). Therefore, in order to produce a given result, one must know two things, the form (eidos) and the origin (archê). Only when one understands both of these has one completed the thought that will lead to the making.

However, if this is the case, then Aristotle’s argument here does not imply a positive interpretation of the bivalence of crafts. Positive terms and privations have a great deal in common: form, essence, substance, formula and science. However, they do not have an archê or origin in common. The physician not only needs to recognize the
form of health, but also needs to recognize that heat, in this instance, can produce it. However, because one needs to understand both the form of something and the “archē” of something in order to produce it, and because knowing the form of something only provides the form of the privation of that thing and not the “archē” of the privation of that thing, having the ability to produce something doesn’t necessarily provide the positive ability to produce its privation. I will extend Aristotle’s own example. Understanding heat (the vibration of particles) provides understanding of coldness (a lack of that same vibration). However, though I might understand that fire is an origin or principle of heat, so I can heat something up, this does not imply that I understand refrigeration. We discovered how to create fire hundreds of thousands of years ago, while we discovered how to refrigerate only in the mid-Eighteenth Century. Therefore, Metaphysics Z, too, works best with a negative interpretation of bivalence.

Metaphysics Θ.2 contains Aristotle’s strongest claims about the bivalence of crafts, but even this chapter should be interpreted in a negative way. This chapter begins with the claim that crafts are a kind of “productive knowledge” (“poiētikē epistēmē”) and are sorts of powers: “This is why all arts, i.e. all productive forms of knowledge, are potentialities; they are principles (archai) of change in another thing or in the artist himself considered as other” (1046b3-4). This is almost verbatim from the first sense of “power” in Metaphysics Δ. However, what is most striking about it is his definition of crafts as “productive knowledge”. This definition is unique to this passage and does not appear in the definition of a craft as a “reasoned state of capacity to make” in Nicomachean Ethics 1140a. He refers to crafts as a kind of “knowledge” here, and does not use the term “crafts” again for the rest of the chapter, referring to crafts exclusively under the name “epistēmē”. He makes the following claim: “The reason is that knowledge is a formula, and the same formula explains a thing and its privation…”

182 For an example of the opposite, positive interpretation, see Makin’s commentary, in which he holds that knowledge of the craft of medicine allows one to engage in acts of both healing and contra-healing (as opposed to just non-healing): “…and grasp of that single form equips an agent to bring about both Φ-ings and contra-Φ-ings” (Aristotle, Metaphysics: Book [Theta], trans. Stephen Makin [New York: Oxford University Press, 2006], 49).

183 διό πάσαι οἱ τεχνές καὶ οἱ ποιητικαὶ ἐπιστήμαι δυνάμεις εἰσίν· ἀρχαὶ γὰρ μεταβλητικαὶ εἰσίν ἐν ἄλλῳ ἢ ἦ ἄλλῳ.

184 ἐξίς τις μετὰ λόγου ποιητική.
The claim that the same formula ("logos") explains something and its privation is familiar from Book Z. So is the claim that something and its privation share the same knowledge ("epistēmē"). However, his characterization of what is necessary to have a craft changes. In Z, someone had a craft by understanding *both* the form and the origin. In Θ, one has a craft simply by having the formula. Since a craft is a kind of knowledge of its product and knowledge is a formula, a craft is a formula of its product. However, since the formula of a privation is identical to the formula of a positive thing, a craft is also the formula of its privation. In other words, if all it takes to produce something is to have its formula, and if the formula of something is identical to that of its privation, then anyone who is able to produce something must be able to produce its privation. This might seem to be production in the positive, not the negative sense and therefore, it would seem to indicate that Aristotle has a positive understanding of bivalence in Book Θ.

However, any positive interpretation of Aristotle’s claims in Book Θ would require having Aristotle argue something unsound. If he is arguing from a positive interpretation, he would be making the following argument:

1) By understanding something, I understand everything with the same formula.
2) Everything and its privation have the same formula.
3) Therefore, by understanding something’s formula, I understand its privation’s formula.
4) I understand something’s formula if and only if I am able to produce it.
5) Therefore, if I am able to produce something, I am able to produce its privation.

The problem with this argument on a positive interpretation is that either premise 2) or premise 4) is false. If I interpret “formula” to exclude what causes something to be produced, much as “form” and “origin” were separated in Book Z, then premise 4) is false. Being able only to recognize health is insufficient to produce it. However, if one includes the “origins” from Book Z in the definition of “logos”, then premise 2) becomes false, because understanding how to produce heat by creating a spark near tinder does not

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185 αἴτιον δὲ ὅτι λόγος ἔστιν ἡ ἑπιστήμη, ὁ δὲ λόγος ὁ αὐτὸς δηλοῖ τὸ πρᾶγμα καὶ τὴν στέρησιν.
imply understanding how to cool something by creating a vacuum over ethoxyethane. So, either understanding something’s “formula” isn’t sufficient to constitute a craft or things and their privations don’t have the same “formula”.

If Aristotle intended there to be a positive interpretation of bivalence in Book Θ, his argument would be flawed. On the other hand, if the argument is read with a negative interpretation in mind, the argument would work. On a negative interpretation, one could take “formula” to include “archē”, so that premise 4) is true. Understanding the “logos” of health includes understanding how it is produced and therefore how to produce it. However, understanding the “logos” of disease includes only knowledge of how to produce it negatively, not positively. One can “produce” disease in the body by choosing not to act in the manner that one deliberates would produce health. One can therefore say that one “caused” the disease through one’s abstention in the sense in which a ship can be said to run aground because of the absence of a steersman. The negative interpretation would therefore not commit Aristotle to any obviously false premises. As long as the “logos” of health includes only how positively to produce health and as long as the production of disease remains negative, the argument in Book Θ avoids the conflict that arises between premise 2) and 4) on the positive interpretation.

Aristotle’s theory of bivalence, then, should be read in a negative way. That is, Aristotle’s claims about crafts and their relationship to choice are consistent with an understanding of capacity for contraries that implies only that a physician can be said to be responsible for disease in so far as he or she chooses not to heal, rather than implying that a physician has the positive power to produce disease in a subject who would otherwise be healthy if not for the physician’s interference. The most consistent reading of his position on crafts and contraries in the *Metaphysics* is that crafts are capable on contraries in the sense that a rational agent with the power to heal also has the power to abstain from healing, that is, the physician has a negative power to produce disease.

6 Aristotle’s Solution

Assuming the negative interpretation of bivalence, Aristotle’s claims about bivalence are less robust than Plato’s, who clearly has a positive understanding of bivalence. Nonetheless, just like Plato, Aristotle will not allow even this negative
bivalence to be considered medicine, properly speaking. Like Plato, Aristotle has linguistic space in which he can carve out the substantive claim that “per se”, medicine cannot be said to be causing disease, even in this negative sense. He makes this claim in *Metaphysics* Θ:

> Therefore such [productive] sciences must deal with contraries, but with one *per se* and with the other not *per se*, for the formula applies to one object *per se* and to the other in some sense *per accidens*. (1046b10-13)

In this section, I will discuss both the linguistic space in which Aristotle makes this distinction and his substantive argument for the primacy of producing the positive term. In the linguistic section, I will discuss *per se* and *per accidens* predication, and how such predication applies to accidents and privations. In the substantive section, I will discuss Aristotle’s theory of privation and how privations have a diminished ontological status relative to their positive terms. Finally, I will look at some of the evidence for why Aristotle makes the claim that health ought to be considered the positive term while disease ought to be considered the privation. Together, these various components will show why Aristotle claims that *per se*, medicine can only produce health rather than disease.¹⁸⁷

### 6.1 The Linguistic Space

Just as Plato developed the phrase “strict speaking” in order to argue that a craft, strictly speaking, can only be used to benefit its subject, Aristotle created a similar distinction between what he calls predicking “*per se*” (“*kath' auto*”) and “*per accidens*” (“*kata symbebēkos*”) in the *Posterior Analytics* and the *Metaphysics*. Using this

¹⁸⁶ ὡστ' ἀνάγκη καὶ τὰς τοιοῦτας ἑπιστήμας εἶναι μὲν τῶν ἐναντίων, εἶναι δὲ τοῦ μὲν καθ' αὐτάς τοῦ δὲ μὴ καθ' αὐτάς· καὶ γὰρ ὁ λόγος τοῦ μὲν καθ' αὐτὸ τοῦ δὲ τρόπον τινὰ κατὰ συμβεβηκός.

¹⁸⁷ Terence Irwin argues for a distinction between “potentiality” (“*dynamis*”, which I have been translating “power”) and “possibility”, and argues that the distinction between causing health and causing disease is a distinction between the potentiality of medicine and the possibility of medicine. To make this distinction, Aristotle use bronze, and argues bronze is only possibly a statue, rather than potentially one, because the *archē* by which it becomes a statue is external (*Metaphysics* 1049a13-18). The difficulty with Irwin’s interpretation is two-fold: first, Aristotle explicitly argues that crafts, in an accidental sense, are potentialities for contraries. They may be accidental potentialities, but that does not imply that they are not potentialities; second, a doctor poisoning and bronze becoming a statue are not analogous on precisely the relevant point. The physician’s choice not to heal is the *archē* of the disease, and this is an internal, rather than an external *archē* (Terence Irwin, *Aristotle's First Principles* [New York: Oxford University Press, 1988], 231-35).
distinction, Aristotle carves out the linguistic space he will need to argue that, while having a craft might make one capable of producing contraries, the term is only used *per se* when it is used to create its product, not the privation of that product.

Aristotle uses the term *per se* predication when something is predicated of something in terms of what is normally translated “essence”, its “*to ti ēn einai*” or “*to ti esti*”, literally translated, “the what it is to be” or “the what it is”. Aristotle uses the phrase “*per se*” to refer to essential predication and “*per accidens*” to refer to accidental predication. He makes this distinction in *Metaphysics* Z: “The essence (*to ti ēn einai*) of each thing is what it is said to be *per se*” (1029b13-14). Therefore, *per se* predication can be thought of as “essential” predication, in the sense that something is predicated of a subject *per se*, when it is a characteristic that makes that thing the kind of thing that it is. Otherwise, the predication is *per accidens*. For example, consider a particular human being, Jon Voight. There are a number of different things that can be predicated of Jon Voight. For example, one might say that he is “six-feet tall” (a quantity), “in California” (a location), “an actor” (a state), or “father of Angelina Jolie” (a relation). However, while all of these are characteristics he has, none of these tell you what he is. None of these describe him as a whole and none of them answer the “what is Jon Voight?” question. The answer to “*What* is Jon Voight?” is “Jon Voight is a human being”. The essence of Jon Voight is his humanity, but “humanity” itself has parts. What makes something a human being is that it is a rational animal. Being “rational” and being an “animal” are thereby parts of Jon Voight’s essence; they make Jon Voight the kind of thing that he is. Therefore being “rational” is not predicated of Jon Voight in the same way that “in California” is predicated of Jon Voight. Unlike saying “in California”, which relates a non-essential or “accidental” property of Jon Voight, saying “rational” relates an “essential” property of Jon Voight.

This, however, raises a significant issue for the interpretation of *Metaphysics* Θ. Crafts and types of knowledge are not essences. One no more says what Hedy Fry is when one says she is a doctor than one says what Jon Voight is when one says he is an actor. It would seem, then, that any predication about crafts should be *per accidens*. The same is as true of health as it is of crafts. “Healthy” is not a part of the essence of

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188 ὃτι ἐστὶ τὸ τί ἦν εἶναι ἑκάστου ὁ λέγεται καθ’ αὐτό.
anything, as one does not become a different type of thing when one becomes ill. Therefore “health” would appear to be always predicated *per accidens* as well. If this is the case, then Aristotle’s claim that productive knowledge of health is predicated *per se* would seem to be nonsense. “Productive knowledge” is never *per se* and “health” is never *per se*, so the term “*per se*” could apply to neither. If that were the case, then there would be no way for Aristotle to make a distinction between “*per se*” and “*per accidens*” predication in crafts because all distinctions would be “*per accidens*”

However, Aristotle has another sense of “essence” that I will refer to from this point on as the “limited sense”. In this sense, described in *Metaphysics* Z, “essence” can refer to things other than substances, even to accidents:

But, after all, ‘definition’, like ‘essence’, has several meanings; ‘essence’ (*to ti estin*) in one sense means a substance and a ‘this’, in another one or other of the predicates, quantity, quality and the like. For as ‘is’ (*esti*) is predicable of all things, not however in the same sense, but of one sort of thing primarily and of others in a secondary way, so too the ‘what’ (*ti*) belongs simply to substances, but in a limited sense to the other categories. (1030a20-25)

This is a tricky paragraph, because it depends on dividing up the parts of the phrase normally translated as a single word, “essence”: “*to (the) ti (what) esti (it is)*”. What he is claiming is that “is” has a number of senses, one of which is primary. So, both the statements, “Jon Voight is a human” and “Jon Voight is an actor” are true, but the “is” here is used differently. The first use which he calls here the “substantive” use is primary and the second is secondary. Consequently, the term “what” also has primary and secondary uses. It isn’t *false* to answer “Jon Voight is an actor” when one asks what he is, but one isn’t giving the primary answer, but rather a secondary one. In fact, Aristotle is claiming, “what” has just as many senses as “is”. For every sense of “is”, primary or secondary, there is a corresponding sense of “what”, primary and secondary. What this implies, though, is that there is also a different sense of essence (the “what it is”) that corresponds to every sense of “what” and “is”. This sense of essence is a limited sense of

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189 The translation of “*ti*” here are “what” rather than “this” is because the term here appears to refer to the “*ti*” in “*tò ti éstiv*” above, which is interrogative.

190 ἦ καὶ ὁ ὁρισμὸς ὀσπέρ καὶ τὸ τί ἐστι πλευσαμάς λέγεται; καὶ γὰρ τὸ τί ἐστιν ἕνα μὲν τρόπον σημαίνει τὴν οὐσίαν καὶ τὸ τὸδε τι, ἀλλὰ δὲ ἐκαστὸν τῶν κατηγορομένων, ποιόν ποιόν καὶ ὅσα ἄλλα τουαίτα. ὀσπέρ γὰρ καὶ τὸ ἐστιν υπάρχει πάσιν, ἀλλ᾽ οὐχ ὀμοίως ἄλλα τὸ μὲν πρῶτος τοῖς δ᾽ ἐπομένους, οὔτω καὶ τὸ τί ἐστιν ἀπλῶς μὲν τῇ οὐσίᾳ πώς δὲ τοῖς ἄλλοις.
essence, and corresponds to the equally limited senses of “what” and “is”. In effect, this means that there are essences of accidents, but in a limited sense. This implies that one can speak *per se* about accidents. Something is spoken of *per se* when one attributes to it something included in its essence; since accidents have essences in a limited sense, one can make attributions to them *per se*, when one attributes to it something included in its limited essence.

Just like substances, accidents have definitions (*horismoi*). Therefore, when one attributes to an accident something that is a part of the definition of an accident, then one speaks of it in terms of its limited essence and therefore one speaks of it *per se*. On the other hand, when one attributes to an accident something that is not a part of the definition of that accident, then one speaks of the accident only *per accidens*. For example, let us say that I wish to speak about my sight. My sight is not a part of my essence, as I can be human without having the power of sight. However, I can still speak about sight *per se* and *per accidens*. Sight, like all powers, has a) an effect on b) a subject, in this case, a) perception b) of colour. Therefore, if I say, “sight is perception”, I am speaking of it *per se*. “Perception” is a part of the definition of sight, and therefore a part of its limited essence. However, if I say “sight is what allows me to read”, I am speaking of it *per accidens*. While this is true, it is not a part of the definition of sight. I could see before I could read, I would be able to see even if I were illiterate, and many animals who have no ability to read at all can see. Allowing me to read is not a part of sight’s limited essence, but an accidental property.

In this way, Aristotle carves out the linguistic space by which he can say that medicine is of health “*per se*” while it is of disease “*per accidens*”. Because “is” has many different senses clustered around the primary sense of substance, so too do both “what” and “essence (literally ‘what it is’)”. Something is predicated of an accident *per se* when it is predicated of it according to the definition of the accident. This still leaves

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191 Charlotte Witt argues that Aristotle intends to restrict this limited essence only to its use in *per se* predication, and that limited essences don’t have the same kinds of explanatory roles that substantial essences have. This is partly correct, as accidents don’t have the same unity as a substance and therefore don’t need an explanation for why they are one thing. However, it would also seem that accidental essences do have some explanatory role; after all, it is at least in part because of the perception of colour that I am able to read (Charlotte Witt, *Substance and Essence in Aristotle: An Interpretation of Metaphysics VII-IX* [Ithaca: Cornell University Press, 1994], 108-11).

192 This is the same term the Plato used when describing “criteria” of crafts in the *Statesman*. 

open the question of on what grounds Aristotle will ascribe healing to medicine *per se* and causing disease to medicine *per accidens*, but in order to understand this position, we must turn instead to Aristotle’s substantive argument.

### 6.2 The Substantive Argument

Aristotle’s distinction between *per se* and *per accidens* predication provides him with the linguistic distinction he needs in order to make the claim that medicine’s power to heal is in some way primary compared to its power to harm. However, I have not yet provided an argument as to why one ought to consider healing medicine *per se* but causing disease medicine *per accidens*. In order to understand this, one must look at his ontological distinctions between a positive state and a privation and his arguments for why a privation can never be predicated of anything *per se*. Because privations can never be predicated of anything *per se* and because disease is a privation, disease can never be predicated of anything *per se* and there is no knowledge of disease *per se*, as opposed to health of which there is both *per se* predication and *per se* knowledge. As a result, both disease and knowledge of disease are always predicated accidentally and they are not an essential part of anything, whether in the full or limited sense of essential, including the craft of medicine.

I will return now to *Metaphysics Z* to investigate how Aristotle uses privation in his account of why disease can only be predicated *per accidens*. Though I have quoted this passage before, I will repeat an extended version of the passage here for reference:

… from art proceed the things of which the form is in the soul. (By form I mean the essence of each thing and its primary substance.) For even contraries have in a sense the same form; for the substance of a privation is the opposite substance, e.g. health is the substance of disease; for it is by its absence that disease exists; and health is the formula and the knowledge in the soul. (1032b2-5)\(^\text{193}\)

This is an important passage and in many ways a puzzling one. Aristotle is claiming that quite a few things are the same between something and its privation: the form, the

\(^{193}\) ἀπὸ τέχνης δὲ γίγνεται ὁμοιὸν τὸ εἴδος ἐν τῇ ψυχῇ (εἴδος δὲ λέγω τὸ τί ἢ ἐνεία ἕκαστου καὶ τὴν πρώτην οὐσίαν)· καὶ γὰρ τῶν ἐναντίων τρόποιν τινὰ τὸ αὐτὸ εἴδος· τῆς γὰρ στερήσεως οὐσία ἢ οὐσία ἢ ἀντικείμενη, οἷον ἡγίεσι λόγον, ἑκεῖνης γὰρ ἀπουσία ἢ νόσος, ἢ ἀποκεῖσθαι ὁ ἐν τῇ ψυχῇ λόγος καὶ ἡ ἐπιστήμη.
essence, the “primary substance”, the substance and finally the formula or “logos”. This passage is a virtual survey of Aristotelian metaphysical principles, and Aristotle identifies all of them in the case of something and its privation. This identification provides the basis of his argument that crafts are capable of contraries in the last section. However, this passage also serves as the beginning of an argument subordinating privations in important ways such that any knowledge of privations is accidental and privations can never be predicated per se.\(^{194}\)

In Book Θ, Aristotle returns to the subject of contraries and demotes the knowledge of the privation to something that is only accidentally the subject of a science and not essentially. This is quite a long passage, but I will quote it in full as I will be referring to it a great deal:

The reason is that science is a rational formula, and the same rational formula explains a thing and its privation, only not in the same way; and in a sense it applies to both, but in a sense it applies rather to the positive fact. Therefore such sciences must deal with contraries, but with one per se and with the other not per se; for the rational formula applies to one object per se, and to the other, in a sense, per accidens. For it is by denial and removal that it explains the contrary; for the contrary is the primary privation, and this is the entire removal of the positive term. (1046b8-15)\(^{195}\)

Therefore, despite the earlier claims in Book Z that a thing and its contrary share the same form, essence, substance and formula, Aristotle explicitly demotes privations in Book Θ to the position of something known only accidentally. Somehow, privations are not the sort of thing that can be an essential part of any body of knowledge.

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\(^{194}\) Note that Aristotle claims in the above passage that all contraries have a single form. This means that the apparent continuum from heat to cold, for example, must be defined relative to one of the extremes, as our later discovery that heat is a motion of particles would confirm. In The concept of first philosophy and the unity of the Metaphysics of Aristotle, Giovanni Reale and John R. Catan make this same observation (Giovanni Reale and John R. Catan, The Concept of First Philosophy and the Unity of the Metaphysics of Aristotle [Albany: State University of New York Press, 1980], 264).

\(^{195}\) ἄπτων δὲ ὅτι λόγος ἔστιν ἡ ἐπιστήμη, ὁ δὲ λόγος ὁ αὐτὸς δηλοὶ τὸ πρᾶγμα καὶ τὴν στέρησιν, πλὴν οὐχ Ὀσκότως, καὶ ἄπτων ὡς ὑμοῖον ἔστι δ’ ὡς τοῦ ὑπάρχοντος μᾶλλον, ὡς’ ἀνάγκη καὶ τὰς τοιαύτας ἐπιστήμας εἶναι μὲν τὸν ἐναντίον, εἰσὶν δὲ τοῦ μὴν καθ’ αὐτὰς τοῦ δὲ μὴ καθ’ αὐτὰς· καὶ γὰρ ὁ λόγος τοῦ μὴν καθ’ αὐτὸ τοῦ δὲ τρόπον πιστὰ κατὰ συμβεβηκός· ἀποφάσει γὰρ καὶ ἀποφορᾷ δηλοὶ τὸ ἐναντίον· ἢ γὰρ στέρησις ἢ πρῶτη τὸ ἐναντίον, ἀυτὴ δὲ ἀποφορὰ θατέρου.
Aristotle provides definitions of privations and contraries in *Metaphysics Δ*. There, he gives two senses of privation that are especially important to understanding why privations are only predicated *per accidens*. Those first two are the following:

We speak of privation (1) if something has not one of the attributes which a thing might naturally have, even if this thing itself would not naturally have it, e.g. a plant is said to be deprived of eyes. (2) If, though either the thing itself or its genus would naturally have an attribute, it has it not, e.g. a blind man and a mole are in different senses deprived of sight; the latter in contrast with its genus, the former *per se*. (1022b23-27)

Note that these two senses of privation are importantly distinct. We say that plants are sightless, but we do not say that plants are blind. The first sense of privation is the sense in which anything can be said to have a privation if it lacks that property, whether it is normal for that thing to have the property or not. So, for instance, I am “flightless” in this sense and I also lack an exoskeleton in this sense. In the definition, he limits these kinds of privation to properties that he says that “a thing might naturally have”. This is an incredibly broad category and would seem to include things like “has a thousand eyes”, as a fly has. In fact, he expands this category even further a paragraph later when he says, “There are just as many kinds of privations as there are of words with negative prefixes” (1022b33).

The second sense of privation is privation of a property that is natural to an individual’s kind. So, for example, a human being is blind rather than simply sightless because human beings are naturally sighted. Aristotle’s example of the mole is quite interesting. *Qua* animal, a mole is blind, because animals are naturally sighted; however, *qua* mole, a mole is merely sightless, because moles are not naturally sighted. It is in this second sense that a person would be said to be sick. People are normally healthy; therefore, sickness is a privation in this second sense. Only an organism can be sick; rocks can merely be non-healthy. Therefore, when something lacks some characteristic that it would normally have in virtue of its nature, it has a privation in this second sense. Note that privations of the second sort are also privations in the first sense. Blind people

196 Στέρησις λέγεται ἕνα μὲν τρόπον ἄν μὴ ἔχῃ τι τῶν περιφερομένων ἔχεσθαι, κἂν μὴ αὐτὸ ἢ περιφερόμενος ἔχειν, οἷον φυτῶν ὁμοίων ἐστερήσθαι λέγεται· ἕνα δὲ ἂν περιφερόμενος ἔχειν, ἢ αὐτό ἢ τὸ γένος, μὴ ἔχῃ, οἷον ἄλλως ἄνθρωπος ὁ τυφλὸς ὑποκεῖται καὶ ἀσπάλλως, τὸ μὲν κατὰ τὸ γένος τὸ δὲ καθ’ αὐτό.

197 αἱ ἀπὸ τοῦ αὐτοφάσεως λέγονται, τοσαυτάχως καὶ αἱ στερήσεως λέγονται.
are also sightless and sick people are also non-healthy, but not *vice versa*. Aristotle also distinguishes a third and fourth sense that I will not use but should be mentioned. The third is a mixed use, according to which one says that something of a certain age has a privation in the first sense even when it is natural to a member of its species in the second sense. For example, children are not fertile, but are not infertile. Although fertility is natural to human beings, it is not natural to human beings of that age, so one speaks of their privation as though it is of the first sense rather than the second. The fourth sense is a homonymous sense of someone who has been forcibly robbed or “deprived” of something that was theirs that, like most homonyms, does not translate well into English. All privations, that is, all negative predications, are included in the first sense of privation, while a smaller set, negative predications of things that would naturally be otherwise, are of the second sense of privation. Disease is a privation of health of this second sense as human beings are naturally healthy.\(^{198}\)

With these definitions of “privation” in mind, I will return to the passages from *Metaphysics* Z and Θ. One will notice that, even when Aristotle is claiming that things and their privations have the same form, essence, substance and formula, the relationship between them is still asymmetrical. His example is that, “Health is the substance of disease” (1032b4). Notice, though, that he does not say that disease is the substance of health. Rather, health and disease both have the same substance: that of health. This is the case with any positive term and its privation: the positive term and the privation have the same essence, *that of the positive term*. The asymmetry of this relationship does not imply that terms and their privations are *equivalent* because they share a form, essence, substance and formula, but rather that the privation is entirely *dependent* on the positive term for its form, essence, substance and formula. One should therefore not read the claims in Book Z that things and privations have the same form, essence, substance and formula as in any way equating them. Instead, Book Z introduces the subordination of privations to their positive terms.

\(^{198}\) Though Aristotle does not mention this explicitly, it is common for privations of the second kind to have independent terms that are not mere negations, like “blind” as opposed to “sightless”. “Sick” or “nosos” is such a word in Greek, as it is in English. English (unlike Greek) also denotes second-type privations by using the “in-” prefix instead of a “non-” or “a-” prefix.
Metaphysics Θ makes this subordination far more explicit, though it has the effect
of making it in some ways more perplexing. First, Aristotle speaks about the formula or
“logos” that a thing and its positive term share and says that this logos applies to both, but
not to them both in the same way. Specifically, he says that the formula applies to the
thing per se, while it applies to the privation per accidens. Aristotle thereby introduces
the per se and per accidens language that I discussed above in the “Linguistic Space”
section. However, one must still examine why it is that privations are only said of
something per accidens rather than per se. Aristotle claims that the formula is predicated
of the privation accidentally because it explains the privation through “denial and
removal”. Somehow, because the formula or a term explains privation by denial and
removal, it only explains that privation per accidens. We therefore have the following
series of claims:

1) A formula (logos) explains a thing (pragma) and its privation (sterēsis).
2) It explains the thing per se and the privation per accidens.
3) It explains the privation per accidens because it explains the privation through
denial (apophasis) and removal (apophōra)

We are told that the formula explains both things and their privations, and then told that it
only explains the latter per accidens because it explains it through denial and removal.

While this is an argument, the connection between the various premises are not
immediately obvious. To understand why one should be believe that explanations
through denial and removal should be considered per accidens explanations, we must
turn to other texts. Two of the three uses of “apophora” in the Aristotelian corpus appear
in the above passage (the other concerns farmers holding property in the Politics 1264a),
so there is little extant evidence of what he may have meant by the term. However, he
has a great deal to say about “denial” and why “denial” is always accidental, especially in
the Topics and the Parts of Animals, so I will turn to those.

