Epistêmê is the Greek word most often translated as knowledge, while technê is translated as either craft or art. These translations, however, may inappropriately harbor some of our contemporary assumptions about the relation between theory (the domain of ‘knowledge’) and practice (the concern of ‘craft’ or ‘art’). Outside of modern science, there is sometimes skepticism about the relevance of theory to practice because it is thought that theory is conducted at so great a remove from the facts, the province of practice, that it can lose touch with them. Indeed, at the level of practice, concrete experience might be all we need. And within science, theory strives for a value-free view of reality. As a consequence, scientific theory cannot tell us how things should be — the realm of ‘art’ or ‘craft’. So we must turn elsewhere for answers to the profound, but still practical, questions about how we should live our lives. However, some of the features of this contemporary distinction between theory and practice are not found in the relation between epistêmê and technê. As we move chronologically from Xenophon to Plotinus, we go from an author who does not distinguish between the two terms, to an author who has little use for technê because it is so far from reality. It is in Aristotle that we find the basis for something like the modern opposition between epistêmê as pure theory and technê as practice. Yet even Aristotle refers to technê or craft as itself also epistêmê or knowledge because it is a practice grounded in an ‘account’ — something involving theoretical understanding. Plato — whose theory of forms seems an arch example of pure theoretical knowledge — nevertheless is fascinated by the idea of a kind of technê that is informed by knowledge of forms. In the Republic this knowledge is the indispensable basis for the philosophers’ craft of ruling in the city. Picking up another theme in Plato’s dialogues, the Stoics develop the idea that virtue is a kind of technê or craft of life, one that is based on an understanding of the universe. The relation, then, between epistêmê and technê in ancient philosophy offers an interesting contrast with our own notions about theory (pure knowledge) and (experience-based) practice. There is an intimate positive relationship between epistêmê and technê, as well as a fundamental contrast.

1. Xenophon
2. Plato
3. Aristotle
4. The Stoics
5. Alexander of Aphrodisias
6. Plotinus
Bibliography
Academic Tools
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1. Xenophon

Xenophon's only sustained discussions of epistêmê and technê are in two of his Socratic works, Memorabilia and Oeconomicus. The Memorabilia recounts conversations which Socrates held on a variety of topics; the Oeconomicus is a conversation largely devoted to one, i.e., the art of running a successful estate and household. In these works, knowledge is intimately tied to knowing how to do things, especially the more organized kind of knowing-how designated by technê. There is no distinction between epistêmê as theoretical knowledge and technê as mere craft or skill. Socrates explicitly identifies as technêi such activities as playing the harp, generalship, piloting a ship, cooking, medicine, managing an estate, smithing, and carpentry; by association with these technêi, we can include housebuilding, mathematics, astronomy, making money, flute playing, and painting. Without marking any difference, he also calls many of these activities epistêmai.
In Plato's dialogues the relation between knowledge (epistêmê) and craft or skill (technê) is complex and surprising.

2. Plato

In Plato's dialogues the relation between knowledge (epistêmê) and craft or skill (technê) is complex and surprising.
Throughout the dialogues characters frequently cite technê as a way of illustrating important points in their philosophical conversations. Some crafts mentioned are medicine, horsemanship, huntsmanship, oxherding, farming, calculation, geometry, generalship, piloting a ship, chariot-driving, political craft, prophecy, music, lyre-playing, flute-playing, painting, sculpture, housebuilding, shipbuilding, carpentry, weaving, pottery, smithing, and cookery. Each of these activities is associated with the word technê, e.g., medicine with the iatrikê technê. Each is also associated with a practitioner, e.g., medicine with a physician (iatros). Other crafts are mentioned but without practitioners, e.g., arithmetic, flute-making, and sorcery. Socrates uses medicine much more than any other technê; other crafts are mentioned without practitioners. In fact, theorêma is used to describe the reflection about craft. In his conversation with Polus, Socrates distinguishes four crafts (technai), as farming and building have concrete, inanimate products. Horse training and huntsmanship care for animate but non-human beings. Medicine cares for the health of humans. Calculation has neither a concrete product nor does it provide care.