In the Topics, Aristotle criticizes those who would divide a genus using a
privation, such as the division of line into those with breadth and those without breadth:
“Moreover, see if he divides the genus by a negation, as those do who define a line as
length without breadth; for this means simply that is has not any breadth” (143b11-
The difficulty with dividing a genus by a privation, he says, is that it would imply that the genus was a member of its own privative species. If one was to divide lines by those with breadth and those with no breadth, one would end up with the following tree:

```
  Lines
 /     \
|       |
|       |
Lines with Breadth       Lines without Breadth
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The problem with this tree is that the genus, lines, does not include the property of breadth. The genus and the non-breadth species, therefore, would collapse into each other as there would be nothing to differentiate the genus from the species: “The genus will then be found to partake of its own species” (143b14). Therefore, a privation can never serve as a differentia of anything, because it would collapse genera and species together.

The reason given in the *Parts of Animals* is different than this. The problem presented there is that, if a privation were used as a differentia, it would not itself admit of any subdivision: “But privative terms in their character of privatives admit of no subdivision” (642b23-24). For instance, footed may be divided into hoofed and soft-footed. However, there is no way to subdivide being footless. So, for instance, if one was to try to divide using privative differentia, one would be forever stuck with indivisible privations:

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199 Ἐπὶ ἐὰν ἀποφάσας διαιρῆ τὸ γένος, καθάπερ οἱ τὴν γραμμὴν ὁριζόμενοι μῆκος ἀπλατές εἶναι· σοῦδέν γὰρ ὠλὸ σημαίνει ἢ ὅτι οὐκ ἔχει πλάτος.
200 Plato also argues for this position, though with a different sort of argument, in *Statesman* 262c-263a, where he argues that one should not separate Greeks off from “barbarians” because such a division does not separate according to real classes and does not divide properly in two.
201 Συμβηστετι όλη τὸ γένος μετέχειν τοῦ ἐδώς.
202 David M. Balme argues that this argument is directed specifically against the Platonists, who argue that forms are things. Either the form of line has breadth or it does not. If it does not, then it is identical to the form of “lines-without-breadth” (Aristotle, *De Partibus Animalium I and De Generatione Animalium I*, ed. David M. Balme [New York: Oxford University Press, 1992], 109).
203 Οὐκ ἔστι δὲ διαφορὰ στερήσεως ἢ στερήσεως· ἀδύνατον γὰρ εἶδη εἶναι τοῦ μὴ ὄντος.
This results from Aristotle’s differentia being importantly adverbial. They separate different ways of being a member of the genus, not simply different subsets. This is why non-footed animals couldn’t simply be divided into red non-footed animals and blue non-footed animals, because red and blue are not different ways of being non-footed, while being hoofed and soft-footed are different ways of being footed. As a result, no privation can ever serve as a differentia, because no privation could itself take differentia.

What these two examples from the Topics and The Parts of Animals show is that privations can never be a part of the definition of anything, because they can never serve as a defining or essential characteristic of anything. Privations are simply incapable of being a part of any definition, because they can never be used to divide one sort of thing from another sort of thing (or even any sort of accident from another sort of accident, since accidents have species and differentia of their own). Since per se predication requires that what is predicated be a part of a definition and since a privation can never be a part of any definition, any privation is necessarily predicated per accidens, rather than per se.

204 Allan Bäck takes this claim one step further, arguing that Aristotle believes even that predicates are adverbial, that is, they are ways of existing: “...my characterization of a tripartite sentence, ‘S is P’, as taking the term ‘P’ as an adverbial qualification of the statement of existence: ‘S is, as a P.’” Allan T. Bäck, Aristotle’s Theory of Predication (Boston: Brill, 2000), 209.

205 James G. Lennox provides a discussion of how differentiae should be based on different “ways” of being the genus of which it demarcates a species. He further argues that Aristotle is consciously criticizing the kind of division that occurred in the Sophist and Statesman, where Plato does use negative predication (despite his own argument against the term “barbarian”), such as dividing footed animals into horned and hornless at 265c (Aristotle, On the Parts of Animals I-IV, trans. James G. Lennox [New York: Oxford University Press, 2001], 165-66).
6.3 Aristotle on Disease as a Privation

So far, I have discussed why it is that Aristotle believes that crafts should not be said to produce privations *per se*. However, I have not yet addressed Aristotle’s arguments that disease is, indeed, a privation. Why, for example, should disease not be an opposite with its own form, rather than one that is simply a privation of the form of health? Aristotle doesn’t provide the same sort of detailed metaphysical analysis of this question that Plato does in the *Philebus*. However, Aristotle does say a number of things about health that would imply that his beliefs about it are quite similar to Plato’s. Specifically, health is treated as a kind of balance in the body. The opposite of balance is not some sort of opposing extreme, but rather, simply its absence, imbalance. In this section, I will collect the evidence for Aristotle’s claim that disease is a privation of health and demonstrate that similarity with Plato.

First, I’ll give a few words on the definition of health. Aristotle equates health with “the” or sometimes “a” good condition (*hexis*) of the body in several places, such as *De Anima* I “one of the excellences of the body” (408a1), *Eudemian Ethics* II “the best condition of the body” (1220a19-20), and the *Rhetoric* “The excellence of the body is health” (1361b3-4). The definition here appears to be analytic. No argument about whether or not health is good for the body is necessary, because health is by definition what is good for the body. This claim appears in the *Eudemian Ethics* I, where Aristotle says that no one would even try to prove that health is a good, as that is a principle:

Further, no one demonstrates that health is good (unless he is a sophist and no doctor, but one who produces deceptive arguments from inappropriate consideration), any more than any other principle. (1218b21-24)

According to Aristotle, then, health is the good condition of the body, which is good by definition. In other words, whatever constitutes the good condition of the body is what Aristotle calls health.

206 τῶν σωματικῶν ἄρετῶν.
207 ὅτι ἡ ἄριστη διάθεσις τοῦ σώματος.
208 σώματος δὲ ἄρετὴ ὑγίεια.
209 ἐτι οὐδὲ δείκνυσιν οὕτως ὅτι ἀγαθὸν ἢ ὑγίεια, ἢν μὴ σωφριστὴς ἢ καὶ μὴ ἰατρός (οὔτοι γὰρ τὸς ἀλλοτρίως λόγους σοφίζονται), διὸς εἰς οὖν ἄλλην ἀρχήν οὐδεμίαν.
However, Aristotle isn’t content with simply this analytic definition and provides health with some positive characteristics as well. Specifically, health is described as a balance, a harmony and a mean between different types of opposites. For example, in *De Anima* I, Aristotle makes the following Platonic remarks:

Harmony, however, is a certain proportion or composition of the constituents blended and the body is composed of contraries…It is more appropriate to call health (or generally one of the good states of the body) a harmony than to predicate it of the soul.

(407b31-32,408a1-2)²¹⁰

This passage argues against the claim that the soul is a harmony in very similar terms to that used in the *Phaedo*, and makes the claim that health is a harmony of various opposites in the body. This theme of appropriate blending appears starkly in the *Physics* VII:

Further, we say that all excellences depend upon particular relations. Thus bodily excellences such as health and fitness we regard as consisting in a blending of hot and cold elements in due proportion, in relation either to one another within the body or to the surrounding. (246b3-6)²¹¹

In *Parts of Animals*, Aristotle adds dry and moist to this list:

There ought, then, to be some clear understanding as to the sense in which natural substances are to be termed hot or cold, dry or moist. For it appears manifest that these are properties on which even life and death are largely dependent, and that they are moreover the causes of sleep and waking, of maturity and old age, of health and disease… (648b2-6)²¹²

Both of these texts show Aristotle views health in much the same way as Plato did, that is, as a kind of harmony between the various contraries in the body. Aristotle specifies these contraries in a way that Plato does not, referring to heat and cold in the *Physics* and adding dry and moist in the *Parts of Animals*.

²¹⁰καὶ γὰρ τὴν ἄρμονίαν κρᾶσιν καὶ σύνθεσιν ἐναντίων εἶναι, καὶ τὸ σῶμα συγκείσθαι ἐξ ἐναντίων…ἄρμοξα δὲ μᾶλλον καθ’ ύγιείας λέγεν ἄρμονίαν, καὶ ὀλὸς τῶν σωματικῶν ἀρετῶν, ἢ κατὰ ψυχής.

²¹¹ἐτὶ δὲ καὶ φαιμὲν ἀπάσας εἶναι τὰς ἀρετὰς ἐν τῷ πρὸς τι πώς ἔχειν. τὰς μὲν γὰρ τοῦ σώματος, οἶνον ὑγίειαν καὶ εὐεξίαν, ἐν κράσει καὶ συμμετρίᾳ θερμῶν καὶ ψυχρῶν τίθεμεν, ἢ αὐτὸν πρὸς αὐτὰ τῶν ἐντὸς ἢ πρὸς τὸ περιέχον.

²¹²Διὸ δὲ μὴ λανθάνειν πῶς δὲτ τῶν φύσεων συνεστῶτον τὰ μὲν θερμὰ λέγειν τὰ δὲ ψυχρὰ καὶ τὰ μὲν ξηρὰ τὰ δ’ ύγρά, ἐπεὶ ὅτι γ’ αὕτη ταῦτα σχεδὸν καὶ θανάτου καὶ ὑγίειας εὐθείαν εἶναι φανερὸν, ἐπὶ δ’ ὑπὸναι καὶ ἐγχεριγόρσεις καὶ ἀκμῆς καὶ γῆρος καὶ νόσου καὶ ύγιείας.
Treating health as an appropriate balance of opposites allows Aristotle to treat health as though it has a determinate account, while disease does not. Similarly to Plato in the *Philebus*, Aristotle believed that disease is *indeterminate*, that is, there are any number of ways that something can deviate from health, but only one way that something can be considered healthy.\(^{213}\) For instance, in the *Topics*, Aristotle makes the observation that, while health has a contrary in disease, the various diseases do not have contraries: “...for health without question is the contrary of disease, whereas a particular disease, e.g. fever and ophthalmia and any other particular disease, has no contrary” (123b33-36).\(^{214}\) Disease has a multiplicity to it that means, while one can contrast “health” and “disease”, particular diseases themselves have no contraries. Moreover, in the *Nicomachean Ethics*, Aristotle compares health to the virtues, which themselves require a mean:

> It is evident too that both are bad, being unjustly treated and acting unjustly; for the one means having less and the other having more than the intermediate amount, which plays the part here that the healthy does in the medical art... (1138a29-31)\(^{215}\)

On the other hand, health is singular and determinate. For example, Aristotle claims in *Metaphysics* Γ that, “As, then, there is one science which deals with all healthy things, the same applies in the other cases also” (1003b11-12).\(^{216}\)

Disease is so multiform because it is a corruption of a natural state. *Metaphysics* H makes a distinction between something’s natural state and a corruption of that natural state:

> E.g. if the body is potentially healthy, and disease is contrary to health, is it potentially both?...We answer that it is the matter of one in virtue of its positive state and its form, and of the other in

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\(^{213}\) Aristotle’s language is somewhat different from Plato’s. Plato says that disease is “undefined” (“apeirōn”), a privative phrase, while Aristotle says that it is “multiform” (“polueides”). Both terms, however, imply that disease lacks a single, intelligible form.

\(^{214}\) (ἔνστασις ἐπὶ τῆς υγείας καὶ νόσου· ἀπλῶς μὲν γὰρ υγεία νόσῳ ἐναντίον, ἢ δὲ τὶς νόσου ἐλεός οὖσα νόσου οὐδὲν ἐναντίον, οἷον ὁ πυρετός καὶ ἢ ὀρθαλμία καὶ τὸν ἄλλον ἐκαστὸν.)

\(^{215}\) φανερῶν δὲ καὶ ὁ ἁμαρτεῖν, καὶ τὸ ἀδίκησθαι καὶ τὸ ἀδικεῖν (τὸ μὲν γὰρ ἐλαστον τὸ δὲ πλέον ἔχειν ἐστὶ τοῦ μέσου καὶ ἀσπερ ὑγειών μὲν ἐν ἑαυτῇ.

\(^{216}\) καθάπερ οὕν καὶ τῶν υγειών ἀπάντων μία ἐπιστήμη ἔστιν, ὁμοίως τούτῳ καὶ ἐπὶ τῶν ἄλλων.
Disease is also described as such a corruption of health in *De Longitudine et Brevitate Vitae*, in which Aristotle says, “…in many things their mode of corruption is something peculiar to themselves, e.g. in knowledge and ignorance, in health and disease” (465a19-21). Disease is described as more than just a privation of health here, but as the corruption (“*phthora*”) of health, a term that can literally mean “destruction”.

When one takes together all of these claims about health, why Aristotle would claim that health is the positive term and disease is the privation becomes obvious. Health is, by definition, the good state of the body, which is defined, like all good states, with reference to the nature of the body. Therefore, anything that deviates from this good state will be considered a disease. Diseases, therefore, are indeterminate, as there are many different ways to deviate from something, and so disease is multiform and undefined except as an absence of the positive state. Aristotle’s particular theory of health is that it is the result of or perhaps consists in a harmony within the body of heat and cold, and dry and wet. As with any harmony, there are multiple ways to deviate from a given harmony whose only characteristic in common is that they deviate from the same harmony. Considered together, then, Aristotle’s various comments about disease show why he would claim that health is the positive state, while disease is the privation. Health is the good condition of the body, while disease is any deviation from (i.e. privation of) that good condition.

6.4 Conclusion

Like Plato, Aristotle believes that, in some sense, a craft is capable of contraries, but that one can only be said to be applying a craft in a strict sense (*per se*) when one applies it in order to produce the positive fact. In this section, I discussed his argument, first discussing whether he meant this in the positive way that a physician can create disease in a healthy patient or in the negative way that a physician can “create” (be

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217 ὁ οὖν εἰ τὸ σῶμα δυνάμει υγεινόν, ἐναντίων δὲ νόσος υγεία, ἢ ἀρα ἄμφω δυνάμει; καὶ τὸ ὤδος δυνάμει οἶνος καὶ ὄξσος; ἢ τοῦ μὲν καθ’ ἐξι καὶ κατὰ τὸ ἐϊδος ὑλή, τοῦ δὲ κατὰ στέρησιν καὶ φθορὰν τὴν παρὰ φύσιν;

218 εἰσὶ γὰρ ἵδαι φθοραὶ πολλοῖς τῶν ὄντων, οἶον ἑπιστήμη <καὶ ἀγνοια>, καὶ υγεία καὶ νόσο.
causally responsible for) disease through abstention from treatment. I concluded that Aristotle’s argument is best understood using a negative interpretation. Next, I discussed the use of per se predication as opposed to per accidens predication, specifically with respect to the per se predication of accidents, that is, attribution of accidents according to their definition. I then established that, since privations can never be predicated per se, medicine can only be said to be used per se when used for the positive term. I then considered why it was that Aristotle believed that health was a positive term and disease a privation, showing that, because health was by definition the positive condition of the body, it is uniform while deviations from it are multiform, and considered the evidence from the Aristotelian corpus to that effect.

7 Chapter Conclusion

Plato and Aristotle both hold two positions that appear largely in conflict with each other. On the one hand, they both hold that crafts are capable of contraries. For Plato, this is clearly in a positive sense, in which having a craft enables one to perform the exact opposite task, stealing as well as guarding or poisoning as well as healing. For Aristotle, this is best interpreted as a negative position, in which he claims that having a power gives one the choice one might not otherwise have had to not perform the task associated with the craft. On the other hand, however, both wish to claim that, strictly speaking, such non-uses of the crafts are not a part of the craft, and both carve out both linguistic space in which to provide a substantive argument. Plato develops a sense of strict speaking, according to which a craft is only strictly speaking applied when it is does with knowledge and for the benefit of the patient. Aristotle separates per se from per accidens predication, the former of which refers to all speech that refers to the essential properties of something and the latter of which refers to all other speech. Substantively, Plato equates cause with the fourth kind of thing in the Philebus, that which generates order out of chaos using measurement, which can only be beneficial for its subject. Aristotle in turn demotes privations to a purely derivative status, dependent on positive terms for their meanings. Together, both of them hold both the view that being a doctor gives one the power to poison, but that poisoning is not strictly speaking a part of medicine.
Chapter 3: Plato on Persuasion and Knowledge

1 Introduction

In this chapter, I will discuss Plato’s argument for knowledge as the proper criterion for freedom and show how he applies this criterion in a medical context. Plato develops this conception as the response to the disintegration of what I will call the “traditional synthesis”. Traditionally, as I will show, Athenians made some quite clear associations. On the one hand, freedom and persuasion were allied while, on the other hand, force and slavery were allied. Democratic Athens was considered free because their political system operated by persuasion, while others, especially the Asians, were slaves because their political systems operated by force. Even before Plato’s birth, however, the traditional synthesis was breaking down. A new group of professional rhetors, especially the Sicilian Gorgias, threatened this traditional synthesis. They claimed that they were able to teach persuasion so well as to make persuasion a kind of force, and they promised young men that they could teach them to enslave others through rhetoric. This threatened the traditional synthesis.

In response to this disintegration, Plato does not simply defend the traditional synthesis as does, for example, Lysias. Instead, Plato develops a new conception of freedom in response to Gorgias’ challenge. On the one hand, he accepts Gorgias’ claim that persuasion, at least non-rational persuasion, is no ally of freedom. However, this does not mean that freedom is an illusion. Rather, knowledge is the true ally of freedom. Plato delimits two different types of persuasion: sorcerous and didactic persuasion. Didactic persuasion can provide freedom for the hearer by being an antidote to the sorcerous persuasion of Gorgias and by being the appropriate sort of learning for a free person. I will conclude the chapter with a look at Plato’s discussion of informed consent in the Laws and, given the evidence available, discuss just what kind of knowledge Plato might have envisioned as being appropriate to a free person in a medical context.
2 The Texts

I will use several texts in this chapter, and I will here provide a short summary of them. The first group of texts will be used as demonstrations of the traditional synthesis, while the next group will provide Gorgias’s challenge and Plato’s new characterization of freedom. I will refer to other texts as well, but the texts listed below will receive the most attention:

Group 1:

*Suppliant Maidens* by Aeschylus (466-455 B.C.): The daughters of Danaos flee forced marriages to the Egyptians and seek the refuge of the Argives under king Pelasgos. He grants them asylum on the grounds that persuasion rather than force is an ally of freedom.

*Heraclidae* by Euripides (430 B.C.): Eurystheus wishes to kill the children of Heracles, whom he pursues to Athens. Demophon agrees to protect the children and a debate ensues about whether Demophon should return the children. Ultimately, it is decided that a free people must be persuaded rather than threatened.

*Philoctetes* by Sophocles (409 B.C.): Neoptolemus and Odysseus go to the island of Lemnos in order to retrieve the bow of Heracles from Philoctetes. In their debates with each other and with Philoctetes about the noble and ignoble ways of retrieving the bow, they consider the relationships between force, persuasion, trickery, freedom and class.

*The Funeral Oration* by Lysias (395-387 B.C.): In a speech in praise of the Athenian dead in the Corinthian War, Lysias provides perhaps the clearest statement of the traditional synthesis.

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220 This speech was written at an unknown time during the war between the Corinthians and the Athenians, which lasted from 395-387 B.C. The speech was given during an annual feast in honour of those who died during the previous year, the same feast in which Pericles delivered his famous funeral oration. (Thucydides, *The History of the Peloponnesian War, Books 1-2*, trans. C. F. Smith [London: Heinemann, 2004].)
Group 2:

*The Encomium of Helen* by Gorgias (5th century B.C.): 221 In this showcase speech, Gorgias defends Helen on the grounds that, if she was forced by Paris to go to Troy, Helen was not responsible, but if she was persuaded, it was still a sort of force.

*Gorgias* 447-465 by Plato (early-mid 4th century B.C.): In this dialogue, Socrates debates with Gorgias about rhetoric, raising concerns about freedom, persuasion and competition.

*Lysis*, esp. 207-210 by Plato (early-mid 4th century B.C.): In this dialogue, Socrates discusses knowledge and its relationship to freedom, especially in the area of craft knowledge.

*Republic VII* by Plato (early-mid 4th century B.C.): In this book, Socrates discusses the various ways in which freedom and persuasion interact, largely using the metaphor of sorcery.

*Laws* 720a-d, 857c-d by Plato (mid 4th century B.C.): At two separate points in the *Laws*, the Athenian visitor explicitly discusses the relationship between persuasion, knowledge and freedom in a medical context. He draws contrasts between free and slave doctors and patients, and the appropriate ways to deal with each.

*On the Art* by “Hippocrates” (5th-4th century B.C.): One of the authors of the Hippocratic corpus discusses the difficulties that Hippocratic doctors have promoting their craft in a public space.


221 Gorgias lived 90 years and there is no evidence as to when the *Encomium* was written. It could even have been written as late as 387 B.C., the date of his death.
3 Eleutheria, Freedom and Autonomy

The central term that will be discussed in this chapter, “eleutheria”, requires some preliminary discussion because it has a similar but not identical semantic field to its usual English equivalent, “freedom”. According to the Greek-English Lexicon, the word “eleutheros” has a number of meanings, including the related meanings “freedom”, “independent”, “open to all”, “unencumbered by”, and the related meanings “fit for a freeman”, and “frank”. Its opposite is “doulos” or “slave”. For all of these uses, there is an analogous use for the English word “free” in the Oxford English Dictionary. “Freedom” is obvious. “Independent” appears in an example for definition 6.a.: “Since I was what may be termed a free man; or, in other words, since I became independent.” “Unencumbered” appears in an example under the same heading: “Finally the divorce mills got through their slow grinding and both the daughter and I were free and unencumbered”. “Open to all” is part of definition 9.b.: “b. Open to all competitors; open for all. free fight: a fight in which all present may join.”. “Frank” is a part of definition 23: “23. Frank and open in conversation or intercourse, ingenuous, unreserved”. The same contrast with slavery also exists in the first definition of the term “freeman”: “1.a. One who is personally free; one who is not a slave or serf”.

Two things should be noticed here concerning these definitions that will be important to understanding their use. First, the term “eleutheria” is robust. In modern ethics, much of the ethical work that “freedom” once did has been taken up by the term “autonomy”, especially in the area of medical ethics. Second, the term serves as a class term. In a society with slavery, like ancient Greece, being free rather than a slave marked one as a member of a social class. Certain behaviours might be appropriate or inappropriate to a free person as a member of their social group, which occasionally led to odd uses of the term. For example, if one shouldn’t thank slaves, then a free person is entitled to be thanked.

The modern term “autonomy” doesn’t really map onto any Greek word, though “eleutheria” ends up doing some of the same work. While the Greeks had a word,

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“autonomos”, the term referred almost exclusively to states and their relationships to each other. For example, if a state was not ruled by another state, it was “autonomos”, literally self-ruled. The sole classical use of autonomia for a human being is in the Antigone by Sophocles, in which the chorus criticizes Antigone for behaving like an “autonomos” (641). As this is its sole use to refer to a human being while the political use is very common, this is likely a metaphor and intended to sound odd. Many of the modern uses of “autonomy” find themselves under the Greek term “eleutheria”, such that if one wishes to know what Greeks might have thought about autonomy, one should look to their use of the term “eleutheria.” The modern term, “autonomy” has several definitions, as identified by Nomy Arpaly:

1. agent autonomy: that I act on my reasons & beliefs.
2. self-efficacy: that I am independent in the world.
3. independence of mind: that I use my own judgement.
4. normative autonomy: that I am a moral agent with moral rights.
5. authenticity: that I am true to myself.\(^{224}\)

The first use, agent autonomy, did not usually fall under the heading of “eleutheria”, but under “enkrateia” or “self-control”. The cigarette smoker who tries to quit but cannot lacks agent autonomy, but would not usually be a “slave” or “doulos” in Greek.\(^{225}\)

However, “eleutheria” included both the second and third modern uses of “autonomy”, self-efficacy and independence of mind. Self-efficacy was a paradigmatic freeman and even aristocratic value in ancient Greece. Independence of mind and the ability to make one’s own decisions was also very much a part of the values of the freeman, and to a large extent underlay the traditional synthesis’s connection between freedom and persuasion. With respect to the fourth definition, it would be anachronistic to identify the Kantian connection between agent autonomy and normative autonomy with “eleutheria”. However, there is still a class use of the term that includes rights: the “eleutheros” is


\(^{225}\) André Laks notes an exception to this at Laws 635c-d, but also notes that it is exceptional (André Laks, "Freedom, Liberty and Liberality in Plato's Laws", Social Philosophy and Policy, 24 [2007]: 150-1). The line in the Protagoras, translated as “they think of his knowledge as being utterly dragged around by all these other things as if it were a slave” by Stanley Lombado and Karen Bell actually uses the term “ἀνδραπόδος”, not “δούλος”, so does not constitute a counterexample (352b).
entitled to a number of rights as a member of his or her social class. Finally, the authenticity definition seems to have no analogous Greek meaning.

I will translate the term “eleutheria” as “freedom” throughout this chapter, however, it is important to note that the debate about “eleutheria” also bears on modern debates about autonomy. Specifically, “eleutheria” as a term included both the self-efficacy and independence of mind definitions of “autonomy”. Therefore, discussions of “eleutheria”, in so far as they concern the self-efficacy and independence of mind, are relevant to modern discussions of autonomy. Further, being an “eleutheros” did indeed bring with it certain rights, though the arguments for this were different. In some ways, the kind of rights an eleutheros was entitled to can be compared or contrasted to the kinds of rights autonomous agents are entitled to. Plato’s conception of “eleutheria”, therefore, is relevant to modern discussions of autonomy, as it does much of the same conceptual work as “autonomy”.

4 The Traditional Synthesis

Traditional Greek thought had many dyads, pairs of opposites set in contrast to each other. The traditional understanding of the relationship of freedom and persuasion was the result of a relationship between two of these dyads. The first was freedom “eleutheria” and slavery “douleia”. The second was persuasion (“peithō”) and force (“bia” and sometimes “anankē”). These were arrayed in a very specific way. One was free if and only if one was moved by persuasion, while one was a slave if and only if one was moved by force. This traditional synthesis was especially important in the democratic society of Athens whose sense of its own freedom was closely tied to the persuasion exercised in the democratic assembly. In this section, I will provide several examples of this traditional synthesis, three from the tragedians and one from an orator. The first two examples are the Suppliant Maidens by Aeschylus and the Heraclidae by Euripides. These two plays include a fairly straightforward case in which the freedom of a city is threatened by force. The third is the more complex use of the terms in the Philoctetes by Sophocles, in which the class meanings of “eleutheria” are brought to the
fore. Finally, I will discuss Lysias, a strong democratic partisan, who provides an argument for the traditional synthesis.

Aeschylus’s *Suppliant Maidens* provides an early instance of the traditional synthesis. In that play, the daughters of Danaus seek asylum with the Argives. The Argives are presented as proponents of freedom, promoting both speech and persuasion, while opposing force. There are two passages that are important. The first (605-624) is that in which the Argives explain why it is they will help the Danaids. The second (941-949) is when Pelasgus explains to the Egyptian herald why he will not turn over the maidens to Egypt. In the first passage, Danaus describes how his daughters received sanctuary. He says that the Argives, whom he describes as free (“eleutherous”), held a vote to allow his daughters to stay after having been persuaded by their king Pelasgus (609). Here he contrasts the behaviour of the Egyptians, who were using force (“prostithēi to karteron”), with that of the Argives, whom Pelasgus persuaded using speeches (“epetīthe rhēsis amph’hēmōn legōn anax Pelasgōn”) (612,615-616). This passage has several interesting elements. First, note the political anachronism that Aeschylus has introduced. The Argives were a monarchy. However, because Aeschylus wished to write a story including themes of freedom and force, he presents the Argives as having a hybrid government, in which it is run by a king with the consent (and even the universal votes! (“pantelē psēphismata”)) of the governed (599). This anachronistic use of democracy shows just how deeply the association between democracy and persuasion was; in order to write about persuasion, Aeschylus needed to introduce an anachronistic democratic process into the Argive monarchy. Second, notice that the freedom of the Argives is not simply self-interested. Rather, because the Argives are free, they defend the freedom of others, that is, they defend the freedom of the maidens. Freedom is not competitive. In fact, free nations are defenders of others’ freedom. Finally, notice just how important speech is to freedom and persuasion. It is the means by which persuasion and therefore freedom can operate. Danaus emphasizes this when

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226 Though Sophocles was born a generation before Euripides, the *Philoctetes* was written after the *Heraclidae*, which is why I discuss them in this order.

227 In this section, I will be citing several, very short passages of Greek. Rather than use cumbersome footnoting, I will instead include the transliterated text within the body of the section.

he uses the redundant phrase, “talking with speeches” (“rhēsin...legōn”) (615). Speech is
the medium by which freedom and persuasion may operate.

When the Egyptian herald arrives, the traditional synthesis connecting persuasion
to freedom and force to slavery recurs in a speech by King Pelasgus. He allows that the
Egyptians may take the maidens, but only through persuasion (“agois an, eiper eusebēs
pithoi logos”) (941). He then contrasts the acceptable way by which the herald may take
the maidens with the improper one, trying to take them by force, which will he claims
will never happen, “mēpot’ekdounai biai” (943). This is an especially clear example of
the persuasion-force dyad, as Pelasgus directly contrasts the two means, the first of which
is acceptable, but the latter of which is not. Having allied himself with persuasion and
against force, King Pelasgus then describes himself as free again, this time in the context
of freedom of speech, saying, “you hear clearly from a free-spoken tongue” (“saphē
d’akouēs ex’eleutherostomou glōssēs” (948-9)). The Suppliant Maidens provides a clear
instance of the traditional synthesis: the herald may persuade or use force; however, if he
uses force, he will be opposed by the free, democratic and loquacious Argives.

Euripides’ Heraclidae, written forty years after the Suppliant Maidens, has a quite
similar premise and deals with some of the same themes, though with a different focus.
Rather than focus on the allegiance between persuasion and force, it focuses on the
enmity between freedom and force. In this case, the children of Heracles and their
guardian, Iolaus, seek sanctuary from Eurystheus who desires to kill them. In this case,