In some dialogues, craft (technê) and knowledge (epistêmê) seem interchangeable in much the same way as in Xenophon's Socratic dialogues. In the Charmides (165c) Socrates says that medicine, i.e., the physician's craft (iatrikê technê), is the knowledge (epistêmê) of health. In Euthydemus (281a) Socrates says that what guides right use of materials in carpentry is the knowledge of carpentry (techtonikê epistêmê). In Ion (532c) Socrates tells the rhapsode Ion that he is not able to talk about Homer with craft and knowledge. In Protagoras (356d-e) Socrates refers to measuring as both a craft and a kind of knowledge.

However, Plato's interest in technê is not innocent. He uses the notion as a way of explicating central themes, such as virtue, ruling, and the creation of the cosmos. As a consequence, he develops a complex account of technê. First of all, a craft has a function (ergon); this is what it characteristically does or what it characteristically accomplishes. In fact, crafts are differentiated by their specific functions (erga) (Rep. 346a). A similar idea is assumed in the exchange between Dionysiodorus and Socrates (Euthydemus 301c), as it is by Socrates in Euthyphro (13d) and Ion (537c). While the ergon of a craft is its goal, the goal is frequently identified with a result separate from the activity of the craft. In the Euthydemus (291e) the goal (ergon) of medicine is health just as food is the goal (ergon) of farming. When in the Charmides (165e) Critias denies that calculation has an ergon, in the way that a house is the ergon of building or a garment of weaving. Socrates answers that nevertheless calculation is about the odd and the even. His answer suggests the possibility of a technê whose goal is not a separate result — an idea to be found in the Statesman. Still in the Gorgias (453e-454a) Socrates argues that calculation produces as its ergon persuasion about the amount of the odd and the even — a result separate from the activity of calculation.

As the concept of technê develops, the role of reflective knowledge is emphasized. Whereas technê is associated with knowing how to do (epistathai) certain activities, epistêmê sometimes indicates a theoretical component of technê. Then it is associated with understanding (gnôsis). On the other hand, the physician knows how to care for the sick (Rep. 342d), to prescribe a regimen (Rep. 407d), to provide for the advantage of the body (Rep. 341e), to make someone healthy (Charm. 174c), to make someone vomit (Laws 933b). On the other, the physician knows or recognizes (gignôskein) health by medical knowledge (epistêmê) (Charm. 170c). Since health is the goal of the medical craft, the physician understands the goal of the craft. Plato emphasizes this knowledge as a distinct aspect of the craftsman's skill. Sometimes this aspect is theoretical in the root sense of theorêma — looking. In the Cratylus (389a-b) Socrates talks about the carpenter who makes the weaver's shuttle; he looks to (bleîpon) something whose nature is to weave. This latter seems to be a material model because Socrates supposes what would happen if it were to break. In that case, the carpenter looks to the form (eidos) of shuttle, that which is shuttle (ho estin kerkis). In the Gorgias (503d-e) all craftsmen work not at random but look toward the goal of their craft (ergon) so that what each produces will have a certain form. Socrates cites painters, housebuilders, and shipbuilders. In Republic VI Socrates compares philosophers who are rulers to painters who look to a model (484c).