they seek sanctuary in Athens, freeing Euripides from the projection of Athenian
government onto other cities (though not from the anachronism). Athens is said to be an
especially free city, and Athens’ freedom is mentioned several times during the play, at
62 (“eleuthera te gai”), at 113 (“gēn...eleutheran”), 198 (“Athēnas tasd’eleutheras”),
287 (“eleutheran”), and 957 (“polism’eleutheron”).229 The first half of the tragedy
provides an example of the political process in Athens and then justifies the Athenian
decision to protect the Heraclidae. Both sides, Iolaus, who is pleading for sanctuary, and
Corpeus, who wants to take the children and threatens to invade Athens if he cannot, are

229 John Wilkins notes that the references in Heraclidae to freedom are all to that of the nation of Athens,
rather than to the freedom of individual members of the society, a use to which Euripides puts the term in
his own Supplices (Euripides, Heraclidae, ed. John Wilkins [Oxford: Clarendon Press, 1979], 57). This
shows that the traditional synthesis applied not only to individuals, but to states as a whole.
given an opportunity to plead their respective cases. The chorus mentions how important it is to hear both stories (“
muthoi”) to render a proper judgement (180). The Athenian chorus as well as the king, Demophon, are persuaded by the Iolaus, though for different reasons. The chorus says that they are moved by pity (“Ŏiktir’”) for the unfortunate nobles (232). Demophon himself gives three reasons. The first reason is piety to Zeus, at whose statue the children are standing, and the second is kinship. However, the third, which he says is most important (“dei malista phrontisai”) is the very fact that Corpeus threatened him (242). He says:

For if I am to allow this altar to be robbed by the force (“biai”) of a foreigner, it will be thought that it is no free land (“eleutheran gaiain”) I govern but that I have betrayed suppliants for fear of the Argives. (243-5)

Because of the status of Athens as a free country, it cannot surrender the children to threat of violence. Violence and freedom are inherently incompatible, according to Demophon, so much so that he cannot give the children to Corpeus precisely because he was threatened. Though Heraclidae does not discuss persuasion per se, it provides an example of the kind of persuasion in action. It shows the incompatibility between freedom and force that was a part of the traditional synthesis and an example of persuasion in action.

Sophocles’ Philoctetes uses several examples of the various means of getting someone to comply, and ranges over force, persuasion and trickery. It discusses the relationship between force and freedom, though in this case, it considers freedom with reference to social class and the rights associated with it. Moreover, it considers it not only in contrast to slavery, but also in constrast to the “aristos” or upper-class nobility. In the section of the play I will discuss, Neoptolemus and Odysseus have already succeeded in tricking Philoctetes into giving them the bow of Heracles. They decide to add insult to injury by compelling Philoctetes to come with them to Troy. The discussion

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230 εἰ γὰρ παρῆσο τόνδε συλᾶσθαι βία
ξένου πρὸς ἄνδρας βωμών, οὐκ ἐλευθέραν
οἰκεῖν δοκῆσαι γαϊάν, Ἀργείων δὲ ὄνοι
ικέτας προδοῦναι.

they have has force and its impact as its central theme. Force is mentioned repeatedly throughout the subsequent conversation, at 983 (“biāi”), at 988 (“biāi”), at 990 (“kratōn”) and at 998 (“biāi”). Philoctetes asks Odysseus and Neoptolemus if they intend to use force on him (“hoid’ek bias axousin?”) (985). Odysseus gives a somewhat strange answer, saying that he will use force on him if he does not come willingly (“Ēn mē herpēis hekōn”). Odysseus is using “willing” in an odd sense here, because his statement here implies that a decision made even under duress would still be considered something that is done “willingly”. This is reminiscent of Corpeus’ speech in the *Heraclidae*, who mixed threats and persuasion by threatening the Athenians from within the assembly. Like Demophon, Philoctetes also does not believe that a decision made under a threat can be considered free, but instead complains that, “My father clearly sired us as slaves (“doulous”) rather than as freemen (“eleutherous”)” (995-996). By referring to his father, Philoctetes is using *eleutheros* to refer to a social class as well as simply absence of compulsion, by reminding Odysseus that freedom from compulsion should be his right by birth. By being subject to force, Philoctetes’ social status as a freeman is damaged as it is an entitlement of a freeman not to be threatened.

Odysseus’ response is a jarring contrast between freemen and aristocrats that would be of particular resonance to the democracy in Athens. Odysseus retorts that he is making Philoctetes neither a slave nor a freeman, but an *aristos*: “No, but as those similar to the best (“aristois”) with whom you must travel to Troy and take it by force (“biāi”)” (997-998). The “aristoi”, the term the oligarchs normally call themselves, operate by force, and they intend to take Troy by force (998). This would have had special resonance in the democratic Athens of 409 B.C., written between the oligarchic takeovers in 411 and 404 B.C. Odysseus here is pointing out a contrast between freedom and force, but a different one from the standard freedom-slavery contrast. Not only is slavery connected to force, oligarchy is as well. Oligarchs use force not only against their slaves but against each other, and Odysseus is requiring the Philoctetes join him in using force

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232 ... ἡμᾶς μὲν ὡς δούλους σαφῶς πατήρ ὅτι ἔξερεν σοῦ ἐλεύθερος.
233 This complaint is meant, in a sense, ironically. He is not claiming that he was actually born a slave, but that Odysseus is treating him as though he was born a slave. In other words, he is complaining that he is being treated inappropriately for a member of his class.
against yet more “aristoi” in the siege of Troy. Philoctetes tries to commit suicide, but is stopped by Odysseus. He then accuses Odysseus of having no freedom in his mind: “mēd’ eleutheron phronōn” (1006). In this passage, Sophocles contrasts freedom both with slavery and with oligarchy.

I will now turn from the playwrights to one of the most vocal proponents of the traditional synthesis, the orator, Lysias. Lysias was a passionate partisan of democracy. Lysias’s family history makes clear just how strong a democratic partisan he was. Lysias’s father, the same Cephalus of the Republic, had been personally invited to live in the Piraeus by the democratic leader, Pericles. In the oligarchic coup of 404 B.C., he and his brother, the same Polemarchus of the Republic, were arrested by the oligarchic Thirty, and Polemarchus was murdered while Lysias managed to escape. Lysias later provided money, arms and recruitment to the democrat Thrasybulus who successfully seized the Piraeus and restored democracy to Athens in 403 B.C., granting Lysias a (short-lived) citizenship in return for his efforts. This support of democracy and hatred of oligarchy found its way into many of Lysias’ speeches.

In the Epitaphius, a showpiece praising those who had fallen in battle serving Athens, Lysias clearly presents the traditional synthesis. He discusses the origin of democracy in Athens, associating it, as he often does, with freedom, claiming that the freedom of all people binds people together and that democracy provides political life using (or perhaps for) free souls:

They were the first and the only people in that time to drive out the ruling classes of their state and to establish a democracy, believing the freedom of all to be the strongest bond of agreement; by sharing with each other the hopes born of their perils they had freedom of soul in their civic life. (18)

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235 This competitive zero-sum game that is aristocratic force will be an important theme in Gorgianic rhetoric.

236 This short biography borrows its details from S. C. Todd, A Commentary on Lysias: Speeches 1-11 (Oxford: Oxford University Press, 2007). He notes that “the shadow of 404/3 dominates the corpus”, but also notes that Lysias would on occasion represent moderate oligarchs in (unrelated) court cases.

237 πρώτοι δὲ καὶ μόνοι ἐν ἔκπειροι τοῦ χρόνου ἐκβαλόντες τὰς παρὰ σφίξιν αὐτῶν δυναστείας δημοκρατίαν κατεστήσαντο, ἣνομικοί τὴν πάντων ἑλευθερίαν ὁμόνοιαν εἶναι μεγίστην, κοινὰς δ’ ἀλλήλως τὰς ἐκ τῶν κινδύνων ἑλπίδας ποίησαντες ἑλευθερίας ταῖς ψυχαῖς ἐποιεῖτον.
In such a system, speech, rather than force, reigns, and this is the appropriate form of government for human beings. Force, on the other hand, is appropriate only among beasts:

For they deemed that it was the way of wild beasts to be subject to one another by force, but the duty of men to delimit justice by law, to persuade by speech, and to serve these two in act by submitting to the sovereignty of law and the instruction of speech. (19)\(^{238}\)

In this speech, Lysias provides perhaps the clearest statement of the traditional synthesis, as well as an argument for why persuasion is better. First, notice that Lysias is connecting freedom with democracy in much the same way as the Aeschylus and Euripides did by using democracies as the settings for their discussions of force and persuasion. Next, he says that democracy is connected with “free souls”. The speech has an ambiguous dative that could mean that democracy rules “with” free souls (a dative of means) or “for” free souls (a dative of interest). Either way, democracy is allied with freedom. Next, Lysias clearly separates force and persuasion, clearly allying persuasion with democracy and freedom. This persuasion works through “logos”, which I have translated as “speech”. Though “reason” is also a possible translation of the term, I have chosen “speech” as it is the term consistently used to refer to speech in the context of oratory.\(^{239}\) By connecting persuasion to speech, he echoes the connection is Aeschylus between between free speech and persuasion.

In addition, Lysias gives not only an account of the traditional synthesis, but an argument as well. Subjection by force, he says, is not appropriate to human beings because subjection by force is the way that beasts operate. Instead, he says, because we are not beasts, we ought instead to persuade each other through speech and write our decisions in laws. In fact, his position is actually stronger than the traditional synthesis. Force is not just appropriate to slaves. Force is appropriate to \textit{beasts}.\(^{240}\) Human beings

\(^{238}\) ήγεσάμενοι θηρίων μὲν ἔργον εἶναι ὑπ’ ἄλληλων μία κρατεῖσθαι, ἀνθρώπους δὲ προσήκειν νόμῳ μὲν ὀρίσαι τὸ δίκαιον, λόγῳ δὲ πείσαι, ἔργῳ δὲ τούτως ὑπορετεῖν, ὑπὸ νόμου μὲν βασιλεύομένους, ὑπὸ λόγου δὲ διδασκομένους.

\(^{239}\) For example, the historical Gorgias in Encomium of Helen, the author of the Hippocratic On the Art and Aristophanes in The Clouds all use the term in this way.

\(^{240}\) Isocrates will later make this same association, arguing that, “because there has been implanted in us the power to persuade each other and to make clear to each other whatever we desire, not only have we escaped the life of wild beasts, but we have come together and founded cities and made laws and invented
using force on one another is quite literally dehumanizing and it resembles the strategy of animals. Rather, because we have speech, something that separates us from the beasts, we ought to use that special power for persuasion. Animals, which have no speech, can never persuade. They can only threaten and be violent. We can then record the decisions produced by those discussions in the form of law, something else that the beasts cannot do. So, Lysias grounds his defense of democracy on the uniquely human power of speech. Moreover, he connects three of the most important parts of the traditional synthesis, freedom and persuasion and their opposition to force. In his version of the synthesis, beastliness takes the role of slavery, which is in many ways an even stronger claim.

Variations on the traditional synthesis were repeated throughout the tragedians and in the rhetor Lysias. In those works, freedom and persuasion were closely connected, while force was put in opposition to them. Lack of freedom was characterized in different ways, including slavery, shame and beastliness. In addition, some of the political context is evident in these works. Freedom and persuasion were seen to be closely allied with democracy, the usual system of government in classical Athens, and Sophocles explicitly contrasted it with oligarchy. Moreover, some other observations about the traditional synthesis were made by these authors. Aeschylus saw freedom as inherently self-diffusing, and a free state will not only defend its own freedom, but that of others. Both Euripides and Sophocles noted that even threats of violence were a danger to freedom. Lysias noted the connections not only with speech but also with law.

Despite some small differences, these works had a great deal in common. Not only was
there no possible conflict between persuasion and freedom, the two were inextricably connected. Further, persuasion and force were diametrically opposed. It was these elements of the traditional synthesis that Gorgias challenges, and I now turn to Gorgias to show the challenge that this synthesis faced.

5 Gorgias’ Challenge

5.1 The Historical Gorgias

The boasts of rhetors like Gorgias provided a serious threat to the traditional synthesis. Gorgias outright boasted that he was able to teach rhetoric so well that it became a kind of force that could enslave others. If Gorgias was right in this claim and persuasion was really a sort of force, then the traditional synthesis breaks down entirely. If persuasion is really force, then the freedom of those who are persuaded is but an illusion. Instead, it is merely slavery in disguise. This would imply that no one who is moved by another in any way is free and that true freedom, if it exists at all, is the competitive freedom that comes from controlling others. The traditional synthesis, then, would be a false synthesis. Not only was what Gorgias was teaching a threat to the traditional synthesis, but to democracy. On the one hand, it threatened democratic Athens’ sense of its own freedom by arguing that there is no difference between being persuaded and being compelled. On the other hand, Gorgias, by teaching his skill for money, put persuasion in the hands of the wealthy elite, giving them increasing power in the city. If the Gorgianic claim was true and he taught rhetoric so well that it became a kind of force, it would spell the end of the traditional synthesis.

I will focus on Gorgias’s speech Encomium of Helen, which provides not only Gorgias’s strongest claims about the power of rhetoric but also provides some insight into why he believed that rhetoric was so powerful. In this showpiece, Gorgias defends Helen, who had abandoned her husband, Menelaus, to join Paris, sparking the Trojan War. Gorgias provides four possible explanations for her departure: she was compelled by Fate, she was kidnapped by Paris, she was persuaded by speech or she was

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242 By a “showpiece”, I mean a speech that was not intended to be used for its stated purpose, such as a defense of the long-deceased Helen.
in love. In all of these cases, he claims that Helen would have been coerced; hence, she is not responsible. Gorgias claims that these four possibilities are exhaustive, and therefore, Helen ought not to be blamed for going to Troy. The case of kidnapping is obvious, and the cases of fate and love are cases of divine compulsion by the Fates and Aphrodite, respectively. However, the inclusion of persuasion is particularly important here. If Helen went to Troy as a result of persuasion in speech, Gorgias claims that she was just as coerced as if Paris had kidnapped her. I will quote this passage in full as it includes several important differences with the traditional synthesis, and I will refer back to it over the course of this and the next section:

What cause then prevents the conclusion that Helen similarly, against her will, might have come under the influence of speech, just as if a forceful person seized her by force. For it was possible to see how the force of persuasion prevails; persuasion has the form of necessity, but it does not have the same power. For speech constrained the soul, persuading it which it persuaded, both to believe the things said and to approve the things done. The persuader, like a constrainer, does the wrong and the persuaded, like the constrained, in speech is wrongly charged.

This passage unravels the traditional synthesis thread by thread. First, notice his claim that Helen might have been persuaded against her will. This is, in many ways, an odd claim, as one would think that it would be impossible to be persuaded of something against one’s will; it is precisely one’s will that is changed. However, according to Gorgias, someone persuaded cannot be said to be acting willingly, which would imply that they cannot be said to be acting freely. Gorgias then explicitly denies the traditional contrast between persuasion and force. Persuasion, he says, can act as a “forceful person” ("biatērion") seizing by force ("bia"). He then describes the force of persuasion

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243 Scott Cosigny argues that Gorgias here is using a “tree division”, in which he uses a division to aggressively rule out alternatives, something that he notes that, done properly, is a part of true dialectic and rhetoric in Phaedrus 265d-e (Scott Cosigny, Gorgias: Sophist and Artist [Columbia: University of South Carolina Press, 2001], 187-88).

244 Unless otherwise noted, translations of Gorgias are that of George Kennedy from Rosamond Kent Sprague, ed., The Older Sophists (Indianapolis: Hackett, 1973).
(“to...tēs peithōus”) and says that it wears the mask of compulsion ("anankē"). The wordplay in this passage makes it evident that Gorgias knows how paradoxically he is speaking. Rather than accept the traditional contrast between persuasion and force, Gorgias argues that persuasion is a sort of force.

However, he says, persuasion does not have the same power ("dynamis") as necessity. In this context, the word seems to mean something like the means by which persuasion compels. Rather than use the traditional tools of compulsion, threats and bodily manipulation, persuasion does two things: it causes people to believe the things said and to approve of the things done. Specifically, then, persuasion influences what we believe and what we praise. Through this influence of what we believe to be true and what we believe to be best, the rhetor can force us to do whatever it is he or she wants us to do. This was the case with Helen, who was persuaded to approve of running off with Paris and then did so. So, while persuasion does not actually grab us or threaten us, it can and does entice us to believe and act in certain ways.

If Gorgias is right, then the traditional synthesis is as mistaken as a synthesis could possibly be. Not only would persuasion not be allied with freedom against force, but persuasion would be allied with force against freedom. The traditional synthesis would not only be false; it would be a sham. Moreover, democratic Athens, in which people are proud that they are moved by persuasion rather than force, would remain unfree.

5.2 Plato’s Gorgias

Plato, too, presents Gorgias as threatening this traditional synthesis, though not quite as starkly as the historical Gorgias. Plato wrote a dialogue named the Gorgias, the first part of which features Gorgias in a discussion with Socrates. In that dialogue, Gorgias appears as being at least apparently a supporter of the traditional synthesis. However, Socrates quickly uncovers that Gorgias is an opponent of the traditional synthesis. The character Gorgias first argues that rhetoric is the source of freedom for human beings, echoing what sounds like a Lysian sentiment.246 However, it quickly

246 As there is an important distinction between the historical Gorgias and the eponymous character that appears in the dialogue, I herein shall refer to the former as “the historical Gorgias” and the latter as “the
becomes clear that he believes that rhetoric is a competitive craft, one with winners and losers. Under the traditional synthesis, the distinction between freedom and slavery is a passive one. If I am persuaded, I am free, but if I am forced, I am a slave. On the other hand, the freedom that the character Gorgias discusses is an active one. Rhetoric provides freedom by teaching others to persuade. It is a competitive craft and contributes to the competitive freedom and self-efficacy of the aristocrat. Therefore, for every free persuader, there is an enslaved persuaded and freedom loses its self-effusiveness. The character Gorgias, despite his apparent agreement with the traditional synthesis, therefore turns out to be as much a threat to the traditional synthesis as his historical counterpart.

At first, the character Gorgias makes a claim that would have been right at home in one of Lysias’s speeches. He says that rhetoric is “…the source of freedom for humankind itself...” (452d).247 So far so good. That persuasion would be the source of freedom for human beings fits well with the traditional synthesis. However, immediately trouble starts to arise. The sentence continues, “…and at the same time it is for each person the source of rule over others in one’s city” (452d).248 This is not incompatible with the Lysian position. After all, rulers over free people are those who have successfully persuaded them. However, notice that the promised benefit is no longer for “human kind itself” (“autois tois anthropois”), but for a smaller number of rulers, which he calls “for each” (“hekastō”). Still, the traditional synthesis allows for leaders and despite the worry that the wealthy will be the only ones able to afford to learn rhetoric and be leaders, so long as people are persuaded rather than forced, they would still be considered free. However, the character Gorgias quickly reveals that he does not hold the Lysian view but one much closer to the historical Gorgias, when he makes the following claim about rhetoric: “In point of fact, with this ability you’ll have the doctor for your slave, and the physical trainer, too” (452e).249 At this point, the character Gorgias reveals that he has nothing like the traditional synthesis in mind. When someone is persuaded

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247 αἴτιον ἄμα μὲν ἠλέυθερας αὐτοῦς τοῖς ἀνθρώποις
248 ἄμα δὲ τοῦ ἄλλον ἄρχειν ἐν τῇ αὐτοῦ πόλει ἕκαστῳ.
249 καίτοι ἐν ταύτῃ τῇ δυνάμει δοῦλον μὲν ἔξεις τὸν ἰατρόν, δοῦλον δὲ τὸν παιδοτρίβην.
using rhetoric, that person is enslaved according to Gorgias. Rather than being a source of freedom for the persuaded, rhetoric is a source of enslavement.

At this point, it is a little unclear how to even interpret the character Gorgias’s earlier boast that rhetoric was the source of freedom “for humankind itself”. Either Gorgias is simply contradicting himself, and Plato’s intention is to show that Gorgias and other rhetors are deeply confused about their crafts, or when Gorgias said that rhetoric was the source of freedom for humankind itself, he did not mean that it made everyone free. Instead, Gorgias perceives rhetoric as a competitive craft, one which has winners and losers and only the winners turn out to have rule and be free. Later in the dialogue, Gorgias argues that rhetoric, like any competitive skill (“tēi agōniāi”), can be used either for good or evil. The introduction of competition here is very important. Competitions have winners and losers, and not everyone is able to successfully persuade. Those who are able to persuade are those who will have rulership (“archein”) within the city. Those who are unable to persuade will not have rulership. The worst off will be those persuaded, who will be enslaved by the winner of the rhetorical competition. Gorgias conceives of rhetoric as a form of competition with winners and losers, both among the rhetors and among their hearers. The prize for winning this competition is rulership. This does not accord with the traditional synthesis, because the traditional synthesis maintained the freedom not only of the successful persuader, but also of the persuaded. As a result, by treating freedom as self-efficacy and rhetoric as a means of attaining that self-efficacy, Gorgias denies an important part of the traditional synthesis: persuasion gives freedom to the persuaded as well as the persuader.

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250 Plato will return to this claim of Gorgias in the *Philebus*, where Protarchus relates Gorgias’s claim that “the art of persuasion is superior to all others because it enslaves all the rest, with their own consent, not by force, and is therefore by far the best of all the arts” (“η τοῦ πείθειν πολύ διαφέροι πασῶν τεχνῶν—πάντα γάρ ώθ’ άντι δούλα δι’ ἐκόντεν ἀλλ’ οὐ διὰ βίας ποιότο, καὶ μικρὸ κρίστι πασῶν εἰή τῶν τεχνῶν”) (58a-b). In this passage, the character Gorgias is contrasting what is done willingly (“δι’ ἐκόντεν”) with what is done by force (“διὰ βίας”), unlike in the historical Gorgias in the *Encomium of Helen*, where he says that persuasion is a type of force (“όσπερ εἰ βιατίρησεν βία ἡρπάσθη”). Nonetheless, the language of slavery (“δούλα”) from the *Gorgias* recurs here.

251 This would be in the same way as one might say that Christianity is the source of salvation for humankind without necessarily implying that everyone is saved.

Both the historical Gorgias and the character Gorgias provide serious challenges to the traditional synthesis. The historical Gorgias challenged the traditional antithesis between force and persuasion, equating the two and denying the possibility of human freedom in the presence of persuasion. The character Gorgias altered the definition of freedom, treating it as a form of competitive self-efficacy, of which persuasion was a tool and thereby asserting that someone persuaded was a slave. Together, both Gorgiases denied nearly every part of the traditional synthesis, and I will refer to these denials as “the Gorgianic challenge”.

6 Plato’s Response

6.1 Persuasion and Magic

Despite his usual hostility to the historical Gorgias and the sophists, Plato partly accepts the Gorgianic challenge to the traditional synthesis. Specifically, he accepts Gorgias’s claim that there is a type of persuasion under which one cannot be said to be free. Plato even adopts Gorgias’ sorcery analogy, which I will discuss in this section and uses it in several dialogues. This “sorcerous” persuasion works by mixing pleasure or fear with belief so as to manipulate those beliefs. Therefore, the traditional synthesis is incorrect. To be persuaded is not to be free, if the persuasion involved is sorcerous persuasion. Where Plato dissents from Gorgias, however, is on the nature of freedom. Gorgias treats persuasion as a zero-sum game, in which the persuader defeats both the persuaded and other persuaders. Plato instead argues that there is a criterion by which one persuaded can be considered free, knowledge. When one has knowledge, one is immune to sorcerous persuasion. The competitive craft of persuasion is replaced with the diffusive craft of teaching as the source of freedom and knowledge becomes its new criterion.

I will begin this section by discussing the method of Gorgianic persuasion and the sorcery analogy he used to describe it. I will then show how Plato adopts this analogy. The term the historical Gorgias and Plato use is “goēteia”, which can mean “sorcery”,

“trickery” or even “jugglery.” I will use “sorcery” to translate this term throughout, as its primary meaning is sorcery, while the use for “trickery” is a metaphor. The Greek-English Lexicon cites “sorcerer, wizard” as the primary meaning of goēs, the related noun, and “witchcraft, jugglery” as the first two definitions of goēteia (356). As such, the primary referent of the term is magical powers, while the use of the term to mean merely “trickery” is secondary. Plato, uses the term as one referring to magical powers. In the Symposium, Diotima lists the powers given by daemons to human beings, and puts goēteia on the list with sacrifices, mysteries, enchantments and prophesy (202e-203a). Given the supernatural context of the term, it is important not to kill the metaphor prematurely by translating the term “trickery” even in those cases where Plato is clearly using the term metaphorically. To do so would be to miss the force of Plato’s metaphor, and perhaps to imply a more mundane meaning when Plato may have even meant its use literally. Rather than beg any interpretive questions of when Plato intends his use of the term metaphorically, I will translate it literally as “sorcery” for the noun and as “ensorcel” for the verb.

In order to understand the sorcery metaphor that persists throughout both the historical Gorgias and Plato, one must understand the method of Gorganic persuasion. In the Encomium of Helen, Gorgias argues that speech is “a powerful lord” (“dunastēs megas”) (8) that can manipulate emotions and by manipulating those emotions, cause someone to change his or her beliefs. As evidence for this he provides the example of poetry. Poetry, which he defines as speech with meter, can cause “fearful shuddering and tearful pity and grievous longing” (“phrikē periphobos kai eleos poludakrus kai pothos philopenthēs”) because, when people encounter the suffering of others, they tend to share that suffering (9). Moreover, the ability to change someone’s emotional state gives one the ability to change his or her opinions. Being able to create pleasure allows one to merge those emotions with the opinions of the hearers:

Sacred incantations sung with words are bearers of pleasure and banishers of pain, for, merging with opinion in the soul, the

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253 “Jugglery” itself is something of an archaic English term, referring to “The art or practice of a juggler; minstrelsy, play; pretended magic or witchcraft; conjuring, legerdemain” (Oxford English Dictionary, “jugglery”, in OED Online <http://dictionary.oed.com/cgi/entry/50124579> [accessed 2 September 2010]).

254 διά τούτου καὶ ἢ μαντικὴ πάσα γορεῖ καὶ ἢ τόν ιερέων τέχνη τῶν τε περὶ τὰς θυσίας καὶ τελετάς καὶ τὰς ἐπωδάς καὶ τὴν μαντείαν πάσαν καὶ γοητείαν.
power of the incantation is wont to beguile it and persuade it and alter it by sorcery ("goëteia"). (10)

It becomes clear as this section of the *Encomium* continues that the sacred incantations here are not those of wizards but of anyone who uses speech in order to merge pleasure and pain with opinions. All of the examples of this sorcery that Gorgias provides are examples of Gorgianic persuasion, including Paris’s seduction of Helen. Gorgias further compares persuasion to a kind of “drug” or “pharmakon” (14). Just as a drug produces health and disease, so can a speech produce emotions:

For just as different drugs dispel different secretions from the body, and some bring an end to disease and others to life, so also in the case of speeches, some distress, other delight, some cause fear, others make hearers bold, and some drug and ensorcel ("exegoëteusan") the soul with a kind of evil persuasion. (14)

Though “drug” or “e pharmakeusan” here is a medical term, and the analogy is specifically medical, this may not be a mixed metaphor. “Pharmakon” has “enchanted potion, philter; hence charm, spell” as its third definition in the Greek-English Lexicon (1917), so the phrase “drug and ensorcel” is not as odd as it appears. Gorgias is a little vague as to the exact mechanism by which one moves from emotional manipulation to change in opinion, but the key seems to be in his phrase “merging with opinion in the soul” (10). It is evident that, in moral matters, the thought of something with pleasure is more likely to make us approve of the thing done. However, Gorgias also believes that rhetoric can work in non-moral matters, and he includes the examples of astronomy and philosophy as those easily influenced by persuasion (13). In the *Encomium of Helen*, then, Gorgias develops an extended magic analogy throughout the work, claiming that persuasion is a kind of sorcery that manipulates belief through manipulating the emotions surrounding that belief.

Plato borrows the historical Gorgias’s use of “sorcery” in reference to persuasion and often accuses those who practice sophistry and rhetoric of being “goëtai”, specifically, illusionists and enchanters. Plato may even have the last line of the above

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255 αἱ γὰρ ἔνθεοι διὰ λόγων ἐπικαίρα ἐπαγωγοὶ ἡδονῆς, ἐπαγωγοὶ λύπης γίνονται· συγγενεμένη γὰρ τῇ δόξῃ τῆς ψυχῆς ἢ δύναμις τῆς ἐπωδίης ἔθελες καὶ ἐπέεισε καὶ μετέστησεν αὐτὴν γοητεία.

256 ὥσπερ γὰρ τῶν φαρμάκων ὄλλως ἄλλα χρυσοῦς ἐκ τοῦ σώματος ἐξέαχε, καὶ τὰ μὲν νόσου τὰ δὲ βίου παῖει, οὕτω καὶ τῶν λόγων οἱ μὲν ἐλύπησαν, οἱ δὲ ἔτεργαν, οἱ δὲ ἔφαβησαν, οἱ δὲ εἰς θάρσος κατέστησαν τοὺς ἄκούοντας, οἱ δὲ πειθοὶ τινὶ κακῆ τῆς ψυχῆς ἐφαρμάκευσαν καὶ ἐξεγοητεύσαν.
passage in mind, “and some drug and ensorcel”, when he has Diotima list the qualities of the daemon, Eros, claiming that he is “a clever sorcerer (―goēs‖), potion-maker (“pharmakos”) and sophist (―sophistēs‖) (Symposium 203d)”. One way that Plato argues that sophists manipulate the emotions of hearers is through imitation. As illusionists, sophists and rhetors are said to be “goētai” by creating illusions or imitations that ensorcel those who view the imitation. Plato characterizes sophists as illusionists in three different dialogues, the Sophist, the Statesman and the Euthydemus. In the Sophist, the Eleatic Visitor claims that the Sophist ought to be called a goēs and also an imitator (“mimētēs”) who ensorcel by putting words in the ears:

Well then, won’t we expect that there’s another kind of expertise – this time having to do with words – and that someone can use it to ensorcel young people when they stand even further away from the truth about things? (234c)

Moreover, in the Statesman, the one who puts forward a false constitution, not grounded in expertise, is “the greatest sorcerer among the sophists” (291c3). In the Euthydemus, Socrates claims that Euthydemos and Dionysodorus are imitating (“mimeisthon”) the sorcery (goēteuonte) of the Egyptian sophist (“sophistēn”) Proteus, a deity who refused to assume his true shape until wrestled by Menelaus (288b, cf. Odyssey iv:456ff.). Plato thereby borrows Gorgias’ use of “sorcery” and attributes it to the sophists.

Moreover, Plato describes as sorcery a kind of persuasion that directly manipulates the emotions of the hearer through pleasure without imitation. The clearest example of this is in the Menexenus, in which Socrates describes the effect that a speech he just heard had on his soul:

They do their praising so splendidly that they ensorcel our souls (goēteuousin), attributing to each individual man, with the most

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\[\text{[Α] ηπγράλεη ὑο ιο οθα ηεηπόξξσ ὰξ} ὑο ιο οθα ηεηπόξξσ ὰξ' νυπξνζδνθ ὶκελ ειλα ηηλα ἄιιελ ηέρλελ, ᾗ αὖ δπλαη ὢλ <

\[\text{< αὖ> ηπγράλεη ὑο ιο οθα ηεηπόξξσ ὰξ' νυπξνζδνθ ὶκελ ειλα ηηλα ἄιιελ ηέρλελ, ᾗ αὖ δπλαη ὢλ <

257 An open question is whether or not Plato intended to say that all sorcerous persuasion was necessarily also mimetic. Christopher Janaway, for example, conflates the two, saying that “Plato apparently agrees with Gorgias that speech, when used by mimetic poetry, drugs and bewitches the soul” (Christopher Janaway, Images of Excellence: Plato’s Critique of the Arts [Oxford: Oxford University Press, 1999], 143). However, the mimetic language is Plato’s, not Gorgias’s. On the one hand, the three-fold division of involuntary loss of beliefs in Republic III implies that there may be a more direct, non-mimetic way of producing beliefs through pleasure that is distinct from other sorts of deception. Hence, young people must be exposed to fears and pleasures, “testing them more thoroughly than gold is tested by fire” (413d). On the other hand, Gorgias 464-465 includes the claim that rhetoric mimics politics, implying that all production of belief through pleasure is mimetic.
varied and beautiful verbal embellishments, both praise he merits and praise he does not, extolling the city in every way, and praising the war-dead, all our ancestors before us, and us ourselves, the living. The result is, Menexenus, that I am put into an exalted frame of mind when I am praised by them. Each time, as I listen and fall under their spell, I become a different man – I'm convinced that I have become taller and nobler and better looking all of a sudden. (235a-b)²⁵⁹

Note what is happening here. The rhetor is using beautiful words that praise people both deservedly and undeservingly. Undeserved praise is obviously false. However, because the words are so beautiful, Socrates cannot help but believe what is being said. His opinions, then, are being changed simply by virtue of the beauty of the words, in some cases to opinions that are false. Specifically, in this case it is the belief that the object of praise is, in fact, deserving of that praise. This is a quite similar process to that described in the Encomium of Helen. By producing pleasure in the soul surrounding a particular belief, a rhetor can make someone likely to hold that belief. In fact, Socrates not only begins to believe undeserved praise, he starts to hold different opinions about himself. He believes that he is nobler and better looking, both of which are difficult to measure, but he even begins to believe he is taller, something measurable and obviously false. Praise then changes the opinions of the hearers by causing pleasure in the hearer, and Plato, like Gorgias, calls this a sort of magic.

Plato claims in the Phaedo that this kind of change of opinion through pleasure is a result of our body and its effect on our soul. In that case, the belief that the only things that exist are physical is a result of the ensorcelling of the soul by our bodies when we experience too much pleasure and desire:

But I think that if the soul is polluted and impure when it leaves the body, having always been associated with it and served it, bewitched (goëteuomenē) by physical desires and pleasure to the

²⁵⁹ γοητεύουσιν ἡμῶν τὰς ψυχὰς, καὶ τὴν πόλιν ἐγκομιάζοντες κατὰ πάντας τρόπους καὶ τοὺς τετελευτηκότας ἐν τῷ πολέμῳ καὶ τοὺς προγόνους ἡμῶν ἁπάντας τοὺς ἔμπροσθεν καὶ αὐτοὺς ἡμᾶς τοὺς ἐτὶ ἔξντας ἐπαινοῦντες, ἀτομτ' ἐγώ, ὁ Μινεέξε, γενναίος πάνυ διατίθεμαι ἐπαινούμενος ὑπ' αὐτῶν, καὶ ἐκάστοτε ἐξέχειν ἀκρούμενος καὶ κηλούμενος, ἣγούμενος ἐν τῷ παραχρήμα μείζον καὶ γενναίότερος καὶ καλλίων ἐγγονέω.
Plato here provides another example of an opinion changed through pleasure. The pleasures and desires we encounter in the body trick us into believing that the physical world is the only real world, rather than the world of ideas. One should note that even if one does not accept the existence of an intellectual world, this is independent from the psychological mechanism Plato is observing. Plato is noting that pleasures and desires create beliefs in us. In the *Menexenus* case, pleasure created approval of whatever is praised. In the *Phaedo* case, pleasure creates belief in the ontological primacy of the objects of pleasure and desire. Pleasure and desire, then, alter opinion by altering what we believe to be good and even what we believe to be ultimately real.

6.2 Knowledge and Freedom

However, Plato still believes that freedom is possible, and the key to that freedom is knowledge. The historical Gorgias had largely equated what he taught with persuasion as a whole, but Plato argues that there are two types of persuasion: the first is the sorcerous type of persuasion, where beliefs are generated through the manipulation of the emotions; the second, however, is teaching, in which one provides knowledge to one’s subject. In the *Gorgias*, Socrates makes this distinction to the character Gorgias, who then admits that there is such a distinction, and that Gorgias does not engage in the type of persuasion involving teaching:

Socrates: Would you like to posit two types of persuasion, one providing conviction without knowledge, the other providing knowledge?”

Gorgias: Yes, I would.

Socrates: Now which type of persuasion does oratory produce in law courts and other gatherings concerning things that are just and unjust? The one that results in being convinced without knowledge or the one that results in knowing?

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260 Ἐὰν δὲ γε σώμα μεμισμένη καὶ ἀκάθαρτος τοῦ σώματος ἀπαλλάττετα, ἄτε τὸ σῶματι ἀεὶ συνοῦσα καὶ τούτο θεραπεύουσα καὶ ἔρωσα καὶ γοητευομένη ὑπ’ αὐτοῦ ὑπὸ τοῦ ἐπιθυμιῶν καὶ ἣδονῶν, ὡστε μηδὲν ἄλλο δοκεῖν εἶναι ἁληθῆς ἄλλ’ ἤ τὸ σωματειδές.
Gorgias: It’s obvious, surely, that it’s the one that results in conviction. (454c)

Socrates then takes his argument another step. What he notes is that the kind of persuasion in which Gorgias is engaged cannot work on those who already know the truth about a subject. After Gorgias boasts that he is capable of persuading concerning health when doctors are not persuasive and even that he could be appointed state physician over a doctor, Socrates makes the following observation:

Socrates: And doesn’t ‘in a gathering’ just mean ‘among those who don’t have knowledge’? For, among those who do have it, I don’t suppose that he’ll be more persuasive than the doctor.

Gorgias: That’s true. (459a)

Plato has not simply put words into the mouth of Gorgias here, as the historical Gorgias makes this exact distinction in the Encomium. There, he tries to explain why it is that his type of persuasion is able to work and makes the claim that it is because people have only beliefs, and not knowledge:

For if all men on all subjects had both memory of things past and awareness of things present and foreknowledge of the future, speech would not be similarly similar, since as things are now it is not easy for them to recall the past nor consider the present nor predict the future. So that on most subjects most men take opinion as counselor to their soul. (11)

What Gorgias is arguing here is that, if people had knowledge of all subjects in all times, speech would have no effect on them. However, because people lack knowledge, they form beliefs instead. Beliefs, though, are the ground in which sorcerous persuasion can work, by mixing in pleasure and fear. Therefore, the historical Gorgias himself admits that those who know are immune to his form of persuasion.

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261 [ΣΩ.] Βούλει οὖν δόο εἴδη θῶμεν πειθοὺς, τὸ μὲν πίστιν παρεχόμενον ἀνευ τοῦ εἰδέναι, τὸ δ’ ἐπιστήμην; {—ΓΟΡ.} Πάνω γε. {—ΣΩ.} Ποτέραν οὖν ἡ ῥητορικὴ πειθὸ που ἐν δικαστήριοις τῇ καὶ τοῖς ἄλλοις δήλοις περὶ τῶν δικαίων τῇ καὶ ἀδίκων; ἡ ἂς ἂς πιστεύειν γίγνεται ἀνευ τοῦ εἰδέναι ἢ ἂς ἂς τοῦ εἰδέναι; {—ΓΟΡ.} Δήλον δήπο, ὅς Σύκρατες, ὅτι ἂς ἂς τὸ πιστεύειν.

262 {—ΣΩ.} Οὐκοῦν τὸ ἐν δήλῳ τοῦτο ἐστὶν, ἐν τοῖς μὴ εἰδόσιν, οὐ γὰρ δήπο ἐν γε τοῖς εἰδόσι τοῦ ἱατροῦ πιθανότερον ἔσται.

{—ΓΟΡ.} Ἀληθὴ λέγεις.

263 εἰ μὲν γὰρ πάντας περὶ πάντων εἶχον τὸν <τε> παροιχομένων μνήμην τῶν τε παρόντων <ἐννοιαν> τῶν τε μελλόντων πρόνοιας, οὐκ ἂν ὁμοίως ὁμοίως ἂν ὁ λόγος, ὡς τὰ νῦν γε οὔτε μνησθήναι τὸ παροιχομένον οὔτε σκέψασθαι τὸ παρόν οὔτε μνηστεύσασθαι τὸ μέλλον εὐπόρος ἔχει· ὡστε περὶ τῶν πλείστων οἱ πλείστοι τὴν δὸξαν σύμβουλον τῇ ψυχῇ παρέχονται.
Through Socrates’ argument, Plato is challenging the historical Gorgias in two ways. First, Socrates is dividing up persuasion in a way that Gorgias did not. Gorgias himself lumped all persuasion together under his own sorcerous persuasion. Socrates is pointing out that there is a second form of persuasion, teaching. Unlike persuasion, teaching is not a zero-sum, competitive craft, as one does not get the better of the person taught when they are taught: the person taught benefits. As a result, Gorgias is incorrect to conclude that all persuasion is of the sort he teaches. The mistake that both the traditional synthesis and Gorgias make is to treat all persuasion as equivalent. The traditional synthesis treats all persuasion as being freeing, while Gorgias treats it all as being coercive. Instead, Plato divides persuasion itself into categories, only one of which is the kind of sorcerous persuasion that Gorgias teaches. The new category is not “trickery” at all, but teaching.

Second, teaching and knowledge provide a perfect antidote to Gorgias’s sorcerous persuasion. As both the character and historical Gorgias admitted, having knowledge makes one immune to the kind of persuasion that he uses. As Principle #2: Crafts and knowledge are co-extensive implies that someone with a craft has knowledge, having a craft makes one immune to Gorgias’s persuasion. He cannot trick doctors concerning medicine, only patients, and only patients who do not understand medicine at that. His kind of sorcerous persuasion can only mix itself with belief (“doxa”), not knowledge (“epistēmē”). What this implies is that those who have knowledge are free in an important way, that is, in the sense that they have independence of mind. No amount of emotional manipulation can cause someone to lose one’s knowledge. Plato thereby shows that Gorgias’s understanding of persuasion is both incomplete and vulnerable to an antidote.

Plato’s most explicit connection of knowledge and freedom is in the Lysis. In that dialogue, Socrates speaks to his very young friend, Lysis, who complains that his parents will not allow him to “do what he likes” (“poiein hoti an boulēi”) (208e). Socrates notices that Lysis’s parents do not let him drive the chariots or the mules and that those jobs are entrusted instead to slaves instead, while Lysis is hindered from performing those tasks. Socrates points out there is a discrepancy between the supposed class structure and what people are allowed to do in practice. The slaves, though they are
slaves, are permitted to engage in a number of tasks, while Lysis, who is “well-born” (“gennaiou” 209a) is permitted to do very few things. Lysis provides a very class-based response, and he tries to point out that what is occurring is in accord with the class structure. The apparent discrepancy is actually in accord with current social norms because Lysis has not yet come of age (“Ou gar pō, ephē, hēlikian echō” 209a).

However, Socrates then argues that it is not Lysis’ lack of age that has caused him to be hindered from performing the tasks he likes. He points out that there are a number of things, including writing or playing the lyre that he is allowed to do, despite his not yet having come of age. Socrates then asks Lysis why it is that he is allowed to perform writing and flute playing, while he is prevented from driving the mules, and Lysis provides the desired answer: “I suppose it’s because I understand these things and not those” (209c). This is not simply a convention-based response such as Lysis had previously given. Instead, it is providing the natural criterion according to which tasks are divided: knowledge. Socrates agrees with Lysis, and points out that this is true even in the case of the crown prince of Persia. Even the crown prince of Persia would not be allowed to tinker with a stew unless he knew how to cook (209d-e).

Knowledge, Socrates concludes, provides the freedom to do what we want. He then makes a claim highly reminiscent of Gorgias’ claim that rhetoric is the source of freedom in the Gorgias. Socrates says the following:

Then this is the way it is, my dear Lysis: in those areas where we really understand something everybody – Greeks and barbarians, men and women – will trust us, and there we will act just as we want, and nobody will want to get in our way. There we will be free (“eleutheroi”) ourselves, and in control of others (“allōn archontes”). (210a-b)

Here Socrates makes an even stronger claim about the relationship between knowledge and freedom than he made in the Gorgias. In that dialogue, knowledge makes one immune to the potential manipulation of sorcerous oratory. However, here, having knowledge provides one with the trust of others that enables us to do what we want. Like

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264 Ὅτι οἶμαι, ἔφη, ταῦτα μὲν ἐπίσταμαι, ἐκεῖνα δ᾿ οὐ.
265 Οὕτως ἄρα ἔχει, ἣν δ᾿ ἐγώ, ὡς γὰρ αὐτὴ, ἃ ἐν φρόνιμοι γενόμεθα, ἅπαντες ἡμῖν ἐπιτρέποντον, Ἐλληνες τε καὶ βάρβαροι καὶ ἄνδρες καὶ γυναῖκες, πούσσομέν τε ἐν τούτοις ὅτι ἂν βουλέωμεθα, καὶ ὑπὸ ἡμῶν ἡμᾶς ἐκὼν εἶναι ἔμποδοι, ἀλλ᾿ αὐτοὶ τε ἔλευθεροι ἐσόμεθα ἐν αὐτοῖς καὶ ἄλλων ἄρχοντες.
the slave cook who is allowed to spice the sauce instead of the king's son, when people think we have knowledge, we are free to act with regard to the things we know.

The passage connects with the dialogue *Gorgias* in two very important and striking ways. First, the language that Socrates uses here is very similar to the language that the character Gorgias used in the *Gorgias*. In the *Lysis*, Socrates claims that we are free ("eleutheroi") and in control of others ("allōn archontes") when we have knowledge. Notice, though, that Gorgias makes a similar boast using the same terms in the *Gorgias*. There, he says that rhetoric is "...the source of freedom ("eleutherias") for humankind and at the same time it is for each person the source of rule over others ("allōn archein") in one’s own city" (452d). The parallel between these passages is striking, and may be an example of Plato altering a sophist’s slogan in order to give it a contrary or different meaning.266 The character Gorgias and probably the historical Gorgias claim that rhetoric is the source of freedom and rule. Plato uses this same claim, but replaces rhetoric with knowledge. When one takes someone else’s claim and switches a single term, it provides heavy emphasis to that term, effectively saying, "Instead of rhetoric, knowledge is the source of freedom and rule."267 This claim here includes an implicit rejection of Gorgias’s position.268

Plato also ties philosophy and the class of freemen together in the *Theaetetus* and the *Sophist*, where he addresses the class-based question of the sort of education that is proper to a freeman. In the *Protagoras*, Socrates asks his ecstatic young friend Hippocrates whether Protagoras taught what was appropriate to freemen: “you didn’t get from them [Hippocrates’ teachers] a technical instruction to become a professional, but a general education suitable to a freeman ("ton eleutheron")” (312b).269 270 Hippocrates

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266 Perhaps the most famous instance of this is the comment of the Athenian stranger that “God is the measure of all things” at *Laws* 716c, a clear revision of Protagoras’s “man is the measure of all things” (Rosamond Kent Sprague, ed., *The Older Sophists* [Indianapolis: Hackett, 1973], Fr. 1). This appears to be a similar reworking of someone else’s slogan.

267 Note also that the combination of freedom and rule points toward Principle #6: Crafts are arranged in a hierarchy, in which tool-supplying crafts are subordinate to those that use the tools. Having knowledge puts one in a position of proper rulership over anyone with a subordinate craft.

268 If the slogan that the character Gorgias uses in the *Gorgias* is actually a slogan of the historical Gorgias, then nothing can be inferred about the relative chronology of the *Gorgias* and the *Lysis*. However, if the slogan in the *Gorgias* is Plato’s own invention and the *Lysis* is actually quoting the *Gorgias*, it would imply that the *Lysis* was written after the *Gorgias*.

269 τούτου γὰρ σῶ ἐκάστην ὑπὲρ ἐπὶ τέχνη ἐμβαθείς, ὡς δημιουργός ἐσόμηνος, ἀλλ’ ἐπὶ παιδεία, ὡς τὸν ἴδιον κατα τὸν ἔλευθερον πρέπει.
responds in the affirmative. The education of a freeman is not craft-based, according to
Hippocrates, but is based on understanding things that are free from technical application.
A similar question about what is appropriate to teach a freeman appears in the Laches,
this time in military education: “this [fighting in armor] and horsemanship are forms of
exercise especially suited to a freeman” (182a). In this dialogue, Laches and Nicias are
debating what kind of military instruction is appropriate for their sons, who are freemen.
Finally, in the (admittedly spurious) Rival Lovers, Socrates and a young, unnamed friend
debate over the value of polymathy, learning a little bit about everything, versus a more
narrow philosophical training. The young friend, a defender of polymathy, defends it
explicitly on the grounds that it is suitable to a freeman:

> The most admirable and proper sorts of learning are those from
which one derives the most fame as a philosopher, and one
acquires the most fame by appearing to be an expert in all the
skills, or if not in all of them, in most of the really important
ones, learning as much of them as is proper for a free man.
(135b)

According to Socrates’ young friend, then, a philosopher should learn about all of the
skills, within the constraints of what is appropriate for a freeman to learn. As one can
see, the question of what is appropriate teaching for the freeman was a live topic
throughout the dialogues.

Surprisingly, in the Theaetetus and the Sophist, Socrates and the Eleatic visitor
make the claim that the appropriate subject of learning for a freeman is philosophy,
specifically dialectic! Knowledge, specifically philosophical knowledge, thereby
becomes the criterion of the freeman class. These dialogues are a part of a trilogy of
dialogues recounting a single discussion, starting with the Theaetetus, then continuing
with the Sophist and concluding with the Statesman. In the Theaetetus, Socrates
compares the life of a philosopher to that of someone in the assembly, the place that
someone like the character Gorgias trains people to speak. Paradoxically, Socrates

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270 This is not the physician Hippocrates, but another man with the same name.
271 καὶ ἄμα προσήκει μάλιστ’ ἐλευθέρῳ τούτῳ τέ το γνωσάσαι καὶ ἢ ἔπικη;
272 ἄν πλείστην δόζαν ἔχοι τις εἰς φιλοσοφίαν: πλείστην δ’ ἂν ἔχω δόζαν, εἰ δοκοῖ τὸν τεχνῶν ἐμπείρος
ἐναι πασῶν, εἰ δέ μη, ὡς πλείστοις γε καὶ μάλιστα τῶν ἓξιολόγων, μαθῶν αὐτῶν ταύτα ἀ προσήκει τοῖς
ἐλευθέροις μαθῆν.
273 It may not be so surprising, however, in light of Principle #4: Crafts are dependant on dialectic for a
determinate subject matter and to systematically approach causal relationships.
274 An implied fourth part, named The Philosopher, was never written.
argues that rhetors like Gorgias are actually enslaved to those they are trying to persuade, while the philosopher is free from concern about the passions of others. In fact, Socrates says, rhetors like Gorgias are like slaves, while philosophers are like freemen:

SOCRATES: Well, look at the man who has been knocking about in law courts and such places ever since he was a boy; and compare him with the man brought up in philosophy, in the life of a student. It is surely like comparing the upbringing of a slave with that of a freeman. (172c-d)

Socrates seems to be directly challenging the claims of rhetors like Gorgias. Gorgias is not teaching people to be free, but rather to be slaves. Instead, philosophy is the true source of freedom.

Those skilled at speaking in the law courts, Socrates claims, are in a constant position of needing to flatter the desires of the audience, in order to get what they want from them. Constantly appealing to the passions of others in courts is slavish, according to Socrates. This slavery takes three different forms. First, the person in the law courts is a slave to the procedures of the law courts. While the philosopher is able to speak on any subject in search of what is, the person in the law courts is required to be a slave to the current topics and the clock: “But the other – the man of the law courts – is always in a hurry when he is talking; he has to speak with one eye on the clock” (172d-e). Second, law courts operate under compulsion (“anankē”), in which one person sues another. Someone defending themselves in a lawcourts is compelled to respond to a charge point-by-point:

…he has his adversary standing over him, armed with compulsory powers and with the sworn statement, which is read out point by point as he proceeds, and must be kept to by the speaker. The talk is always about a fellow-slave, and is addressed to a master, who sits there holding some suit or other in his hand. (172e)
So far, it would appear that Socrates is speaking exclusively about the court system, specifically of Athens. That a defendant is required to respond to a charge point-by-point is apparently a part of Athenian legal procedure. Gorgias claims not only to be able to teach people to speak in courtrooms, but also in political assemblies or even in private. Further, Socrates seems to be envisioning only being sued, not bringing a suit. The compulsion that a defendant experiences is the compulsion that a prosecutor wields. However, when he describes what it is that the lawyer is skilled at, he quickly reveals that is concern is broader than just defenders in the Athenian courtroom. First, he notes that the skill involved in being good at public speaking is that of flattery, something which is actually a skill honed very well by slaves in powerless positions: “Such conditions make him keen and highly strung, skilled in flattering the master and working his way into favor; but cause his soul to be small and warped” (173a).\textsuperscript{278} Moreover, this requirement that we learn how to flatter our masters is a part of any public speaking, including the assemblies and even including playwrights. Theodorus, with whom Socrates is speaking, quickly draws this general conclusion: “We [philosophers] have no jury and no audience (as the dramatic poets have), sitting in control over us, ready to criticize and give orders” (173c).\textsuperscript{279} Because someone speaking in an assembly is appealing to other people, they are acting in a slavish way, flattering their audience and trying to please them.

What Socrates is engaged in here is a clever bit of class commentary. He is using some very important observations about slavery in order to accuse the rhetors and sophists of behaving slavishly. As many slaves, abused and exploited people have discovered, the ability to flatter those who have power over them is an important part of making slavery tolerable. One learns to please one’s master so as not to be beaten. By accusing sophists and rhetors of teaching flattery, Socrates is accusing them of teaching them skills only needed by slaves. A nobleman and a freeman don’t need to flatter. They are independent, and don’t need to be obsequious. Rather, flattery implies that the person being flattered has the real power. By learning to flatter the crowds in order to get them to do what he wants, Gorgias is actually teaching his students to treat crowds as slaves treat their masters. This doesn’t teach freedom; it teaches slavery. Socrates uses the

\textsuperscript{278} ὥστε’ ἐξ ἀπάντων τούτων ἐντονοὶ καὶ δριμεῖς γίγνονται, ἔπισταμένοι τὸν διευθυντὴν λόγῳ τε θωπεύουσι καὶ ἔργῳ ὑπελθέται, σμικροὶ δὲ καὶ οὐκ ὅρθοί ταῖς ψυχαῖς.
\textsuperscript{279} οὔτε γὰρ δικαστὴς οὔτε θεατὴς ὅσπερ ποιητάς ἐπιτιμήσων τε καὶ ἄρξον ἐπιστατεῖ παρ’ ἡμῖν.
traditional class distinctions in Athens to show that the skill that Gorgias is claiming to
teach is actually not an appropriate skill for a free person at all.

This claim that philosophy is the education appropriate to a freeman continues in
the *Sophist*, in this case specifically focusing on the dialectical method that is developed
in that dialogue. In their search for the sophist, the visitor and Theatetus happen on a
method of collecting and division that they decide isn’t appropriate to a sophist, and the
Eleatic visitor makes the following claim:

> Or for heaven’s sake, without noticing have we stumbled on the
> knowledge that freemen have? Maybe we’ve found the
> philosopher even though we were looking for the sophist.

(253c)

This is a very important claim. First, we see something of an answer to the lingering
question of what kind of education is appropriate to a freeman. The appropriate
knowledge for a freeman is dialectic. Moreover, the Eleatic visitor actually equates the
freeman and the philosopher in this passage. The person who has dialectic is both a true
freeman and a true philosopher. The knowledge of dialectic, which is the knowledge that
a true philosopher has, is the knowledge of freemen. What a freeman should be learning,
according to this passage, is dialectic, the same knowledge that makes someone a
philosopher. Again, we see a strong connection between freedom and knowledge in
Plato’s dialogues, this time as a replacement in the curriculum for the lessons of the
sophists.

In several dialogues Plato sets out a new criterion for freedom: knowledge.
Knowledge provides freedom because it makes one immune to the very manipulation that
someone like Gorgias claims to teach. Further, craft knowledge will give us the ability to
act as we want in situations we know something about. Finally, a philosopher’s
education, in which knowledge is gained through dialectic, is more appropriate to the free
person than one centred on public approval, as the latter turns the speaker into a kind of
slave, pandering to the emotions of his or her audience. Plato thereby sets up knowledge
as a new criterion for freedom.

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280 ἣ πρὸς Δίως ἐλάθομεν εἰς τὴν τῶν ἔλευθερων ἐμπεσόντες ἐπιστήμην, καὶ κινδυνεύομεν ζητοῦντες τὸν
σοφιστὴν πρῶτον ἀνημηρικέα τοῦ φιλόσοφον;
7 Medical Applications

In this section, I will consider the specifically medical applications of Plato’s connections between knowledge and freedom. A number of the examples of the relationship between knowledge and freedom in the Platonic corpus are medical examples. In the Gorgias, there is an example of sorcerous persuasion being used in a medical context. In the Laws, there is an example of the type of understanding that is appropriate to a free patient. Comparing these passages to some passages in the Hippocratic corpus, I will attempt to uncover the specific medical applications and even the type of knowledge that Plato believes is appropriate for a free patient to know as opposed to a slave patient.

7.1 Sorcerous Persuasion in Medicine

The case of sorcerous persuasion appears in the Gorgias. In that dialogue, the character Gorgias wishes to provide an example of the power of rhetoric by giving the example of his brother, who is a doctor. Gorgias claims that he has gone many times with either his brother or other doctors and has been able to persuade their patients to undergo some painful procedure, using solely oratory and with no knowledge of medicine at all:

Many a time I’ve gone with my brother or with other doctors to call on some sick person who refuses to take his medicine or allow the doctor to perform surgery or cauterization on him. And when the doctor failed to persuade him, I succeeded, by means of no other craft than oratory. (456b)

This passage is interesting for a number reasons. First, Gorgias is not a doctor. In fact, part of this boast is that he does not need to know medicine in order to persuade people in crafts of which one has no knowledge. What this implies is that the kind of persuasion that Gorgias uses in this context cannot be the didactic persuasion that communicates knowledge. Gorgias lacks knowledge, so that is impossible. Rather, this is purely sorcerous persuasion. Second, Gorgias claims that he has done this many a time.

281 πολλάκις γὰρ ἦδη ἔγονε μετὰ τοῦ ἄδελφου καὶ μετὰ τῶν ἄλλων ἰατρῶν εἰσελθὼν παρὰ τινα τῶν καμινόντων οὗτι ἐθέλοντα ἢ φάρμακον πιεῖν ἢ τεμεῖν ἢ καθεσθεῖν παρασχεῖν τῷ ἰατρῷ, οὐ δυναμένου τοῦ ἰατροῦ πείσαι, ἐγὼ ἐπείσα, οὐκ ἄλλη τέχνη ἢ τῇ ῥητορικῇ.
("pollakis"). Gorgias isn’t providing simply an anecdote. This is something that he has done often.

Most importantly, the doctors themselves invite the character Gorgias along with them to persuade a recalcitrant patient, after they themselves have failed to persuade them. In this passage, Gorgias is not simply boasting about the power of sorcerous rhetoric to persuade a recalcitrant patient, he is denying the power of didactic persuasion to persuade a recalcitrant patient. The doctor is only able to transmit information about health and how to improve the health of the patient. It is unclear in the story why the patients are recalcitrant, though it is likely for one of two reasons. Either the patient does not believe that the treatment will really work because the patient’s fear of pain is undermining the belief he or she would otherwise have that the treatment will be beneficial, or the patient does believe the treatment will work, but doesn’t want to undergo the treatment because of the pain. In both of these cases, the medical craft has proven useless in persuading the patient. Fear of pain has mixed with opinion in such a way that either the patient cannot believe that the treatment will work or the patient doesn’t care whether the treatment will work. Rhetoric, on the other hand, is a craft of mixing pleasure and fear with opinion, according to the historical Gorgias. The character Gorgias intervenes and manipulates the opinions of the patient using sorcerous persuasion, unmixing the fear from opinions surrounding the procedure. In other words, the doctor cannot persuade the patient, because the doctor only understands health. Only a rhetor can persuade the patient, because only the rhetor understands pleasure and fear. In a recalcitrant patient, didactic persuasion simply isn’t relevant because knowledge isn’t the problem. Fear is the problem.

Despite the character Gorgias’s boasts that he can assist physicians, the references to oratory that do exist in the Hippocratic corpus are largely hostile, precisely because of the way in which oratory and showmanship could take advantage of patient’s relative ignorance about health. Due to the lack of any sort of medical accreditation in the Fifth Century, physicians were largely forced to convince others of their credentials in an

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282 In this section I do not intend to imply any more unity to the Hippocratic corpus as a part of a single school of medicine. Instead, I use them to provide examples of the way in which rhetoric was impacting on medical practice in ancient Greece.
However, the methods of medicine were especially unsuited to promoting their craft in an open setting. Doctors were finding that sorcerous persuasion was undermining their ability to gain patients. Although sorcerous persuasion might be used to persuade a recalcitrant patient, the overall opinion of the authors of the Hippocratic corpus was that sorcerous persuasion usually promoted quackery, at the expense of good medicine.

There are a number of instances of frustration with other doctors and the methods by which they gained patients. The author of Law was very concerned about the number of charlatans in Greece and also with the way in which doctors are chosen. Much of this work is a polemic against other doctors, but the author is ostensibly concerned not only with uncovering the imputed deception of other physicians, but also with the ignorance of patients with respect to the medical craft and the effect that has. Lack of knowledge of the medical craft leads many patients to be prone to sorcerous persuasion, just as both Plato and the historical Gorgias had claimed. Coupled with the number of people pretending to the medical craft, this creates a situation in those claiming to be serious doctors had difficulty attracting patients and the reputation of the medical profession as a whole was harmed.

The author of Law believes that medicine has been disgraced ("adoxiēs") because of the ignorance both of those who attempt the art of medicine and of those who choose doctors (1). There are many who claim to be doctors, but very few who are in fact (1). He is claiming that both a) there are a large number of false doctors, and b) the ultimate problem is with the patients who are unable to distinguish false doctors from true ones. Moreover, false doctors often attract patients by using showy methods, designed to impress the patients using spectacle to delight them, rather than any sort of medical craft. Two such examples of this showy persuasion appear in the work On Joints. The author of On Joints criticises those who make complex, beautiful nose bandages without knowing what they are doing ("tēisi kalēisin epidesesin aneu noou")
Apparently, it was common for physicians to use elaborate bandages for broken noses and perhaps other breaks, as the elaborateness of the bandaging would seem to advertise the skill of the physician. Another example is not only showy and public, but also outright dangerous. He criticizes those who tie hump-backed patients to a ladder and drop them suddenly to the ground in hopes of straightening the spine:

> For, to begin with, successions on a ladder never straightened any case, so far as I know, and the practitioners who use this method are chiefly those who want to make the vulgar herd gape, for to such it seems marvelous to see a man suspended or shaken or treated in such ways. (42)

These doctors were a threat because, in the face of patients unable to understand medicine themselves, they turned medicine into showmanship. Both of these cases from *On Joints* have in common that they are done *publicly*. While bandages may not be applied publicly, they are worn publicly. The gable-dropping apparently was actually performed publicly, causing the crowd to marvel at what they were seeing. In both of these cases, the author is criticizing is the susceptibility of a crowd without knowledge to being impressed with wonders: sorcerous persuasion. At places in the Hippocratic corpus, the doctors criticize persuasion directly. *On the Art* is largely a defense against those who have the “art of bad speech” ("logôn ou kalôn technēi") and who attempted to bring shame on physicians who do not rely on rhetoric (*On the Art* 1). By using the phrase “art of bad speech”, the author is specifically connecting false doctors with that of deceptive rhetors and sophists. Further, in *On the Art*, the author makes the claim that what genuine doctors do is to provide a demonstration or “epideixis” of deeds, not

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286 Jacques Jouanna raises the possibility that the origin of the spectacle of bandages lay in the historic connection of bandages with the warrior class, such as Achilles’ binding of Patroclus’ wound at *Iliad* 11.832. Bandaging had historically been something in which warriors themselves were trained and was in a way glorious (Jacques Jouanna, *Hippocrates* [Baltimore: Johns Hopkins University Press, 1999], 94-95,440). However, it is equally plausible that bandages took on this showy role because they were a visible and enduring sign of the physician’s craft.

287 Jouanna argues that Hippocratic doctors believed that, in principle, ladders could be used to correct a deformed spine in a treatment called “succession”. However, the dropping of the patient and the publicity appear to be what is being criticized here (Jacques Jouanna, *Hippocrates* [Baltimore: Johns Hopkins University Press, 1999], 97).

288 *Τοῦτο μὲν γὰρ, αἱ ἐν τῇ κλῆσις καταστίσεις οὐδένα πω ἐξήθησαν, ὃν γε ἑγὼ οἶδα· χρέονται δὲ οἱ ἱεροὶ μάλιστα αὐτῆς οὗτοι οἱ ἐπιθυμέουσις ἐκχαινοῦν τὸν πολὺν ὅξιον.*

289 A very similar phrase is used with reference to Socrates (presented as a sophist) in Aristophanes’ *Clouds* in which Phaedippides asks to be taught the “worse speech” (τὸν ἡπτονα) (114). The Worse Speech then appears as a character in this play.
words. The term “epideixis” is a technical term from rhetoric, referring to a rhetorical performance.

The problem for many doctors is that their method of persuasion did not work very well in a public context. Instead, many doctors rely on building up a reputation through making correct predictions. Their primary method of building up a reputation, perhaps oddly, was not necessarily curing people but by forecasting what would happen. This is most thoroughly discussed in the treatise Prognostics. The author characterizes himself as a prophet, declaring the past, present and future of the patient and his or her illness:

For if he discover and declare unaided by the side of his patients the present, the past and the future, and fill in the gaps in the account given by the sick, he will be the more believed to understand the cases, so that men will confidently entrust themselves to him for treatment. (1)

One key element in prognostication was to say whether or not a patient would die. First of all, one appears wiser when one is able to predict the future. More importantly, however, the doctor will not be blamed for a death if the doctor predicts the death in advance (1). In fact, the author of On the Art goes so far as to argue that doctors should not try to treat those who will be overmastered by their disease (3).

While this method of prediction worked privately, it was a method particularly unsuited to the public marketplace. Predictions take time to be fulfilled, and the doctor’s reputation would need to be spread largely by word of mouth. Making a proper

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290 οἱ τε νῦν λεγόμενοι λόγοι δηλοῦσιν ἁἱ τε τῶν εἰδότων τὴν τέχνην ἐπιδείξεις, ὡς ἐκ τῶν ἔργων ἡδίων ἢ ἐκ τῶν λόγων ἐπιδεικνύοντον.
291 An important exception to this is Polybius’s On the Nature of Man, which describes itself as a lecture. However, this public interest in medical topics seems to mainly be restricted to “the ultimate constituents of the human body” rather than the whole of the medical art (Hippocrates, Hippocratic Writings, ed. G. E. R. Lloyd [Middlesex: Penguin Books Ltd., 1978], 38).
292 These numbers refer to the paragraph in which the quoted text is found.
293 ἵνα τὸν καταδεικνύειν τὸν νοσεότον πρήγματα, ὥστε τολμήν ἐπιτρέπειν τοὺς ἀνθρώπους σφέας ἐκουτούς τῷ ἱμέρῳ.
294 This characterization of knowing past and future is the same language used by Gorgias when he describes the knowledge that would make one immune to sorcerous persuasion: “For if men on all subjects had <both> memory of things past and <awareness> of things present and foreknowledge of the future, speech would not be similarly similar” (Encomium of Helen 11).
295 τοὺς ἀποθανόμενους τε καὶ σοφησμένους προγνωστικοὺς καὶ προσαγορεύουν ἁναίτιον ἢν εἶδος.
296 τὸ μὴ ἐγχειρεῖν τοῖς κεκρατημένοις ὑπὸ τῶν νοσημάτων.
prediction is particular to each patient’s circumstance and can often take a long time. The author of *Prorrhetics (Predictions) II* discusses this process of making predictions.

Making proper predictions requires learning all of the details, and one must be careful. One needs to take into account the diet and exercise of the patient, especially if the patient is bedridden. Fevers can result from changes in diet. As a result, predictions are particular to the course of each patient and disease.

This provides a fundamental problem for doctors that rely on prediction in the context of the Greek marketplace. They do not wish to be dependent on effects or speeches in words, but their means of gaining reputation, correct prognosis, is always limited to particular patients observed usually in their homes over long periods of time.

That the public did not understand the medical art made it difficult for physicians who rely on observation and prediction to attract patients. Instead, those able to impress patients with public displays undermined them. The observational method of doing medicine was especially unsuited to public displays, as doctors built up reputations over time through prognostication rather than presentation. These physicians are concerned that public displays are undermining their ability to apply their craft.

### 7.2 Didactic Persuasion in Medicine

In contrast to this use of sorcerous persuasion in the *Gorgias*, Plato argues instead that what is appropriate for a free patient is that he or she be educated about his or her illness, in so far as is possible. Specifically, it is appropriate for a free patient to be taught about his or her illness in much the same way that the physician himself or herself understands the illness. The patient should learn both the principles of the illness and how this illness has come to be. The information should be case-specific, and not presented simply as a series of rules or “doctor’s orders” to follow. This passage is tied together with other passages from the *Phaedrus* and the *Laws*, and I will discuss those relationships as well.
That didactic persuasion is appropriate to a free patient is presented most clearly in Book IV of the *Laws*. In that book, the Athenian visitor provides a long comparison of two types of medicine: free medicine and slave medicine. The visitor makes the apparently uncontroversial claim that there are two types of medicine, free and slave medicine. Free medicine is performed by doctors, and is usually performed on free patients. However, there is also another sort of medicine that Socrates calls slave medicine. The doctor’s slave assistants, who have picked up some medical techniques through observation without understanding them, will use those techniques on other slaves, who presumably cannot afford to pay for the doctor themselves. The Athenian visitor describes these slave doctors in the following way:

Now here’s another thing you notice. A state’s invalids include not only free men but slaves too, who are almost always treated by other slaves who either rush about on flying visits or wait to be consulted in their surgeries…Then he dashes off on his way to the next slave-patient, and so takes off his master’s shoulders some of the work of attending the sick. (720c-d)\textsuperscript{302,303}

The slaves, unable to afford the attendance of the physician and not valuable enough to have a physician paid for by their masters, are treated instead by other slaves, in this case, the slaves of the doctors. However, these slave doctors are not doctors per se. Specifically, they lack understanding of the craft or any of the causal relationships involved. Instead, they do what they’ve seen their masters doing in similar situations, as a result of their long exposure to medicine as doctors’ slaves. They simply dictate, without any capacity to explain why it is that they prescribe what they do in this circumstance:

This kind of doctor never gives any account of the particular illness of the individual slave, or is prepared to listen to one; he simply prescribes what he thinks best in the light of experience,

\textsuperscript{302} Άρ’ οὖν καὶ συννοεῖς ὅτι, δοῦλων καὶ ἑλευθέρων ἄντων τῶν καμνόντων ἐν ταῖς πόλεσι, τοῖς μὲν δοῦλως σχέδον τι οἱ δοῦλοι τὰ πολλὰ ἵστεος περιτρέχοντες καὶ ἐν τοῖς ἱστεοις περιμένοντες… οἴχεται ἀποτηνήσις πρὸς ἄλλον κάμνοντα οἰκήτης, καὶ ἀυστόνην οὕτω τῷ δεσπότῃ παρασκευάζει τῶν καμνόντων τῆς ἐπιμελείας.

\textsuperscript{303} Jouanna observes that medicine in the Hippocratic corpus does not seem to be divided this way, though he does use this reference to slave doctors to help explain the mysterious “assistants” that appear in many of the Hippocratic texts (Jacques Jouanna, *Hippocrates* [Baltimore: Johns Hopkins University Press, 1999], 90-91, 400).
as if he had precise knowledge, and with the self-confidence of a dictator.\textsuperscript{104}

The phrase for experience here is the term \textit{“empeiria”}, a term encountered before in the \textit{Gorgias}. That dialogue was discussed in Chapter Two, in the discussion of why crafts must aim toward a good and why pasty-baking is not a craft but merely a practice (\textit{“empeiria”}). Slave doctors are similar. First, slave doctors lack any comprehensive knowledge understanding of health and also any comprehensive understanding of the causal relationships between the treatment prescribed and the health of the patient. As a result, what slave doctors have to work with, which may very well work in many cases, is having seen treatments and having seen illnesses. From this experience, they can prescribe treatments they have seen doctors prescribe on the basis of the similarity of the conditions of their patients to those they have seen doctors treat. However, slave doctors cannot explain what they are doing or why they are doing it because they simply don’t understand what they are doing or why they are doing it. Slave doctors lack the understanding of the workings of the body or the workings of the medicine.\textsuperscript{305}

On the other hand, the Athenian visitor introduces what he calls the “free doctor”, who proceeds in a quite different method than these slave doctors. His patients, unlike those of the free doctor, are usually freemen. Because he actually understands the body and the reasons for which he has prescribed the course of treatment he has prescribed, he discusses what it is that he knows with his patient:

The visits of the free doctor, by contrast, are mostly concerned with treating the illnesses of free men; his method is to construct an empirical case-history by consulting the invalid and his friends; in this way he himself learns something from the sick

\textsuperscript{304} Καὶ οὕτε τινὰ λόγον ἐκάστου πέρι νοσήματος ἐκάστου τῶν οἰκετῶν οὐδεὶς τῶν τοιούτων ἰατρῶν δίδωσιν οὐδ’ ἀποδέχεται, προστάξας δ’ αὐτῷ τὰ δοξάντα ἐξ ἐμπειρίας, ὡς ἀκριβῶς εἰδός, καθάπερ τύραννος αὐθαυδός.

\textsuperscript{305} Aristotle makes a similar distinction between craft and experience in \textit{Metaphysics} A.1. There, he argues that experience often works very well at curing illnesses, but that it is ultimately distinct from craft because it lacks understanding of causation: “With a view to action experience seems in no respect inferior to art...But yet we think that knowledge and understanding belong to art rather than to experience, and we suppose artists to be wiser than men of experience...and this because the former know the cause, but the latter do not” (“πρὸς μὲν οὖν τὸ πράττειν ἐμπειρία τέχνης οὐδὲν δοκεῖ διαφέρειν...ἀλλ’ ὅμως τὸ γε εἰδέναι καὶ τὸ ἐπάθειν τὴν τέχνην τῆς ἐμπειρίας ὑπάρχειν οἴομηδὰ μᾶλλον, καὶ σοφοτέρους τοὺς τεχνίτας τῶν ἐμπείρων ὑπολογιμάτωμεν...τοῦτο δ’ ὅτι οἱ μὲν τὴν αἰτίαν ἴσαις οἱ δ’ οὐ”) (981a13-b27).
and at the same time he gives the individual patient all the instruction he can. (720d)

This passage provides an important record of how free patients were treated, or at least how Plato believes free patients ought to be treated. The remainder of this chapter will focus on of what kind of instruction Plato means.

Notice that this passage treats the communication between doctor and patient as largely two-way. On the one hand, the free doctor takes the time to compile an empirical case-history using the information provided not only from the patient, but also his or her friends. However, at the same time, he tries to educate the patient, in so far as he can. Interestingly, the Athenian stranger says that this happens “at the same time”. Somehow, the doctor explains what it is that he is trying to teach while he collects the information from his patient. One minimalist interpretation of what is happening here might be that somehow the instruction of the patient is a by-product of collecting information, not a deliberate attempt of the physician to instruct the patient. However, this interpretation cannot be correct. Notice that the doctor only instructs the patient, not the patient’s friends. If the instruction were merely a by-product of collecting information, then the patient’s friends would be instructed as well. They are not. Instead, in the

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306 ὁ δὲ ἐλευθερος ὡς ἐπὶ τὸ πλεῖστον τὰ τῶν ἐλευθέρων νοσήματα θεραπεύει τε καὶ ἐπισκοπεῖ, καὶ ταύτα ἐξετάζειν ἀπ' ἀρχῆς καὶ κατὰ φύσιν, τῷ κάμοντε κοινοῦμενος αὐτῷ τε καὶ τοῖς φίλοις, ἀμα μὲν αὐτὸς μανθάνει τι παρὰ τῶν νοσοῦντον, ἀμα δὲ καὶ καθ' ὅσον οἶδε τὲ ἔστιν, διδάσκει τὸν ἀσθενοῦντα αὐτὸν.

307 The interpretation of this passage intersects with interpretations of the purpose of the prefaces to the laws in the Laws as a whole, as the medical example serves as an analogy or an example by which one might understand the purpose of legal prefaces. The Athenian stranger explicitly says that educating patients includes the purpose of making them “hēmeros”, meaning “tame” or “civilized”. Some have taken this to imply that somehow the education is disingenuous. See, for instance, Christopher Bobonich, Plato’s Utopia Recast (Oxford: Oxford University Press, 2002), 97-105. Another example is Plato, Laws X: Translated With a Text and Commentary, trans. Robert Mayhew (Oxford: Clarendon Press, 2008), 55-58. However, the word “tame” does not apply to humans as the word “hēmeros” does. When one uses the word “tame” (a strictly beast-related word) for humans, it has the effect of appearing de-humanizing and makes the entire process of education described in the Laws seem disingenuous. However, the word “hēmeros”, while its first meaning in the Greek-English Lexicon is the beast-related “tame”, also has other meanings such as “civilized” for humans, “cultivated” for plants and “ready for planting” for land (H.G. Liddell and R. Scott, Greek-English Lexicon with a Revised Supplement [Oxford: Clarendon Press, 1996], 771). Given that the Greek “hēmeros” has these secondary meanings that the English “tame” does not, one should not automatically assume that Plato intended to use the term in a dehumanizing way. Compare “train”. One may “train” a doctor and “train” a dog, but that does not imply that one treats a doctor like a dog. The same term may apply to different classes without implying comparison of the members of those classes. Plato even couples being “hēmeros” with being most “godlike” (“θεαιτὸν ἡμεροτατὸν τε”) at Laws 766a. Therefore, I take the claims about teaching being appropriate to the free patient at face value.
process of collecting the information from the patient, the physician somehow overtly makes an effort to instruct the patient “all...he can”.

In order to understand the content of the information that is appropriate to teach a free patient, one must look to other passages in Plato. Later on in the Laws, in Book IX, the Athenian stranger provides some more content to what the free doctor teaches to the free patient:

The doctor would be acting almost like a philosopher, engaging in a discussion that ranged over the source of the disease and pushed the inquiry back to the whole nature of the body.

(857d)³⁰⁸

This provides some additional content to the instruction that was lacking in Book IV. First, note that the free doctor here is said to be behaving, “almost like a philosopher” and is “engaging in a discussion” with the patient. This hearkens back to the simultaneity of collecting information and educating the patient that was mentioned in Book IV. The free doctor discusses the various parts of the empirical case study with the patient as he develops that case history. They discuss two other important things. First, they discuss the source (“archê”) of the disease. In other words, what they discuss is the causal relationships involved in the disease which the physician has. Moreover, they discuss this with respect to the “whole nature of the body”. This hearkens strongly back to the discussion of dialectic in the Phaedrus that I discussed in detail in Chapter One and

Principle #4: Crafts are dependant on dialectic for a determinate subject matter and to systematically approach causal relationships. What distinguishes a craftsperson from someone with a mere empeiria is that the craftsperson has understanding of the various techniques of medicine in relationship to the whole.³⁰⁹ The physician not only explains the disease and the causal processes involved in the disease, but also health and the body as a whole, providing the patient with the understanding of the goal of medicine as well as the techniques of medicine or the aetiology of his or her own disease.

Medicine requires such individualized care because of the imprecision of the craft. In fact, medicine is so complex that it is not subject to codification or to any rule-

³⁰⁸ Καὶ τοῦ φιλοσοφεῖν ἔγγυς χρώμενον μὲν τοῖς λόγοις, ἐξ ἀρχῆς τε ἀπτόμενον τοῦ νοσήματος, περὶ φύσεως πάσης ἐπινόητα τῆς τῶν σωμάτων.
³⁰⁹ If this passage is connected to the Phaedrus, as it likely is, it would provide further evidence as to what the reference to “whole” in the Phaedrus means, that is, that it refers to the whole subject. However, the word for “whole” in this passage is “pasēs”, not “holon”.

like *enpeiria*, like the one used by slave doctors. Rather, each case must be examined particularly and in relation to the causal processes of the individual body. In the *Philebus*, Socrates divides up crafts according to their level of mathematical precision:

Socrates: So there is a lot of imprecision mixed up in it and very little reliability.

Protarchus: Very true.

Socrates: And will we not discover that medicine, agriculture, navigation, and strategy are in the same position? (56a-b)

Medicine is less precise than some other crafts such as carpentry, and there will be more imprecision in each medical decision. As a result, medicine is stochastic; each case must be treated individually. This imprecision manifests itself in the rushed method of performing slave medicine. Since medicine cannot be easily reduced to rules that are simply transmitted, both the authors of the Hippocratic corpus and Plato recommend individualistic treatment and the development of case histories. I have referred to Hippocrates’ method of observation over a long period of time in Section IXa, above. The Athenian Stranger recommends a similar mode of treatment. Since medicine is a stochastic and less precise craft, it cannot be reduced to simple rules. Rather, the causal relationships both of the body and of the particular case must be understood, and related to the particularities of a given case.

It is due to this imprecision that slave doctors end up in the position of dictators. Because of the stochastic nature of the medical craft, the kind of associative rules of thumb that one can generate through experience are insufficient and end up being applied in inappropriate circumstances. When one does not understand the complexities of a craft or the causal relationships involved, one must often create general rules that apply in most cases. However, the slave doctor will not be able to know when exceptions arise, since he or she does not understand the rules in the first place. Therefore, it is not enough to simply know *that* something is usually beneficial. One must understand *why*

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310 {ΣΩ.} Οὐκὸν μεστὴ μὲν ποι μουσικὴ πρῶτον, τὸ σύμφωνον ἁμόττουσα ὑπὸ μέτρῳ ἀλλὰ μελέτης στοχασμῶν, καὶ σύμπασα αὕτης αὐλητική, τὸ μέτρῳ ἐκάστης χορδῆς τῷ στοχάζοντα φερομένης θηρεύσασα, ὅστε πολὺ μεμειγμένον ἔχειν τὸ μὴ σαφές, σιμπρον δὲ τὸ βέβαιον.

{ΠΡΩ.} Ἀληθέστατα.

{ΣΩ.} Καὶ μὴν ἰατρικὴν τε καὶ γεωργίαν καὶ κυβερνητικὴν καὶ στρατηγικὴν ὁμοίως εὐρήσομεν ἑξούσας.
something is usually beneficial in order to recognise when it will not be. In *Statesman*, the Eleatic visitor describes the absurdity of trying to perform medicine by using rules:

VISITOR: Are we to say - that is, between us- that if a doctor, or else some gymnastic trainer, were going to be out of the country and away from his charges for what he thought would be a long time, and thought that the people being trained, or his patients, would not remember the instructions he had given them, he would want to write down reminders for them - or what are we to say?

YOUNG Socrates: As you suggested.

VISITOR: But what if he came back unexpectedly, having been away for less time than he thought he would be? Do you think he wouldn’t propose other prescriptions, contrary to the ones he had written down, when things turned out to be different, and better, for his patients because of winds or else some other of the things that come down from Zeus which had come about contrary to expectation, in some way differently from the usual pattern? (295c-e)\(^{311}\)

*Even a doctor* cannot render reliable the kind of empirical rules by which the slave doctor tries to function. Understanding of what to do in a particular situation, then, is not simply a matter of knowing what usually works. Such a rule requires understanding why something usually works due to the causal principles underlying it. Once those principles are understood, one will no longer need the rule, but will understand, in each case, why something works.

What the free doctor provides, then, is not simply a set of rules for a patient about how to be healthy, like the “four food groups” or “reduce salt”. While these things usually generate health, they do not carry with them the kind of detailed understanding of health *in the patient’s case*, nor do they carry with them the understanding of the nature of the body as a whole. What is described by the Athenian Stranger, then, in both Books IV and IX of the *Laws* is an attempt to instruct the patient as far as possible in the detailed causal history of his or her own illness and how it and the cure relate to the body.

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\(^{311}\) {ΞΕ.} Τὸν τοιοῦτον ἐπεξεργάζεται ἐπὶ πόρος ἡ ἡμᾶς αὐτοῦς ἱερίκαν μέλλοντα ἡ καὶ τίνα γυμναστικῶν ἀποδημίαν καὶ ἀπέστειλα τῶν θεραπευομένων συχνῶν, ὡς οἷον, χρόνον, μὴ μνημονεύσαν οὐκέντα τὰ προσταταθέντα τοὺς γυμνασμένους ἢ τοὺς κάμνοντας, ὑπομνήματα γράφειν ἢ ἐθέλειν αὐτοῖς, ἢ πῶς: {NE. Σ.Ω.} ὄντως.

{ΞΕ.} Τί δ’ εἰ παρὰ δοξάν ἐλάττω χρόνον ἀποδημήσας ἐλθοὺ πάλιν; ἄρ’ οὐκ ἂν παρ’ ἐκείνα τὰ γράμματα τοιμῆσις ἄλλ’ ὑποθέσαι, σωματικών ἄλλον βελτίων τοῖς κάμνοις διὰ πνεύματα ἢ τί καὶ ἄλλο παρὰ τὴν ἔλπιδα τὸν ἐκ Διός ἐπέρεως ποὺ τὸν εἰσαχότοις γενόμενα.
as a whole, something that should be possible given time according to **Principle #3: Crafts are teachable.** Only this sort of medicine is appropriate to a free person. To provide simple rules without this understanding would be to treat the free patient like a slave patient, and it is not a coincidence that the Athenian stranger describes the slave doctor as behaving with the confidence of a tyrant.

In fact, the Athenian Stranger claims that prescriptions given as rules without understanding are both the province of slave medicine and are tyrannical (“tyrannos”) (720c). This is not because he is using rules *per se*, but because he is transmitting those rules without any attempt to help the patient understand what he is doing. On the other hand, as knowledge is the criterion for freedom, explaining what the physician is planning to do and why he is planning to do it is the type of medicine appropriate to a free patient. A physician who does understand the causal relationships and how they contribute to the whole health of the body should take care to explain those causes as much as possible.

### 8 Chapter Conclusion

Plato develops an understanding of the relationship between force, persuasion, knowledge and freedom. Faced with the disintegration of the traditional synthesis that allied persuasion with freedom and slavery with force, and the challenge presented to that synthesis by rhetors like the historical Gorgias who tried to equate force and persuasion, Plato takes neither side. Instead, he makes a distinction in persuasion between sorcerous and didactic persuasion. The former relies on the manipulation of the emotions of the hearer, but the latter involves providing the hearer with knowledge. This knowledge becomes the new criterion by which someone can be considered free. In medicine, we see a contrast between the sorcerous persuasion practiced by the character Gorgias and the free persuasion practiced by the Athenian Visitor’s free doctor. Given the stochastic nature of the medical craft, the free doctor cannot simply prescribe rules. Instead, the free doctor provides explanations to the patient that “range over the source of the disease and pushes the inquiry back to the whole nature of the body” (720c). This is a high standard, but according to Plato, knowledge is what makes us immune to sorcerous
persuasion and is the source of freedom, and so knowledge on the part of the patient is the only guarantee of, as we would now say, autonomy.
Chapter 4: Modern Applications

1 Introduction

Just as the Platonic understanding of crafts ("technai") proved fruitful in the ancient world in debates about the nature of virtue, so too can it prove fruitful in modern debates in medical ethics. Plato’s claims about the relationships between types of knowledge, between knowledge and power and between tool and product can all be used to clarify and hone modern discussions. In this chapter, I will use what I will call Plato’s “framework” of crafts to shed further light on these discussions. My aim is not to discover what Plato “would have said” on any of these topics; far from it. Rather, I will mine Plato’s framework for distinctions and definitions that I will apply to modern debates, clarifying some of the confusions and proposing approaches to the problems in Platonic terms that, while they may not always resolve the debates, may enable them to be discussed more fruitfully.

I will apply Platonic principles to three subjects, all related to Plato’s hierarchy of crafts that I discussed in Chapter One. First, I will discuss medical paternalism and autonomy. Modern debates concerning paternalism and autonomy tend to assume that the physician knows what is best for the patient’s health, whereas autonomy only comes into play as a kind of veto power in case the patient has other, non-health goals. I will argue that, when one applies a Platonic framework and regards the patient as the expert in the use of his or her own body, this simple paradigm breaks down. Instead, just like the flautist directing the flute-maker in Republic X, it is the patient that is in the best position to discern the relative value of the health goals weighed in any medical decision that involves trade-offs. Second, I will use the Platonic description of the Hippocratic method in the Phaedrus to discuss the use of recommendations in the “Author’s Discussions” sections of modern medical meta-analyses. The Phaedrus makes a careful distinction between the understanding of the subject of the craft, causal relationships relevant to that subject, and the application of those causal relationships to the subject. The methods applied in meta-analyses can only provide causal understanding of techniques relative to predefined indications and contraindications, while recommendations require
understanding of the importance of those aspects to the health of the patient as a whole. To provide recommendations as though they are the scientific conclusion of a meta-analysis fails to appreciate the limitations of the methodology and presupposes a scale of value that, when it does not consider the patient’s own scale of value, is paternalistic. Finally, I will apply the Platonic framework of crafts to the current debate about the “therapeutic misconception” in research ethics. Several modern bioethicists argue that, because therapeutic medicine and medical research are separate crafts, they therefore ought to have separate ethical systems. I argue that these bioethicists have only appreciated a part of the relationship between therapeutic medicine and medical research. Though they are separate crafts, they are hierarchically related; medical research produces tools for therapeutic medicine. The physicians engaged in medical research serve the role of evaluating the products of medical research, in a similar way to any user evaluating a potential tool. Physician researchers are therefore still functioning qua physicians, and therefore will continue to be bound by the rules of medical ethics despite the distinction between the two activities.

2 Paternalism and Autonomy

I will first apply Plato’s hierarchy of crafts to the problem of paternalism and autonomy in medical decisions. What I will argue is that the current paradigm of paternalism and autonomy is incomplete. In the current paradigm, the physician is considered to be the expert in understanding what decision is best for the patient’s health, while the patient is the expert on how best to integrate health with other goals he or she may have. Should the patient be able to choose between health and other goals, the patient is autonomous, meaning that the patient is able to act on the basis of his or her own beliefs about the good life. Should the physician try to hinder the patient’s other goals in favour of health, the physician is acting paternalistically, meaning that the physician is trying to circumvent the patient’s own vision of the good life in favour of health, putatively for the patient’s own best interests. The problem with this paradigm is that the assumption that physicians know what is best for a patient’s health is in itself paternalistic. Except in trivial cases in which one negative outcome includes all other
negative outcomes, there is no single scale intrinsic to medicine for comparing competing health goals. Arbitration between competing health goals requires understanding of the uses to which the patient wishes to put the body, and claims by physicians to know which health goal is best would require knowledge of what way of life is best. As a result, in order to understand the proper relationship between physician and patient, I will apply Plato’s arguments about the relationships between tool producer and tool user. Specifically, Plato argues that crafts that produce tools are not complete. They need supervision by those intending to use the tool to ensure that what is produced is useful and to evaluate the kinds of trade-offs that need to be made in production. The body is a tool with which the patient may live the kind of life he or she wishes to live. The patient, therefore, is required to compare competing health goals, not to simply compare health to other goods in order to be autonomous.

2.1 The Current Paradigm

The current paradigm for considering paternalism and autonomy includes the claim that the physician knows what is best for the health of the patient, while the patient, then, can only contribute other, non-health goals that he or she may have. Paternalism occurs when a physician tries to unduly influence a patient to seek health over other goals. The patient’s autonomy, therefore, can only interfere with medical practice, and the patient’s input is reduced to a kind of veto of health in favour of other goals. This paradigm assumes four things, all of which I will argue are incorrect:

A) There is always a single outcome that can be considered best for the health of the patient.

B) The physician is the expert on both the identification and production of this outcome.

C) Paternalism occurs only when a physician unduly promotes health against non-health goals.

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312 Note that the paradigm I refer to here is not a complete paradigm for paternalism, but a common approach to the division of knowledge between physician and patient that occurs within that paradigm.
D) A patient’s autonomy is limited to weighing health against non-health goals.

As one might expect, most contemporary discussions of paternalism argue that paternalism should be avoided. This is a laudable goal. However, those same discussions make these same assumptions about the kind of expertise that the physician brings to a health care decision, and about the purely negative role that autonomy plays in a medical decision. In this section, I will go through contemporary texts on paternalism to show how these three assumptions are routinely made.

The first example is from *In informed Consent: Legal Theory and Clinical Practice*. In that book, Jessica W. Berg, Paul S. Appelbaum, Lisa S. Parker and Charles W. Lidz summarise the origin of the desire for patient autonomy in the following way: “What individual patients asserted against medical paternalism was, in essence, that health was not the only value of importance to them.”\(^{313}\) Note how this passage is phrased. Health is treated as a *single* value. Berg et al. do not say that autonomy arose as the result of a patient’s desire to choose *which* health objective is of most value to them, but only of other values *versus* this single value of health. Patient autonomy is limited to comparing the value of health against other, non-health goals the patient might have in an overall vision of the good life.

In the book *Autonomy & Paternalism: Reflections on the Theory and Practice of Health Care*, Thomas Nys et al. make a similar claim. They argue that health is an “agent-neutral good”, meaning that, all things considered, it is something that all people would agree is a good thing:

> Even if we count it [health] as an intrinsic good, it is not the only intrinsic good nor the *sumnum bonum*. The science and the practice aimed at producing health and overall functioning then is an ‘agent-neutral good’...This medical good is an agent-neutral good because it depends neither on an individual physician’s vision of a good more broadly conceived, nor on that of a patient or the patient’s family or social context.\(^{314}\)

Note how Thomas Nys et al. make the same assumptions as those listed above. Like Berg et al., also that Nys et al. speak of health in the singular. It is only a single goal at

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which we may aim. The term “overall functioning” implies that there is some measure against which we may gauge what, if there are health outcomes to weigh, would best contribute to our health “overall”, and that knowledge of this measure is a part of the physician’s expertise. This good is something that exists independently of any particular broader views of a good life, and would be the same for each patient regardless of his or her life plans. Then, in order to argue against paternalism, they argue that this unified health is not the only good. Our autonomy only allows us to weigh health against the other goals that we might have. Nys et al. use the contemporary paradigm: health is a unified goal, medicine’s aim is that goal and autonomy’s only capacity is to assert other goals against health.

Note what this paradigm implies. Whenever a patient dissents from a physician’s recommendation, the patient is considered to be choosing some other non-health goal over his or her own health. One might expect that, when there is a trade-off between one health outcome and another, and a patient chooses to go against a physician’s advice so as to pursue one of those outcomes, it would be characterized as being the choice of one health goal over another. However, on this paradigm, anyone who prefers one health outcome over another contrary to a physician’s advice is considered to be acting on non-health goals. There is only one outcome that is best relative to the “agent-neutral” goal of health, and a patient who chooses another health outcome is considered to be acting for the sake of some other goal. What is best for the body is known by the physician irrespective of the uses we ourselves might have for it, rendering irrelevant any individual life goals to the very practice that repairs our bodies. This makes individual beliefs about the good life, the capacity of whose pursuit constitutes our autonomy, irrelevant to health-care decisions per se.

### 2.2 The Powers of the Body

In this section, I will discuss the powers of the body, using the analogy of other complex tools that we use. However, though I will be adopting a Platonic approach, I

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315 One difficulty in describing the body as a tool is that it seems to rule out simply enjoying bodily activity for its own sake. This difficulty raises issues that there is insufficient space to address thoroughly. In brief, “tool” need not imply more than that having something in a certain condition makes some activity possible.
will need to argue paradoxically that Plato’s model of the relationship between tools, tool-makers and tool-users was incomplete. Though Plato mentions the relationship between tool-maker and tool-user in both the *Cratylus* and *Republic* X, he never provides a systematic account of the collaboration between tool-user and tool-maker. This lack of a systematic account may be the result of a limitation of Plato’s account of the excellence of tools, especially in *Republic* I. There, Plato treats tools as being evaluated (indeed, being defined) by a single characteristic power, rather than by a collection of powers. In this section, I will discuss tool examples that do not conform to Plato’s one-tool, one-power analysis, and then discuss those examples with relation to the body. I will argue that the powers within a single tool conform to certain logical relations that affect the way that they interact.

According to Plato, each tool has a function or “*ergon*”. Good tools have the power to perform their *ergon* well. They have this power by virtue of some excellence or “*aretē*”. For example, a pruning knife has the function of cutting (its *ergon*). It is a good knife when it has the power (*dynamis*) to cut vines well. It has the power to cut vines well by virtue of its sharpness (its *aretē*). The clearest example of this relationship is presented in the *Republic*, Book I. First, he establishes the connection between the function of something and the unique power of something: “And would you define the function of a horse or of anything else as that which one can do only with it or best with it?” (352e). Note how he defines the “function” in terms of what something can do (elsewhere, “*dynamis*”, though power is indicated by a dative of means here). Some single, unique power defines its function. Note the distinction between a function and a power: the power is the ability to do something, while the function is actually doing it. Plato further says that there is a single excellence related to each function. This excellence is what allows the thing to perform the activity well.

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316 I discussed the translation of “*ergon*” in chapter one. “Function” is the usual translation, but the Greek word can apply to non-tools as well as tools. “Characteristic activity” is better in some contexts.

317 Ἀρ’ οὖν τούτῳ ἄν θεῖς καὶ ἵππῳ καὶ ἄλλῳ ὑποσιόν ἔργον, δ ὅπερ ἢ μόνῳ ἐκείνῳ ποιή τις ἢ ἄριστα;
Now, I think you'll understand what I was asking earlier when I asked whether the function of each thing is what it alone can do or what it does better than anything else…[I’m asking] whether anything that has a function performs it well by means of its own peculiar excellence and badly by means of its badness. (353b)

In the Republic I, then, Socrates provides a one-to-one-to-one relationship of function to power to excellence. A single function is provided by a single power made possible by a single excellence.

The difficulty with Plato’s analysis is that it doesn’t apply to many tools, even to some of the tools that he himself lists. I will go through some of those counter-examples to show the complexity. The complexity manifests itself in the following ways:

A) Some tools are capable of multiple functions (they have multiple erga).

B) Some tools have their function through a system of activities that can be evaluated independently (they have multiple aretai).

I will go through both of these conditions in turn, and then discuss the ways in which these different complexities manifest themselves in the body, and how the body does not have a one-to-one-to-one relationship of function to power to excellence.

The first example I will discuss is the example of tools that have multiple erga or functions. Probably the clearest example of this is the Swiss Army Knife. Unlike its pruning knife cousin, a Swiss Army knife is capable of numerous activities of different kinds. It has appendages for cutting fruit, meat, opening beer bottles, opening wine bottles, filing nails, cutting paper and turning screws, among other things. Unlike simple tools, which have a single ergon, a Swiss Army knife has at least as many erga as it has appendages, and perhaps more than that. If one considers the Swiss Army knife a single tool, then it is a single tool with multiple erga, not a single ergon, and Plato’s one-one-one analysis would not apply.

One might say in response that a Swiss Army knife is not actually a single tool, but rather multiple tools on a single base. A Swiss army knife’s powers nicely correlate to its physical parts. However, other tools are not so easily broken into parts. Take, for

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318 Ἡπις, ἢν δ’ ἕγω, αὐτῶν ἡ ἀρετή· οὐ γάρ πω τούτο ἐργοτό, ἀλλ’ εἰ τῇ οἰκείᾳ μὲν ἄρετῇ τὸ αὐτῶν ἐργον εὖ ἐργάζεται τὰ ἐργαζόμενα, κακία δὲ κακός.
319 I will discuss a third sort of complexity involving trade-offs and design restrictions in sub-section 2.4.
instance, a water-proof wind-breaker. People quite commonly wear such a windbreaker for the sake of keeping out both the cold wind and for keeping off the wet rain (assuming they aren’t also using an umbrella). We need the water-proof windbreaker for both functions. It is much harder to simply divide up the two functions of the water-proof windbreaker into distinct physical parts the way one does a Swiss Army knife. Saying the water-proof windbreaker is two tools is implausible unless one is willing to say that the same parts of the same physical object can be two different tools. Further, even if one were willing to say that the same physical object can be two different tools, Socrates’ definition allows of an ergon allows for the possibility of something having multiple erga. He says that a tool’s ergon is something that it alone can do or that it can do better than anything else. This is not inconsistent with a tool’s being able to perform two erga better than anything else. For instance, a hearth was (at the time) the best way of heating a home and the best way of cooking food. Even on Socrates’ definition, the hearth would therefore have two erga.

The second type of complex tool I will discuss is tools that have a single ergon, but produce this ergon through a system of sub-powers. As a consequence, these tools have multiple aretai, one for each of the sub-powers. I will use Plato’s own example of a flute from Republic X. Let us say that the function of a flute is to produce pleasure through melody. The problem is that the flute does this by having multiple parts that each have their own distinct powers. The flute has a mouthpiece that produces the original whistling sound when blown on, a shaft that textures the whistle that has been made, and pips that must be properly proportioned so that one may produce mathematical relationships among the notes to produce a melody. Note that there are three different powers here that all go together to create a tool capable of producing pleasure through melody. One part of the flute might be defective, while the other parts work very well.

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320 This argument has some affinity with that in Paul Sheldon Davies, Norms of Nature: Naturalism and the Nature of Functions (Cambridge: MIT Press, 2003). There, he argues that function should always be defined hierarchically in the sense that a function isn’t a function unless it contributes to some further activity that could not function without it. For instance, the function or functions of the nervous system can be defined relative to locomotion or the manipulation of objects. However, while Davies’ argument allows for the recognition of discrete powers as parts of larger functional systems, it creates the difficulty that the final erga, that is, powers of the body that don’t contribute to larger physical systems are not functions. My argument corrects this omission by distinguishing between final erga, like those of a Swiss army knife and contributing powers, like those of the flute.
For instance, the reed in the flute might need replacing, but the pips and the shaft are in “working order”. Because a flute is a system of powers, each of those powers has its own excellence, and so the flute (or at least the parts of the flute) may be said to have multiple excellences.

One might object that the virtue of the flute should be considered all of these parts working together well, so the parts of the flute can’t be called excellences on their own. The problem with this objection is that it takes away some of the linguistic space we need to discuss repairing objects. If I take my car in to the shop because there is something wrong, and I ask the mechanic, “Is there something wrong with the carburetor?”, he or she might answer, “No, the carburetor is working. The ignition is broken”. If we deny that parts can be excellent independently of one another, this discussion becomes impossible. My carburetor still has the power to regulate the amount of gasoline and air going into an engine, which is its own ergon. The carburetor has this excellence independently of the excellences of the other parts. In fact, it even has this excellence when sitting on the shelf before it is even placed in a car. I do not mean to imply here that the excellence of carburetors can be defined independently of the excellence of cars. What I am arguing is that the excellence of a given carburetor can be evaluated independently of a given car, even the car in which it is currently placed (and even when it is not placed in a car at all). When the overall activity of something follows from a sequence of activities of the parts, the excellences of the parts can be evaluated independently.

The human body has features of both sorts of complexity: it has multiple erga, like a Swiss army knife, and it has multiple systems with multiple excellences, like a flute. First, the body is like a Swiss army knife in that there are different things we can do with the different parts of the body, and in some cases different things we can do with the same parts of the body. To provide the most obvious examples, we see with our eyes, we hear with our ears and we move. Some parts of our body have quite different powers: we eat, speak and breathe with our mouths, while we touch, manipulate objects and catch ourselves from falling with our hands. These are different erga: there are multiple things

\[\text{erga}\]

321 Since the flute is a Platonic example, I am speaking here of the Greek aulos, usually translated “flute”. It is a reed instrument. It is more like a modern oboe than a modern flute, but I use the translation “flute” as it is the traditional one.
that we can do with our bodies, none of which is reducible to another. In this respect, then, the human body deviates from the one-one-one analysis of a pruning knife in favour of the multiple powers of a Swiss army knife.

Second, the body is also in many ways like a flute, in that it has a number of parts that each contributes to the various erga of which the body is capable. The body has a number of contributing and overlapping systems that interact in ways analogous to and in some ways more complex than the parts of the flute. Consider, for example, an act of walking. In order to walk, one must have energy that is provided through nutrition, a respiratory system for oxygen, a nervous system to send information, muscles and ligaments for the movement of the legs, and bones to support the body. This act of walking would be of greater or lesser quality depending on the quality of the sensory powers involved. Sight can make it easier to walk, though it is not necessary. Each of these sub-systems has excellences that can be evaluated independently of one another, much like the carburetor and the ignition. Nutrition and respiration are required for all erga; they are “vital” systems. Damage to the nervous system can affect multiple systems depending on the location of the damage. Finally, some systems can contribute to other systems without being necessary. The body combines both the complexities of the Swiss-army knives and the flute. It has multiple erga, but also has a complex arrangement of sub-powers relative to those erga. What this means is that the body can be said both to have multiple functions (erga) and multiple excellences (aretai).

2.3 Healthier and Unhealthier

In this section, I will use the above discussion of complex powers to challenge the first assumption of the current paradigm, that there is a single medical outcome that can be said to be best for the health of the patient. Even if there is such a thing as a perfectly healthy body, as Normal Daniels says when he describes health as “the natural functional organization of a typical member of a species”, it would not imply a single scale

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322 A misunderstanding of evolution might lead to the conclusion that the purpose of our bodies is reproduction, but this rests on a confusion between the origin of a power and the ergon of a power.  
323 Daniels’ complete definition of health is “the absence of disease and diseases...are deviations from the natural functional organization of a typical member of a species” (Norman Daniels, "Health Care Needs
against which to compare deviation from that natural functional organization. That one can describe a perfectly functioning Swiss-army knife does not imply a single scale against which one can say which broken attachment would make the Swiss-army knife more dysfunctional “overall”. What I will argue is that when a tool has multiple erga, there is no internal scale against which to compare malfunctions in those erga. By an internal scale, I mean a scale that can be derived from understanding the erga themselves. Instead, when a tool has multiple erga, an external scale must be used to compare the relative value of those erga.324

By an internal scale, I am referring to a scale defined solely according to the compared powers themselves. For example, in comparing sight, a scale might be the 20/20 vision scale, while in comparing mobility, a scale might be speed. To compare sight against hearing, however, some third, external scale would need to be used to compare the two. Only in trivial cases in which only one power is impeded or in which one negative outcome includes another negative outcome can one sick person be said with certainty to be healthier than another using internal scales. For example, all other things being equal, someone who is blind is less healthy than someone who is sighted and someone who is blind and deaf is less healthy than someone who is only blind. Between powers, however, no internal scale exists against which to measure one deviation from another. There is no internal scale of deviation by which one might compare sight versus mobility, or sensitivity in the limbs versus ease of digestion. The current paradigm would suggest, in Nys et al.’s terms, that there is a single, internal scale called “overall functioning” to which health contributes. Ashcroft and McMillan refer to our “medical welfare”, and say that knowledge of the patient’s medical welfare is in the hands of the physician. This suggests a single internal scale of deviation that can be applied to compare any two unhealthy people. However, nothing is said about how this is to be measured. The presence of multiple erga makes such a unity as difficult to gauge as it would be to gauge the lack of which attachment would most affect the overall functioning

324 This is true even of more complex systems than a Swiss Army knife. Powers that have no immediate use, such as circulation, are useful exactly in so far as they contribute to those that do have such use. While complex systems might give the appearance that they contribute to some sort of overall scale of functioning, they in fact are only evaluated in terms of the sum of the powers for which they are necessary.
of a Swiss Army knife. Any scale of deviation would need to come from outside a metric of the powers themselves, as the scale would require measuring the powers against one another.

The more complex and interdependent the powers, the more complex the range of malfunction, and the harder it is to compare one deviation from another. Even apparently unified *erga* such as sight are far more complex than they might appear. For instance, sight can be affected in many different ways. All things being equal, someone with 20/30 vision is healthier than someone with 20/40 vision, because those two powers are being compared against a single, measurable scale. However, one person might be near-sighted (measured on the 20/x scale), while another person might be farsighted, unable to focus on nearer objects, but with 20/20 vision. Another person might be colour-blind, unable to distinguish between red and green, while another might be colour-blind, unable to distinguish between blue and yellow. A fifth person might have floaters and cataracts, obstructing portions of the field of vision, while a sixth person might have only one, perfectly functioning eye, but with no depth perception and a limited field of vision on one side. A person might even have different defects in different eyes. Our language of “20/20 vision” obscures the different kinds of defects that people have, such that even the phrase “better vision” has no single internal scale against which vision might be compared.325 What is true for vision is even more true for the body as a whole.

It should be noted that I am not denying either Plato’s claim that there is some overall healthy state of the body of which the physician has knowledge, nor am I denying Normal Daniels’ claim that health can be defined as normal species functioning.326 Both of these claims can be retained. If one conceives of health as the normal range of powers of a human being, then one can conceive of what it would mean for a person to be

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325 This claim about the complexity of diseases is very similar to Aristotle’s claim that disease is multiform (“*polueides*”). That there are so many ways to deviate from a single form leads to a great deal of variation.

326 This distinction is important in order to avoid some of the difficulties introduced by a position like that of Christopher Boorse’s distinction between disease and illness. He argues that disease should be considered deviation from natural species functioning, while illness is defined of any bodily state that makes us unhappy. The difficulty with such a distinction is that the severance is too extreme as it renders what he calls “disease” irrelevant to medical decisions, and takes away any standard by which we might differentiate disease from lacking some sort of non-natural bodily enhancement (Christopher Boorse, “On the Distinction Between Disease and Illness”, *Philosophy and Public Affairs*, 5 [1975]: 49-69).
perfectly healthy.\textsuperscript{327} All of the parts of the perfectly healthy person’s body would function in line with some sort of species-typical norms. Knowledge of these species-typical norms would be a part of the medical craft. In fact, they must be a part of the medical craft, or there would be no goal at which medicine would aim. Nonetheless, the presence of species-typical norms does not provide an internal scale against which to compare defects so as to say that one ill person is more ill than another. In the case of any proposed treatment involving trade-offs that there is no single internal scale against which to compare the alternatives. Medicine per se has a single goal, health, but that no more implies that there is an internal scale than that the intelligibility of a perfectly functioning Swiss Army knife implies there is an internal scale against which its attachments may be weighed.\textsuperscript{328}

I will also answer a possible objection to this position. One might argue that it is common sense that the ability to walk is more important than the ability to touch one’s thumb to one’s little finger, and that therefore the physician qua physician should be able to say that a person with paraplegia is less healthy than a person with a damaged joint in the little finger. Therefore, my claim that medicine cannot internally compare malfunctions is epistemically implausible. My response is that even to make this evaluation requires an external scale, in this case, common sense. That the capacity to walk is more important than the capacity to touch one’s thumb and little finger cannot be derived internally from the definitions of the powers themselves. In this case, it is true that any person would prefer to be able to walk than to touch together one’s thumb and little finger, but that requires the application of an external scale. That every practically

\textsuperscript{327} This is similar to what Robert Wachbroit calls a “biological concept” of normality, which is an understanding of normality rooted in the normal biological functioning of various organs working together. This allows for the consideration of “perfect health” without necessarily believing that there is anyone who is perfectly healthy (Robert Wachbroit, "Normality as a Biological Concept", Philosophy of Science, 1994: 579-91).

\textsuperscript{328} A special comment should be made about the vital powers, those powers without which one would be dead. These powers are special in terms of comparing health and disease because, from the point of view of functioning, death is worse than any other possible diseased state. Death includes all other possible dysfunction. Therefore, from the point of view of function, death is the worst possible outcome. In effect, the vital powers provide a special example of a trivial case: just as being blind and paralysed is unhealthier than just being blind, being dead is unhealthier than any diseased state. However, this special status only applies to certain death, and only applies to the cessation of a vital function, not its impairment. Diminishment of a vital power does not have the same special logical status as its absence, because its diminishment is does not necessarily include the destruction of other powers. For example, difficulty in digestion doesn't affect sight. Therefore, when it comes to evaluating who is healthier and who is unhealthier, vital powers have a special logical status, but this logical status only extends to their absence.
rational human being, including every physician *qua* practically rational human being, would make such a decision does not make the scale internal, only a matter of universal intuitive consensus. In the next section, I will consider those cases where common sense does not provide an adequate scale of malfunction, and another external scale must be applied. Nonetheless, whether one refers to common sense or another scale, when there are multiple *erga*, the scale must be external.

The multiple *erga* of the human body imply that, except in trivial cases, comparing health states is impossible from within the craft of medicine itself. Such comparisons would require a single metric. These comparisons are impossible internally even if one accepts the claims of Plato and Norman Daniels that there is a definite, perfectly healthy state of the body. Even knowledge of such a healthy state does not supply a single metric for comparing deviations so long as that perfectly healthy state includes multiple *erga*.

### 2.4 Medical Decisions and Collaboration

In the previous section, I dealt with what it meant to say that someone is healthier or unhealthier than another person, and the problems that having multiple *erga* presents for thinking about this. In this section, I will discuss the applications of this to medical decisions themselves. Often, in health care decisions, trade-offs must be made between various health goals. The expertise required to make decisions when trade-offs must be made lies not in the internal expertise of medicine, but in the external expertise of understanding the uses to which the body will be put. In other words, the best metric for making a medical decision comes from the craft of living, which the patient is presumed to have.\footnote{In saying that the patient is presumed to have the craft of living, I deviate somewhat from Plato’s own beliefs, in that he rather clearly did not believe that everyone had the craft of living, and assumed that such a craft was possessed only by a few people. My goal is to reconcile, in so far as is possible, Plato’s theory with liberal democracy. However, I have deliberately chosen the term “presumed” rather than “assumed”. One can support liberal democratic theory without necessarily assuming that everyone knows how best to live. Rather, one presumes, for practical purposes, that people know best how to live their own lives so as to promote autonomy and to preserve the maximum scope for practical reason. In other words, even if one does not believe that someone has the craft of living, one acts as though that person does, much in the way that a defendant is presumed innocent until proven guilty, even when the evidence is overwhelming. One can thereby agree with Plato that there is a craft of living without necessarily drawing the same political} In order to explain this position, I will use the example of a shield-maker and
a soldier. I will also add a distinction not made explicit in Plato. This is a distinction between the excellence of something relative to its powers and the excellence of something relative to its use. Using these distinctions, I will show how the patient is a required part of any medical decision and is needed in order to supply medicine with its completion.

Consider two shields. The first is a ten-foot shield that can fully conceal the body but is impossible to carry. The second is a three-foot shield that can both be carried and used effectively with one’s weapon of choice. Which is the more excellent shield? This question raises an overall tension in Plato’s thought about tools. According to the passage in Republic I, it would seem that the ten-foot shield is actually a better shield. If one defines shield strictly as “projectile blocker”, then the ten-foot shield is a better projectile blocker and therefore a better shield. However, in Republic X and the Cratylus, the story becomes more complicated. The craftsman who is to use the shield needs to direct its production because of the restrictions placed on design by its use: “It’s wholly necessary, therefore, that a user of each thing has most experience of it and that he tell a maker which of his products performs well or badly in actual use” (Republic X:601d). Note that a good tool here is being defined not in terms of some one capacity that it has (as in Book I), but in terms of its “actual use”, which admits of other considerations. Plato here admits a kind of complexity that was not in Book I. Specifically, he admits that considerations of use may be admitted into defining quality, above and beyond the power of the tool. Excellence in tools is being defined relative to the using craft, not relative to a defining power.

conclusions. Another option would be to take the Protagorean route of arguing that most people do, in fact, have the craft of living, and therefore it should be assumed in patients rather than simply presumed. In either case, presuming that the patient has the craft of living is a deviation from Plato’s own theory, which puts such a craft in the hands of the political class, specifically the guardians.

330 A case like this is considered by Plato in Timaeus 75b-c. There, the demiurge makes the human skull, but needs to trade-off two different capacities. On the one hand, the skull needs to be thin enough to allow for perception. On the other hand, it needs to be thick enough to protect the brain. If one tries to define the skull in terms of one or the other of these powers, it would be less excellent. It’s only when one balances the two powers in actual use that the chosen thickness of the skull can be said to be ideal.

331 Πολλή ἀρά ἀνάγκη τὸν χρόμενον ἐκάστῳ ἐμπειρότατον τε εἶναι καὶ ἄγαλφον γίνεσθαι τῷ ποιητῇ οἷα ἄγαθά ἢ κακά ποιεῖ ἐν τῇ χρείᾳ ὡς χρήται.
One way to think of this is to think of the function in two different senses, the first of which I will call its “effect” and the second of which I will call its “use”. Take, for instance, the example of a bridle. We tend to describe a bridle in terms of it being “a tool to steer a horse”, and this is the correct description of it. Note, however, that this describes the bridle in terms of its role in a higher-order craft, riding. Another way to describe a bridle is “a tool that turns a horse’s head”. It would be quite possible to use a bridle to turn a horse’s head without the purpose of riding it, defining it in terms of a single effect. Defining something’s excellence in terms of its use requires the contribution of those who will actually use the object, because the use of the object refers explicitly to the activity of the user. Creating a bridle, defined as a tool for moving a horse’s head, does not necessarily require the input of a rider. A bridle, defined as a tool for steering a horse, would require the supervision of a horse rider. The same issue arises with the warrior and the shield. When a shield is described as a tool for “blocking projectiles”, it does not take into account its actual use. However, when it is described as “for blocking weapons in battle” or “for blocking blades by an infantryman”, then that description includes its use. Similarly, a body, defined as a tool for “pumping blood, moving around and moving stuff” does not necessarily require the input of a patient to understand these effects, but a body, defined as a tool for “living a life of sort x” does require the input of the patient to understand what sort of effects are most useful to living that sort of life.

When a tool is defined in terms of its actual use, rather than simply in terms of its effects, the user’s input provides the external scale for evaluating the relative value of erga. In medical decisions, this becomes important whenever trade-offs between erga must be made. I will provide an example. A man has a non-malignant tumour on his spine between the twelfth and thirteenth thoracic vertebrae (about two-thirds of the way down the spine). The presence of the tumour is causing pain to the patient that is inhibiting, but not preventing mobility. The physician believes she can remove the tumour, but removing it would carry a risk of causing irreparable and permanent paralysis in approximately 5% of cases. Should the patient undergo the procedure? Here we have

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332 Plato does not make this distinction. Nonetheless, this distinction can help sort out some of the puzzles involved in understanding collaboration between tool-maker and tool-user, as well as trade-offs made in the production of certain tools.
a case where the restoration of complete function must be weighed against a chance of its complete loss. However, there is no internal scale of deviation that can weigh these two possible outcomes against one another. Rather, the patient, who intends to use the body, must weigh the possible outcomes and their probabilities against the kind of life he wishes to live. Depending on the patient’s career and leisure activities, a partial inhibition of mobility may be more or less of a concern. If a patient has a career that involves a great deal of lifting, or if the patient is a serious athlete, undergoing the procedure may be a risk more worth undertaking. After all, in those cases, a serious impairment might be just as devastating to a moving or sports career as complete impairment. If the patient is less physically active, the partial mobility he or she has may be more acceptable, and so the patient would be less willing to undergo the procedure, as the risked full impairment would bring new problems with it of its own. In either case, because there is not an internal scale against which to compare the outcomes against one another, one must use an external scale, in this case, the life goals of the patient.333

A quick word should be said about risks to vital powers, where one might, for example, have a risk to an ergon on one side, with a risk to life on the other. Even more complex choices are possible, such as a choice between a heart operation that would create a moderate chance of immediate death, but, unless it is undertaken, there would be a high risk of death in a few years. In cases like this, the patient is choosing different levels of probability for different lengths of lives based on the goals that the patient has for his or her life overall, and the length of time and strength of body needed to reach those. A person whose vision of the good (remainder of) life involves spending as much time as possible with family may think differently about a risk of death from someone whose vision of a good life includes regular physical activity as a necessary component. Even when risks of death are involved, what kind of life one wishes to live are important to evaluating those risks.

333 For such a comparison to be made, it is not necessary that the various powers be commensurate (that they can be measured using a single unit), but comparable (that they can be ranked). For some choices, it might seem that no comparison is possible, as the chooser would be unable to make a judgment as to which is better. However, not being able to judge which option is better does not necessarily imply that they are incomparable. Rather, they may be comparable, and have been judged to be “roughly equal”. This latter point was made in Thomas Hurka, *Virtue, Vice and Value* (New York: Oxford University Press, 2001), 176-77.
What all of this implies is that the patient needs to be involved in any medical decision that involves any trade-offs among powers. Absent an internal standard in medicine by which to compare the health outcomes of various medical options, the patient is required to evaluate which outcomes are more useful. The body is something that will be used, and there are no internal metrics between powers that can say which power will be of more use to a given patient in any actual life. Instead, a process of collaboration between physician and patient is necessary. The physician knows which erga are actually damaged and various procedures that may or may not be able to restore or improve those powers at which rates of success. The physician also knows the various risks of those procedures and which erga may be adversely affected by those risks. The patient, on the other hand, has the understanding of what kind of life he or she wishes to live, and is able to consider how those various powers will contribute or not to that vision and to what degree. Both are necessary to a medical decision, as the goal of the medical decision is to provide a body fit for use by the patient.

2.5 Rethinking the Paradigm

The current paradigm of considering the physician as the expert on what is best for the patient’s health, while the patient can only contribute non-health goals, appears on its face to combat paternalism and promote autonomy. However, it ultimately does not go far enough and builds paternalistic elements into itself. By considering the relationship between erga and excellences with the body, one can see that there is no internal scale in medicine to determine between competing health outcomes. What this implies is that the putative expertise of the physician qua physician to know what one outcome is best for a patient’s health does not exist, except in trivial cases. Believing that it does, however, has two negative side-effects. First, it means that any patient who chooses a health outcome that the physician does not believe is the best outcome is cast as someone who is choosing to act against his or her own health for the sake of some

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334 This is not to say that all medical decisions are controversial. Many tradeoffs will be obvious given common sense. However, this common sense is not possessed by the physician qua physician but qua human being with common sense about the good life. In effect, it is possessed qua potential patient, in much the same way as a shield maker who also happens to be a soldier.
other goal. Let us take the case of the man who must choose whether or not to undergo back surgery for a non-malignant tumor. If the physician advises that he undergo the procedure, but he doesn’t wish to undergo it, the current paradigm would suggest that this patient is sacrificing his health for the sake of other, non-health goals. However, the proper characterization is that the patient is not willing to risk full immobility for the sake of removing an impediment to immobility. Adding this extra element in which a patient is somehow sacrificing “health” whenever he or she prioritizes his or her \( \text{erga} \) in a way different from a physician is an inaccurate and unfair characterization of what he or she is doing.

Secondly, the current paradigm actually promotes paternalism, though indirectly. The paradigm promotes paternalism because it promotes the physician’s view of the good life over that over the patient’s, putatively in the name of the patient’s best interest. Since there is no internal way of ranking \( \text{erga} \), the physicians must be getting their beliefs about which powers are more important from somewhere. In order to rank the powers of the body, then, the physician must be presupposing some view of what constitutes a good life and building that view into his or her recommendations. When a physician makes a recommendation based on views about the good life, whether those of her own or of a community, without allowing for possible contrary views by the patient, this is paternalistic. It hampers the ability of the patient to live based on his or her own view of the good life in favour of the physician’s own view of what is in the patient’s own best interests. However, at least if it were phrased in terms of different views of the good life, the patient might be in a position to recognize value differences and choose differently. When these views are couched in a technical guise, masquerading as professional expertise, the patient may not have enough information to recognize the conflict, and, as stated above, any deviation is portrayed as sacrificing health. The current paradigm thereby allows a great deal of paternalism to slip through unnoticed.

Instead, my suggested paradigm builds patient autonomy right into medical decisions. Rather than seeing the patient’s view of the good life as some external constraint on medicine, the patient is actually required for making correct medical decisions, because the body is a tool for that very patient’s use. The patient is just as essential for making medical decisions as a soldier is for making shields, and a patient’s
input is no more a constraint on medicine than a soldier’s input is a constraint on shield-making. The patient’s view of the good life becomes a part of every medical decision, because it serves as the goal of the medical decisions and the only metric against which medical decisions can be weighed. I therefore suggest that the paradigm should be revised. The physician is not the expert who knows what is best for the patient’s overall health while the patient is only the expert on his or her other goals. Rather, medicine is a lower-order craft, repairing and preserving the tool we all use for living. This will remove the subtle paternalism of the current paradigm and improve patient autonomy.

3 Recommendations in Meta-Analyses

3.1 Introduction

In this section, I will combine some of the principles of the “Hippocratic Method” from the *Phaedrus* with some of the considerations from the last section. I will then apply those concepts to medical meta-analyses. A meta-analysis is a statistical aggregation of studies in an attempt to compile all the available data on a given question. The meta-analyses employ selection criteria for which studies will be included. Usually, these studies have a section called “Author’s Conclusions” that provide a recommendation. I will argue in this section that these authors' conclusions typically are not, and in fact cannot be, entailed by the data that is provided in the meta-analysis. This is the result of two problems with the method as a whole. First, the methods employed in meta-analysis can only be applied to causal relationships. Second, any recommendation would include presuppositions about the relative priority of various health outcomes in patients, something that cannot be determined by the studies and that introduces the difficulties from Section I. I will show that these studies routinely confuse the causal conclusions of the study with the weighing of outcomes, and I will suggest that these studies not include recommendations.
3.2 The “Hippocratic Method” and the Scientific Method

In the *Phaedrus*, Socrates makes a distinction between the three parts of what he there calls the “Hippocratic Method”. This method consists of three distinct steps. The first involves a process of collection and division, in which one recognizes what comes together in the same kind, and then the various parts within that kind. The second step involves understanding the various parts and the powers they have, defined as how they affect other things and, more importantly, how they are affected by other things. The final step applies these causal relationships so as to produce the desired state of the subject studied in the first step. I discussed that method in Chapter One, but in this chapter, I will focus on this distinction between the three parts and why it is significant for understanding the method of meta-analyses. Specifically, meta-analyses can only include the second part of the Hippocratic Method, not the first or third part of the Hippocratic Method. The statistical analysis they perform can only apply to causal relations between properly defined indications, but cannot contribute to the proper understanding of the proper functioning of the body nor the importance of those indications.

The three parts of the Hippocratic method are described more than once by Socrates in the *Phaedrus*, and are taken as an analogy from medicine and applied to rhetoric. What he calls the “Method of Hippocrates” is divided into three distinct parts. When applied to the soul, Socrates describes it in the following terms:

Socrates: First, you must know the truth concerning everything you are speaking or writing about; you must learn how to define each thing in itself; and, having defined it, you must know how to divide it into kinds until you reach something indivisible. Second, you must understand the nature of the soul, along the same lines; you must understand which kind of speech is appropriate to each kind of soul, prepare and arrange your speech accordingly, and offer a complex and elaborate speech to a complex soul and a simple speech to a simple one. Then, and only then, will you be able to use speech artfully, to the extent that its nature allows it to be used that way, either in order to teach or in order to persuade. (277b-c)\(^{335}\)

\(^{335}\) Πρὶν ἄν τις τὸ τε ἀληθὲς ἐκάστου εἶδῇ πέρι ὁν λέγει ἢ γράφει, κατ’ αὐτὸ τε πᾶν ὁρίζεσθαι δυνατὸς γένηται, ὁρισάμενός τε πᾶλιν κατ’ εἶδη μέχρι τοῦ ἀτμήτου τέμνειν ἐπιστήθη, περὶ τε ψυχῆς φύσεως διδών.
The method has three parts: application of dialectic to the subject so as to understand it as a whole and to divide it into kinds (or parts); the discovery of causal relations; and the application of those causal relations to the whole. These steps are interrelated. The first step provides understanding of the whole subject and its *genē* (types or parts). These *genē* are needed to ask the appropriate causal questions of the second part of the method, and those causes are then used to produce the desired state of the whole subject, understood dialectically from the first part.

This distinction in the Hippocratic Method has importance for understanding the methods of meta-analyses. The use of statistical methods in medical practice must necessarily be divided into three parts. First, before a particular study can take place, the researcher must already have a clear question to pose. A medical study looks for certain indications or contraindications, measurable objectives or risks that a physician would seek or avoid. Not all indications or contraindications can be examined in any given study, so there is already some selection of the relative value and disvalue of these indications and contraindications in this selection process. Second, the study must examine the causal relations between proposed treatments and those selected indications and contraindications using statistical analysis. Finally, physicians using these analyses must apply the discovered causal relationships to the body. If there is some trade-off between indications or between indications and contraindications, the physician must also have in mind some external scale for ranking the various indications and contraindications. Note, however, that the statistical methods of a meta-analysis can only contribute to the second part of this three-step process. A meta-analysis cannot get started unless one has *presupposed* the indications and contraindications that will be searched for. Further, a meta-analysis cannot be applied unless one has an *external* scale against which to weigh any possible trade-offs between the indications and contraindications.

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κατά ταύτα, τὸ προσαρμότον ἐκάστη φύσει εἶδος ἄνευρίσκων, οὕτω τιθῆ καὶ διακοσμῆ τὸν λόγον, ποικίλη μὲν ποικίλους ψυχῆ καὶ παναρμονίους διδοὺς λόγους, ἁπλοὺς δὲ ἁπλῆ, οὐ πρῶτον δυνατῶν τέχνη ἔσεσθαι καθ’ ὅσον πέρῳ κειμενορισθήναι τὸ λόγον γένος, οὕτω τι πρὸς τὸ διδάξαι οὕτε τι πρὸς τὸ πείσαι.

336 The term kinds (“γένη”) here refers to both types and parts in various sections of the *Phaedrus*. I discuss the reasons for the double use in Chapter One.

337 Strictly speaking, statistical methods can observe only correlation, not causation. However, the inferences from these correlations are causal and their applications require that they be such. Part of the role of control groups in trials is to establish the direction of the causation.
Only the discovery of causal relations can be, strictly speaking, a part of a meta-analysis. First, one must choose certain measurable indications and contraindications for which to search. Second, the causal relations must be established. Finally, one must decide how to apply these causal relations in actual practice. The statistical analysis of meta-analyses can only contribute to the second step in this process. The indications and contraindications themselves, as well as any scale on which to balance trade-offs are necessarily external to the discovery of causal relationships.

3.3 Actual Cases

In this section, I will show through examples that, despite these methodological limitations, medical meta-analyses claim to be able to perform the third step in the “Hippocratic Method" when they claim that they have actually demonstrated which course of treatment is better using the analysis. As meta-analyses are limited at most to showing causal relationships, this is an error, but it is a common and even ubiquitous one. For this section, I have chosen the January 2009 issue of *The Cochrane Review*, the most prestigious meta-analysis journal. In nine studies within that one issue, authors either claim they have weighed or that they will weigh risks against benefits, as though that is something that is within the scope of their methodology. They do this in two sections: at the beginning, when they set out what it is that they intend to prove; and at the end, when they summarise their conclusions.

Meta-analyses in the *Cochrane Review* routinely claim that their *purpose* is to weigh one risk against another in a way that involves comparative evaluation, rather than simply establish causal relationships through empirical data. The claim often appears early in the review, when the review justifies its importance. In the January 2009 issue, seven reviews present the problem that they hope to address as being that of whether or not harms outweigh benefits:

**Corticosteroids have powerful anti-inflammatory effects and have been used to treat established CLD. However, it is unclear**

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338 The reason many of these claims are in the past tense even though they are about what the article will demonstrate is that they are outlining the flaws in the current literature that they hope to correct.
whether any beneficial effects outweigh the adverse effects of these drugs.339

After GOG #92 showed that adjuvant radiotherapy reduced the number of recurrences, the debate has changed to whether this benefit is enough to outweigh the attendant risks. To our knowledge there has been no previous systematic review of this subject.340

However, little evidence currently exists to demonstrate whether there is any additional benefit in combining the two treatments compared with either treatment alone and, if there is, that this benefit outweighs any disadvantages or risks associated with the additional therapy (Spiegel 1997; Wardle 1990; Westra 1998).341

This Cochrane systemic review aims to determine whether nutritional supplementation before surgery is associated with better outcomes than no supplementation and whether the benefits of pre operative nutrition outweigh any potential harms in improving clinical outcome of malnourished patients undergoing abdominal surgery.342

On balance, however, potential benefits from statins appear to outweigh potential detrimental effects and adverse effects from statins will be assessed in this review.343

Even so, a key question to be answered is whether the potential risks of the treatment are outweighed by their benefits in the management of acute COPD exacerbations.344

Notice how each of these quotations present the problem that their meta-analysis is intended to address: risks and benefits have not yet been weighed. They are not simply claiming that they will be demonstrating causal or statistical relationships, which is the limitation of their method. In these articles, confusion about the limitations of the method of meta-analyses appears right from the beginning of the studies.

343 B. McGuinness, R. Bullock and D., Kerr, E., Passmore, P. Craig, "Statins For the Treatment of Alzheimer’s Disease and Dementia", Cochrane Database of Systematic Reviews, 2009: CD007514.
The same confusion appears at the end of the studies. Several reviews not only claimed that their purpose is to have “weighed” risks and benefits, but that their evidence either had provided or might have provided just such a successful weighing. In some cases, the authors conclude that they lacked the evidence to decide whether risks outweighed benefits, as though this is something they could possibly have shown:

The benefits of early postnatal corticosteroid treatment (≤7 days), particularly dexamethasone, may not outweigh the known or potential adverse effects of this treatment.346

The benefits of late corticosteroid therapy may not outweigh actual or potential adverse effects.347

There is insufficient evidence to conclude that the clinical benefits of TMLR outweigh the potential risks.348

Although the question remains whether the possible deleterious effects of reversible rejection in a very low percentage of patients outweigh the possible beneficial effects of steroid avoidance, the vast majority of patients do benefit from being without steroids early after transplantation without immediate risk of rejection.349

It seems that CsA partially outweigh350 the benefits in lipid profile seen after stopping of steroids.351

The more intense diabetogeneicity of TAC partially outweighed the benefits of steroid-sparing strategies in NODAT incidence.352

345 In this subsection, I am only discussing the methodological limitations of these studies and how these limitations are not well reflected in the conclusions. In some cases, one choice of treatment may “outweigh” another with the application of common sense to the causal inferences. However, in the next two subsections, I will discuss how these weighings and common sense tend to come apart in many cases, and how this methodological confusion is not a mere mischief.


350 The phrase “partially outweigh” appears in a few studies. Since it is impossible to partially outweigh something in a literal sense, the phrase indicates that “outweigh” is sometimes being used in a non-literal sense. In these cases, “outweigh” seems to be being used synonymously with “offset”.


352 ibid.
Budesonide may confer benefit in terms of a lower mean CDAI score and a longer time to relapse of disease. However these mild benefits are outweighed by the risk of adrenocorticoid suppression when using budesonide for extended periods of time.\textsuperscript{353}

The potential adverse effects of statins among people at low risk of CVD are poorly reported and unclear (Jackson 2001) but, among Statins for the primary prevention of cardiovascular disease those with pre-existing CVD, the evidence suggests that any possible hazards are far outweighed by the benefits of treatment.\textsuperscript{354}

Both the introductions and the conclusions of these studies discuss weighing as though it is both a purpose and an outcome of the studies themselves. However, such a weighing cannot be performed by the methods of the studies, as they are limited to only the second part of the Hippocratic Method. Because they use statistical methods to study causation, they are able to determine whether or not there is causation in many cases. In fact, the breadth of their sources makes them often the best source for discovering causal relations between agents and the body. Nonetheless, the authors repeatedly claim that that is not all they are doing. This is the result of believing that the method of meta-analyses can somehow weigh outcomes, even though their methods are limited to causal relationships.

None of these meta-analyses provide a clear scale against which they are weighing the benefits and risks of the various treatments they are comparing. However, even if they were to provide such a scale, that scale would be subject to the same criticisms I discussed in Section Two. Specifically, in order to perform the kind of weighing that they propose to do and to have done in the meta-analyses, there must be a single scale on which to do such weighing. However, this raises both problems raised in Sections 2.3 and 2.4.\textsuperscript{355} First, no single, internal metric exists because of the multiple \textit{erga} of the human body. Second, any putative scale would necessarily contain presuppositions about the good life that individual patients may or may not share. Therefore, the inclusion of such scales necessarily produces the same kind of paternalism.

\textsuperscript{353} E. I. Benchimol et al., "Budesonide Formaintenance of Remission in Crohn’s Disease", \textit{Cochrane Database of Systematic Reviews}, 2009: CD002913.
\textsuperscript{355} As in those sections, there would be cases where common sense would dictate that one outcome should be chosen over another. Nonetheless, this common sense would still be an external scale. For some cases where common sense seems to break down in these cases, see the next section.
that the current paradigm of paternalism does. Specifically, presuppositions about the
good life are built into the scale and belong either to the medical community or to the
individual authors of the studies. These presuppositions take the form of paternalism
when the authors claim to have discovered the best course of treatment and thereby put
the patient in the position of believing that dissent is not dissent about what constitutes
the best state of the body relative to their life goals, but the choice of non-health goals
over the health goals presented by the authors of the study.

3.4 Concern about Precision

Another difficulty with the mixing of the third part of the Hippocratic Method
with the second is that it undermines the overall precision of meta-analyses. One of the
strengths of meta-analyses is their ability to aggregate data from hundreds of different
studies into a single study that is able to use statistical methods to discover causal
relationships. Through this model, they are able to discover statistical correlations
between the various treatments and medical indicators of a power that is simply
unmatched. They are also very good at noting when data is insufficient, and pointing out
where further research is required. However, when adding the first and third parts of the
Hippocratic Method, they become extremely imprecise. The scales of goals are
undefined, and the applications of the causal relations to those goals are equally unclear
and rarely stated. This has the effect of creating a strange hybrid of precision and
imprecision in a single document. It has the further effect of masking the imprecision of
the recommendations behind the precision of the results, creating the impression that the
conclusion has been as precisely demonstrated as the statistical analysis. In this section, I
will discuss my study of the ways in which the recommendations of meta-analyses are
confused with statistical results not by the authors themselves, but by those who cite the
meta-analyses. The goal is to show that the mixture of precision and imprecision creates
a false sense of precision about the conclusions.

In order to examine how meta-analyses were cited, I chose the 2006 meta-
analysis, “Induction of labour for improving birth outcomes for women at or beyond
term” by A.M. Gülmezoglu, C.A. Crowther and P. Middleton. I examined ten papers that cited this study to examine if any distinction was made between the causal relations and the conclusions. The results were disappointing. Of those ten references, not one even quoted the meta-analysis verbatim. Moreover, not one of the references cited a page number. Instead, various bits of the meta-analysis were paraphrased and brought together. It would be impossible without having read the original study to determine to what extent they were citing the body of the meta-analysis proper and to what extent they were citing the author’s conclusions. The causal relations and the practical conclusions had simply been mixed together. Two of the citations, those of Stotland et al. and Heimstad et al., did appear to be citing the author’s conclusions as conclusions, though they actually made the conclusions sound more stringent than they were. The original study made the following recommendation in its “Author’s Conclusions”: “Labour induction at 41 completed weeks should be offered to low-risk women.”. Note the use of the term “offered”. Both of the above mentioned reports, however, paraphrase this recommendation not as “offered” but as “policy”. Stotland et al. make the following statement, with the Cochrane review as its citation:

Multiple reports have suggested that a policy of induction of labor at 41 instead of 42 weeks’ gestation does not increase the

357 The reason for choosing this older study, rather than one from the 2009 issue, is that it has had time to be cited by secondary authors.
cesarean rate and may reduce maternal and infant morbidity. (683.e4)\textsuperscript{359}

Heimstad et al. make the following statement, with the Cochrane review as its citation: “A policy of induction of labour at 41 completed weeks reduces this risk without increasing the risk of assisted vaginal or abdominal delivery”.\textsuperscript{360} These sentences are references as though the policies suggested are from the Cochrane Review. However, in both cases, the “offer” recommended in the Cochrane Review has turned into “policy”.

The lack of precision has been noted by those who author meta-analyses as well. Olsen et al. in the paper, “Quality of Cochrane Reviews: Assessment of Sample from 1998”,\textsuperscript{361} argue that the treatment recommendations at the end of Cochrane Reviews are rarely supported by the data. According to Olsen et al., of the 53 reviews in the fourth issue of 1998, 17% of the “Author’s Conclusions” are were not supported by the data, according to the eleven methodologists they consulted. In order to claim this, Olsen et al. share some of the confusion of the Cochrane Reviews themselves, in that they believe that there even might be a conclusion that would be supported by the data; I have discussed that difficulty above. Olsen et al. do not provide a hypothesis as to why this disconnect between the conclusions and the data occurs, but this disconnect can be understood with reference to the Hippocratic method. The authors of the study have no way of garnering a practical conclusion from their data directly. They therefore cannot derive such a conclusion without importing assumptions about the best sort of life, assumptions that may vary from person to person. It is not surprising, then, that a third party reading a meta-analysis would disagree with the conclusions, as they may not import the same assumptions about the good life.\textsuperscript{362}

\textsuperscript{359} N. E. Stotland, A. E. Washington and A. B. Caughey, "Prepregnancy Body Mass Index and the Length of Gestation at Term", \textit{American Journal of Obstetrics and Gynecology}, 2007: 683.e4. Stotland et al. here cite four different studies. However, the Cochrane Review says nothing about policy and shouldn’t be cited in support of this sentence.


\textsuperscript{362} One thing that this study shows is that what is thought to be common sense can itself be controversial. Presumably, the authors of the studies cited by Olsen et al. thought that they were applying common sense to arrive at their conclusions. Nonetheless, what is thought to be common sense seems to arrive at controversial conclusions at least a sixth of the time.
There is a real imbalance between the precision of the statistical analysis and the imprecision of the authors’ conclusions. This hybridization of the studies leads to imprecision in the way that the analyses are used in actual practice. Rather than citing the statistical results of the study, authors cite the conclusions, and even then, not necessarily accurately. Moreover, they cite these conclusions as though they have the full rigour of the statistical analysis itself.

3.5 Conclusion

The use of recommendations in meta-analyses is creating serious confusion between the three parts of what Socrates called the “Hippocratic Method” in the Phaedrus. The scientific method is able to show causal relations using measurement and statistical analysis. It is not, however, able to make recommendations or “weigh” various risk factors against each other. To do this requires knowledge of the relationship of these risk factors to the whole, which is beyond the scope of the scientific experiments. However, by including the recommendations at the end of these studies, the authors are making claims for their studies that are far beyond what they have actually demonstrated and undermine the scientific integrity of the paper. Moreover, confusion as to the function of these conclusions allows them to both remain a part of the analysis for the purpose of citation while simultaneously being insulated from the rigour and quality of the rest of the analysis. As it is unlikely that these confusions can be easily sorted out, I recommend that these “Author’s Conclusions” not be included in future meta-analyses.

4 The Therapeutic Misconception

4.1 Introduction

According to the Helsinki Declaration of 1964, medical research on human subjects should be held to the same standards as therapeutic medicine, and all human research subjects should “be assured of the best proven diagnostic and therapeutic
However, authors such as Franklin Miller and Howard Brody have charged that this conflation of ethical principles has led to confusion between the aims of therapeutic medicine and medical research, generating what they call the “therapeutic misconception”. Under this misconception, they say, physicians routinely compromise the care of their patients on the grounds that their research is “therapeutic”, while patients routinely assent to compromised care, unaware of possible conflicts between their medical care and medical research. Therefore, they argue, therapeutic medicine and medical research ought to have separate ethical codes and the medical research ethics code need not guarantee the best proven therapeutic methods to their subjects. In this section, I will argue that, while they are correct to note the important distinction between therapeutic medicine and medical research, they are incorrect to conclude that this distinction implies that medical research should be autonomous from the ethics of therapeutic medicine. To demonstrate this, I will introduce the Platonic theory of the hierarchy of crafts, in which Plato argues that crafts are arranged in a hierarchy in which the work of tool producers must be evaluated by the tool users. Physicians participate in trials not as researchers, but as physicians evaluating potential products of medical research. Therefore, the ethics of research can never be as autonomous as Miller and Brody would like.

4.2 The Therapeutic Misconception

In this section, I will apply the Platonic methods of dividing and ordering crafts to a contemporary debate about the interaction of medicine and medical research. Specifically, a challenge has recently been raised to the current ethical codes in medical research. Since the Helsinki Declaration of 1964, the World Medical Association has required that medical research may never compromise the health of the subjects involved in a study: “Concern for the interests of the subject must always prevail over the interests


364 There is some similarity between the principles of the Helsinki Declaration and the principle of “never doing harm” from the Crito 49b. The principle in the Crito is broader than that in the Helsinki Declaration, but would itself justify such an approach.
Franklin Miller and Howard Brody argue that the idea that research in a therapeutic context will not interfere with patient care is a “therapeutic misconception”. Instead, they argue that medicine and medical research are two different activities with different methods and different ends that may conflict. To confuse medicine and research causes numerous practical problems in the performance of both and creates a serious threat to the autonomy of research subjects who are usually mistaken as to the nature of the task into which they have entered. I will argue that those who argue that there is a “therapeutic misconception” are correct that there has been confusion between medicine and medical research, but that they are mistaken in believing that the logical distinction between medicine and medical research implies that there ought to be separate ethical codes for each. In fact, the hierarchical relationship between research and medicine implies that their ethical codes may never be completely severed.

In order to explain the origin of the therapeutic misconception, Miller and Brody describe what they call the “similarity position” and the “difference position.” According to the similarity position, medicine and research are the same activity and therefore ought to have the same ethical codes. According to the difference position, medicine and research are different activities and therefore ought to have different ethical codes. Miller and Brody hold that the similarity position is incorrect and the difference position is the correct one. However, if one subscribes to the difference position, there is simply no need to reconcile the two ethical codes. For instance, one need not reconcile the ethics of medicine, which require healing one’s patients, with the ethics of law, which require protecting a client’s legal interest. They are different activities and therefore have different ethical codes. Instead, they argue, “The basic goal and nature of the activity determines the ethical standards that ought to apply.” In other words, the ethics of crafts are entirely determined by the craft’s nature and purpose and their ethics will differ insofar as their nature and purpose differ. Since medical research and therapeutic medicine have different goals and natures, they should therefore have different ethical

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367 Ibid., 22.
standards. Confusion over the natures and purposes of research and medicine is causing those like the authors of the Helsinki Declaration to needlessly and confusingly conflate the ethical codes of two separate activities.

In many ways, Miller and Brody are making a remarkably Platonic-sounding argument. They have made a distinction between research and therapy that depends on the distinction between their ends. Research has the goal of “scientific knowledge”, while therapy has the goal of health. As a result, they claim, they are different activities. This is the same kind of logical distinction made in the Republic and the Euthydemus: a single craft has a single goal, and crafts ought to be distinguished by their goals.

Miller and Brody also share the Platonic approach in treating these distinctions as important, both logically and ethically. Socrates uses this “strict speaking” about the specificity of a craft to refute Thrasymachus in Republic I about the nature of justice, and similar refutations occur in other dialogues. Confusion about what one is doing can have serious ethical consequences. Miller and Brody argue that confusion about what constitutes medicine and research leads to the systematic compromise of patient care in ways that violate the integrity of physicians, the autonomy of patients and the practicality of ethical codes. They believe that, should the distinction between research and medicine be properly understood, these problems would be resolved.

From a Platonic perspective, research seeks to discover the causal relationships of various potential treatments on the body so that medicine may then assign those treatments for the sake of health. However, this implies that research and medicine are distinct powers. Research is an acquisitive craft whose goal is to capture knowledge, in much the same way as the crafts of geometry or arithmetic capture logical truths in figures and in words. Medicine is a productive craft whose goal is the health of the

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368 The argument also bears an affinity with Aristotle’s distinction between theoretical and practical knowledge from Nicomachean Ethics VI. However, Plato’s framework of dividing crafts between the acquisitive and productive is closer to Miller and Brody’s treatment of research and therapy as being goal-oriented “activities”.

369 For example, at Republic 346c, Socrates argues that “We are agreed, then, that each craft brings its own peculiar benefit” (“Οὔκοιδον τὴν γε ὀφελέιν ἐκάστης τῆς τέχνης ἰδίων ὀμολογήσαμεν εἶναι;”). At Euthydemus 291e, Socrates uses several examples including medicine to show that crafts have a single product: “Socrates: Then what would you say its result was? For instance, if I should ask you what result does medicine produce, when it rules over all the things under its control, would you not say that this result was health” (“ΣΩ. Τί οὖν ἂν φαίης αὕτης ἔργον εἶναι; ὡςπερ εἰ σὲ ἐγὼ ἐρωτῶν, πάντων ἄρχουσα ἢ ἕστηκεν ὄν ἄρχει, τί ἔργον παρέχεται; οὐ τὴν ψύειαν <ἄν> φαίης.”).
patient. They are logically distinct. Each has its own goal. Therefore, if one activity was to also produce the goal of the other activity, this would be an accident, in the same way that one does not pick carrots for the sake of health as the goal of carrot-picking is carrots, and if one becomes healthy while carrot-picking, this is accidental.\footnote{This would be true even if the motive for picking carrots was becoming healthy. Because the same activity can be performed for different motives, those motives are not a part of the definition of the activity. I discussed this issue in Chapter Two, where the Socrates of the Republic makes the distinction between shepherding, strictly speaking, and the various motives a shepherd might have for shepherding.} Crafts with separate natures and purposes may conflict in their applications, as what leads to the good of one subject may not lead to the good of another. In this way, a patient could be harmed in the course of discovering a new therapy, while pulling a patient from a trial may be good for the patient’s health, but harmful to the trial.\footnote{The compromise of patient care in research trials includes, but is not limited to: the need for placebo controlled trials for early drug testing; the lack of “equipoise” or equivalence of belief, by a physician as to whether the test or control arm of a trial is the superior treatment; the inability of patients’ to consider internally incommensurable side-effects when choosing a treatment option; the inability to tailor treatments to a patient’s medical history; the inability of physicians to customize or to tweak dosage for patients; the unwillingness of physicians to switch a patient in a trial from one treatment to another unless faces serious side-effects; and the use of a “wash-out” period in which patients are untreated (Franklin G. Miller and Howard Brody, “A Critique of Clinical Equipoise: Therapeutic Misconception and the Ethics of Clinical Trials”, The Hastings Center Report, 2003: 20-1).}

Confusion from a logical perspective could compromise a patient’s care. If a physician is genuinely unaware of the possible conflicts between research and medicine, as Miller and Brody argue is often the case in trials, then the physician will be providing inferior care to his or her patients if he or she has his or her patients participate in such a trial. If such confusion is as widespread as they contend, the prevalence of medical research in therapeutic medicine is causing substantial interference with their patients’ care. Further, confusion on the part of patients as to the sort of craft to which they are becoming the subject would be a serious blow to the autonomy of patients. Simply by virtue of their own trust in physicians, patients are not understanding research methodologies, and this is leading many patients to compromise unwittingly their health care for the sake of medical research.

However, the final component of Miller and Brody’s argument does not follow from a proper distinction between research and medicine. They argue that, if a proper distinction were made between research and medicine, a distinction between the ethics of medicine and of research would follow. Miller and Brody hold the belief that ethics of a
profession are determined by the nature and purpose of the profession, and with this Plato would agree. However, it precisely the intrinsic connection between the nature and purpose of medicine and medical research that requires an intrinsic connection between their ethics. Research and medicine are not so neatly divided logically as Miller and Brody claim. It is true that they have different methods and different immediate goals, and that these can at times conflict with one another. Nonetheless, they also have a hierarchical relationship with one another. As I argued in Chapter One, crafts that use tools and crafts that produce tools are in a hierarchical relationship. What this amounts to is that the tool-using craft is required to guide the tool-producing craft. The tool-using craft is required in order to direct the tool-producing craft as to when it should produce its product. Moreover, tool-producing crafts are incomplete. They only produce tools that have powers needed by the tool-using craft, and therefore require the tool-using craft to explain the powers that are needed. Medicine and medical research are in a strict hierarchy. Medical research by definition produces diagnostic, therapeutic and prophylactic methods that may be used by medicine in its pursuit of health. In other words, medical research produces and only produces tools of therapeutic medicine. Other research on the body, which the Helsinki Declaration refers to as “theoretical”, is explicitly outside of the restrictions of the Helsinki Declaration. As a result, medical research requires direction from medicine concerning which sorts of procedures need development and which do not. For example, if a simple, inexpensive cure for a condition exists, little research is needed for a replacement. However, if a treatment is costly, only moderately effective or has side-effects, finding a new therapy might be highly beneficial. Therefore, research is already in a position of needing direction from medicine for what sorts of treatment are needed. Further, medical researchers depend on the medical profession to evaluate the outcomes of their various therapies. Whether or not a particular treatment was efficacious or inefficacious and to what degree is something that physicians are trained to recognize by virtue of their training as physicians, and this type of recognition is the very reason that physicians are employed in research in the first place. They are serving the role of evaluating the various effects of therapies in terms of various sorts of medical indication and contraindication. In other words, they are evaluating the products of medical research in terms of the goals of the
medical craft. In short, in some ways, current practice already recognizes this Platonic hierarchy.

This hierarchy should also apply to the ethics. A physician, when involved in research, isn’t simply acting as a researcher, where research is some other completely independent craft from that of medicine. Rather, the physician is involved in the research *precisely* in so far as he or she is qualified to evaluate the results, that is, in so far as he or she is a doctor. This kind of participation is *qua* doctor, in the sense that one acts as doctor *qua* doctor when one is evaluating the efficacy of the medical tools one plans to use. Take the analogy of a soldier and a shield-maker. The soldier is required to evaluate the product of a shield-maker. However, when the soldier evaluates the shields, the soldier is not thereby acting as a shield-maker. It is his or her soldierly knowledge that is needed to *complete* the otherwise incomplete craft of shield-making. The soldier does not become a shield-maker when directing the shield-maker; it is *qua* soldier that his or her input is needed. Therefore, Miller and Brody are incorrect in arguing that the different methods and immediate ends of medical research and medicine imply that they are independent activities requiring separate ethical codes. In medical research, as with all tool-producing crafts, tool-users (physicians) are required to evaluate the tools they employ and are acting as physicians when they do so. They are still acting *qua* physicians and do not become researchers when they do so.

Since physicians employed in medical trials are still acting *qua* physicians, in much the same way that a soldiers evaluating shields are still acting *qua* soldiers, physicians involved in medical trials are still bound by the codes of medical ethics *even though* medical research and therapeutic medicine are logically distinct. This means that physicians employed in research trials are still obliged to follow the ethical obligations of the medical profession when engaged in medical research, which includes the obligation to seek optimal care for their patients.³⁷² First, it implies that a physician may not supervise their patients in a medical trial that would provide those patients with less than

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³⁷² Note that this does not contradict Section 2. The optimal care here refers to the care for a patient that best renders his or her body fit for use in the manner best suited to his or her beliefs about the good life.
optimal care. This limits researchers in the types of roles that researchers may expect physicians to play in their research trials. Second, it implies that a physician may not even refer a patient to a trial that he or she knows will compromise his or her patient’s medical care (especially if such a referral is likely to come across as a referral to a specialist). This implies that researchers must ensure that their trial methodologies conform to the ethics of the medical profession if they expect to use physicians for any sort of recruitment of subjects. Medical research ethics must either set itself up without using physicians qua physicians in their trials (which is likely impossible except possibly for phase one trials), or it must structure its trials in such a way that researchers do not expect the physicians involved, who are acting as physicians, to contravene the ethics of their profession.

Is it then possible for there to be any activity of medical research that can exist independently from medical ethics? It would seem, at first, that there might be the possibility for there to be pure medical research that does not employ physicians and therefore would not be bound by ethical restrictions on physicians. However, given the relationship between a super-ordinate and subordinate craft, any medical research would necessary be ultimately supervised by medicine. So far, I have discussed the role of physicians in evaluating the results of medical tests. However, physicians are also required to initiate research. As with meta-analyses, research cannot get started unless one already has a set of indications and contraindications in place that one is seeking to promote or avoid. Or, to put it in the terms used in Chapter One, the “knowing what” is to be produced must be specified by the using craft. As a result, medical research itself is ultimately commissioned, so to speak, by the medical craft, and cannot exist

373 I do not seek to defend the principle that physicians should always provide their patients with optimal care here. This principle is a widely-accepted and central principle of most medical codes of ethics and is accepted as such by Miller and Brody as well.
374 In general, phase one trials test for safety, phase two trials test for absolute efficacy (placebo control) or relative efficacy (active control) on a small scale, and phase three trials test for relative efficacy on a large scale.
375 This point is similar to that made by Aristotle in the Nicomachean Ethics: “...in all of these the ends of the master arts are to be preferred to all the subordinate ends; for it is for the sake of the former that the latter are to be pursued” (“ἐν ἅπασις δὲ τὰ τῶν ἀρχηγετικῶν τέλη πάντων ἐστίν αἱρετῶτερα τῶν ὑπ’ οὐτά τούτων γὰρ χάριν κάκερν (διώκεται)” (1094a14-16). Lower-order crafts are performed for the sake of those that supervise them. It would be as inappropriate for a physician to undermine the health of his or her patient in order to develop a new treatment as it would be for a general to undermine a military victory in order to invent new weapons of war.
independently. This relationship of medicine to medical research implies that medical research must be bound by medical ethics, as physicians should not avoid the strictures of their professional ethics by employing those who are not themselves bound by them. As a result, medical research itself, by virtue of its subordinate relationship to medicine, should be bound by its ethical proscriptions.

4.3 Conclusion

Miller and Brody have discovered an important problem in current research ethics. There seems to be a great deal of confusion about the possible conflicts between research and medicine, among physicians and especially among patients. This confusion stems from a logical confusion between the two activities of research and medicine and from a failure to appreciate the ways in which these difficulties conflict. However, they fail to establish that there ought to be two, autonomous codes of ethics for medical research and for medicine. Medical research and therapeutic medicine are arranged in a hierarchical, evaluative relationship, and therefore, the physicians involved in medical research are still involved *qua* physicians. Therefore, no completely autonomous code of research ethics is possible.

5 Chapter Conclusion

In this chapter, I have taken the Platonic framework of crafts and applied it to three modern issues in medicine. The tool of which I have made the most use is Plato’s understanding of the hierarchy of crafts. Specifically, crafts are arranged in such a way that subordinate crafts are incomplete and require a higher-order craft to provide them with the specifications of their product. The modern paradigm of paternalism, meta-analyses and concern about the therapeutic misconception treat medicine as too autonomous, not as a part of a hierarchy of crafts. Once that hierarchy is introduced, new approaches to these questions take form. In relation to paternalism, the very belief that medicine is autonomous leads to its own sort of paternalism. As for meta-analyses, the belief that practical conclusions can come from causal analysis leads to a paternalistic hybrid of precision and imprecision. As for research ethics, the argument that medicine
and research are autonomous fails to take into account that medical research is a subordinate craft to medicine, and that, as a result, the physicians involved are still functioning *qua* physicians, and that they cannot simply be considered to be researchers.
Conclusion

1 Summary

This dissertation has explored several applications of Plato’s theory of crafts, and especially Plato’s discussion of the craft of medicine. I began in Chapter One with an overview of Plato’s theory of crafts. This involved contrasting his use of crafts with Aristotle’s definition of the term, as Plato applies the term also to non-productive bodies of expert knowledge. The inclusion of acquisitive crafts and the acquisitive nature of theoretical crafts led to a co-extensivity between crafts and “epistēmē”. I then addressed some of the features of crafts that recur in the Platonic corpus. First, all crafts have an important relationship to two meta-crafts, rhetoric and measurement. Second, all crafts are arranged in a hierarchy in which the tool-user oversees the tool-producer.

This approach to crafts led to numerous puzzles that occupied Plato and his near contemporaries. It led to the puzzle that when one considers crafts as knowledge, they seem to be capable of contraries, but when one considers crafts as power, they should be capable of only one thing. In Chapter Two I discussed Plato and Aristotle’s approaches to this difficulty. Both carved out linguistic space in which to provide a substantive argument to resolve the difficulty. They each have a version of strict speaking and a metaphysical analysis that prioritizes generation over destruction that allowed them both to say that, while a person with a craft will be capable of contraries, qua that sort of crafts-person, they are not. In Chapter Three I discussed an intergenerational debate between Gorgias and Plato on the nature of freedom. Gorgias had challenged the traditional synthesis allying freedom with persuasion by arguing that persuasion was a sort of force. Plato, on the other hand, introduces a new criterion for freedom: knowledge. I then discussed what he meant by this and showed how Plato arrives at a conclusion about informing patients that is relevant to modern discussions of informed consent.

In Chapter Four, I applied Plato’s approach to crafts to three modern problems. First, I addressed the problem of paternalism and autonomy. The current paradigm
assumes that the physician knows what is best for the patient’s health, while the patient can only choose to sacrifice that health for other non-health goals. However, when one applies Plato’s understanding of the hierarchy of crafts, one can see that this understanding is limited and that the goals provided by the patient, who uses the body, is necessary to complete the medical craft itself. Second, I addressed the problem of recommendations in medical research. Using data from a recent issue of the Cochrane Review, I showed how medical researchers systematically confuse practical recommendations with causal conclusions, and that those who cited those studies routinely confused the researcher’s recommendations with the scientific result of the paper. Finally, I looked at the “therapeutic misconception” discussed by Miller and Brody and argued that, while they were correct that physicians and patients often confuse the ends of research and medicine, their claim that this implied that research and medicine should have different ethical codes failed to account for the hierarchy between medical research and medicine proper. The richness and unity of Plato’s framework can be appreciated by the way that it can be applied to so many subjects in the medical field.

2 Important Results

One important result of this dissertation was to bring together the various uses to which Plato puts medicine in his corpus. While I did not evaluate all of his references, I chose a representative sample. Plato uses medicine as his paradigmatic craft, and turns again and again to this example in almost every dialogue. Medicine serves him well as an example because:

1. It has a definite product: health.
2. It has a definite subject: the body.
3. It is a craft and therefore a body of knowledge.
4. Its subject is made well through the application of mathematical ratios.

Medicine has all of the characteristics that makes it the ideal example of a craft. This has two effects. First, almost everything that Plato says about medicine should be taken as a part of a general theory of crafts. Plato’s discussion of medicine brings to light an entire approach of the relationship between knowledge, power and practical wisdom. Second, and conversely, Plato almost inadvertently supplies an entire approach to medical ethics.
Though he almost always uses medicine as an analogy for something else, he ends up saying so much about medicine that one uncovers a Platonic approach to medicine as a whole. After all, as discussed in the introduction, Plato mentions medicine than he does politics, and that he isn’t ultimately interested in medicine doesn’t imply that he said any less about it. That there has not been a great deal of interest in Plato’s approach to medicine reflects Plato’s own ultimate interests, but we are under no obligation to share only Plato’s ultimate interests when studying his works.

Another major goal in this dissertation was to examine the ways in which Plato’s understanding of crafts could be applied to the medical and professional ethics. The ethics of professions, especially that of medicine, are themselves intellectually challenging and morally problematic. Many of the dilemmas within those professions, even if they cannot be solved by Plato’s understanding of the crafts alone, can greatly benefit from an application of Plato’s understanding of the crafts. First, using Plato can help resolve definitional questions about the limitations of a given field. For instance, Plato’s understanding of crafts can be used to establish where medicine ends and research begins, or where being a lawyer ends and making money begins. Just as Socrates used the “strict speaking” sense of a craft in Republic I to establish that tyrants aren’t strictly speaking rulers, so too one can use the “strict speaking” sense of craft to clearly define what sorts of activity lie within the scope of a profession. Second, using Plato can help establish the kinds of hierarchical relationships that ought to be in place between these professions once they are delineated. When research ethics dictates medical ethics or when weapons manufacturers dictate military policy, the quality of medical treatment and military strategy suffers. These hierarchical relationships help professionals to appreciate the different roles that they play relative to other professions, including those of supervision, tool-production and co-operation.

3 Future Applications

The topics to which I applied Plato’s theory of crafts are only some of the topics to which Plato’s theory of crafts has application. There are many other topics that there was not space to cover. In this conclusion, I will suggest further areas in modern
biomedical ethics to which the framework would be useful. These subjects will be an important component in my future research.

First, Plato’s framework of health can be very helpful in understanding the nature of medical distribution questions at both the institutional and the political levels. Norman Daniels argued in *Just Health Care* that health care is a matter of justice because of the kind of opportunities (powers) that it gives to those who are healthy, while Ezekiel Emmanuel discussed in *The Ends of Human Life: Medical Ethics in a Liberal Polity* the ways in which various kinds of health care distribution result from different views of the good life. Distribution of health care can both augment and diminish autonomy, and a study of those ways with reference to Plato’s understanding of the hierarchy between medicine and the body-using patient would be a worthwhile project.

Second, Plato’s framework raises some important questions for the kind of health education that is important for free citizens. Although they may occur only once or twice in our lives, important medical decisions are often decisions that can affect our capacity to live the kind of life we wish. Having the skills to consider health care alternatives in light of the various life plans we might have is an important part of ensuring that our autonomy is not compromised when we enter a health-care context. Understanding basically how our bodies function can provide students with the background they need to consider health care decisions autonomously. Much of our current health education focuses on instilling rules (like the four food groups) rather than understanding. What kind of information or skills a free citizen needs to be an autonomous before entering a clinical setting is a topic rarely addressed and about which Plato’s framework has much to offer. His framework challenges us to consider the kind of knowledge we ourselves need as autonomous patients.

Third, in the *Gorgias*, Socrates makes a claim that he makes in no other dialogue. He claims that "gymnastikē" or gymnastics, the craft of staying healthy, and "iatrikē" or medicine, the craft of restoring health, are the same craft, because they have the same product, health. This claim mirrors the modern distinction between “preventative” and “curative” medicine, the former of which is normally considered preferable. Some interesting puzzles arise, however, from expanding the definition of “medicine” beyond that of restoring health. Once one includes prevention, odd conclusions seem to follow,
like the inclusion of sanitation and air-quality control. Even more puzzling would be the social determinates of health, which seem to imply that poor people are often unhealthy just by being poor, and that improving social equality might therefore be a part of the same craft of medicine. What we call “medicine” may find itself in a hierarchical or part-whole relationship to a broader, health-producing craft. How to fit together all of these various health-producing crafts in using a Platonic framework is another project to consider.

These are just three possible applications. The Platonic framework of crafts is so rich that it could help contribute to numerous questions in the field of medical ethics, many of which I have not discussed myself. Moreover, though this is beyond the scope of the present thesis, Plato’s framework may well be applicable to other areas of professional ethics. Plato’s approach to crafts provides the reader with a framework in which to consider the relationships between knowledge, power and practical wisdom.
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