The theoretical aspect is also expressed as articulate reasoning about the goal. In Plato's view, the ability to explain why he does what he does is one of the most important characteristics of craft. In the Charmides, Socrates says that we test the physician by questioning him since he understands health (Charm. 170e5-7). Expanding on the idea of testing, Socrates says they will investigate the physician in what he says and in what he does, on whether what he says is true and whether what he does is right (171b7-9). This theoretical side of craft is further developed in the Gorgias. In his conversation with Polus and later in his conversation with Callicles, Socrates carries on a sustained reflection about craft. In his conversation with Polus, Socrates distinguishes four crafts (technai): medicine, physical training, judging, and legislating; the first pair are concerned with the body and the latter with the soul (464b). These crafts provide their care always for the best, either of the body or of the soul (464c). Unlike empiric practice (empeiria), technê has an account to give by which it provides the things it provides, an account of what their nature is, so that it can say the cause of each (465a). In the conversation with Callicles, Socrates returns to this account, when he seems especially interested in the ability of technê to give an account. He says medical technê investigates the nature of the thing it cares for (therapeuetic) and the cause of what it does and has an account to give of each of them (501a). The context shows that what medicine cares for is health, so it has an account to give of health, which is the cause of its actions.
So far then, a craft is defined by its goal and is a kind of knowledge. Fully developed, this knowledge is knowing how to accomplish a goal on the basis of an understanding of the goal; the understanding can be articulated in an account. The account informs and guides the skilled practice. A craftsman's being able to articulate the goal is most fully developed, perhaps, in the Laws. The Athenian Stranger describes the distinction between the slave doctor and the doctor of free men as resting on the ability to give an account. The slave doctor relies on experience (empeiria) and has no account to give for his procedure. The free doctor not only has an account, he communicates it to his patients as a way of eliciting their cooperation in the course of treatment (720 b-d). Presumably, the patients come to appreciate the reasons for the actions the doctor undertakes as well as the regimen he prescribes because they better understand the nature of health and the way the treatments produce health. In fact, the empiric doctor laughs at the free doctor for instructing his patients — as though he were trying to make them into doctors themselves (857 d-e).

There is a second feature of technê that is vital for understanding its importance to Plato. In the Gorgias, technê is distinguished from empeiria not only by its ability to give an account but also because it seeks the welfare of its object. The physician and the physical trainer seek the welfare of the body, just as the judge and the legislator seek the welfare of the soul (464c). These features of technê figure in one of Plato's persistent themes, the knowledge needed to rule the city. One of its most important occurrences is in the Republic, where Socrates characterizes ruling as a kind of technê that looks out after the welfare of the city (Rep. 342e). But in other dialogues as well, the authentic ruler has a knowledge, both practical and theoretical, that allows him to achieve what is good for the city. In fact, the passage just cited from the Laws is part of an analogy to explain why the legislator should be able to explain to the citizens the reasons behind the law.

Indeed, most accounts of knowledge in the dialogues are carried out in the context of such discussions. Even in the Theaetetus, the dialogue most often thought of as dedicated to epistemology, we find the same theme. When he argues against Protagoras' relativism, Socrates gets the sophist to concede that some people are wiser than others when it comes to what is good for the city (167c-d). Socrates then seizes upon an analogy with medicine. While each person may be the final authority for himself when it comes to what is hot, dry, and sweet for him, in matters of health and disease not everyone knows the healthy for himself nor is he able to cure himself. Just so, while Protagoras may hold that for each city what is fine or base, just or unjust, pious or impious is what the city takes it to be, what is really advantageous for the city is not the same as what it takes to be advantageous (171e - 172b). Although Socrates' investigation of knowledge becomes more abstract when he introduces being, not-being, likeness and unlikeliness, identity and difference, unity and plurality, to this group he adds the fine and the base, the good and the bad (185c-186a). The soul itself investigates these things, trying to determine their being (ousia) and their opposition to one another and the being of that opposition. Finally, the investigation of being, non-being and the other opposites — including the fine and the base, the good and the bad — also reflects both on the being of each and on its usefulness (pros te ousian kai ὀψελείαν) (186c). While Socrates does not explain what reflecting on their usefulness amounts to, the remark shows a link, however slight, to the original motivation for the investigation of knowledge — i.e., providing what is really advantageous for the city.

Nevertheless, these passages from the Theaetetus raise an important issue. Knowledge of the forms tends to become an end in itself; and in this way the idea of knowledge as pure theory begins to make an appearance in the dialogues. This tension is also prominent in the Republic, of course, where Socrates introduces and develops the notion that rulers should be philosophers, who are defined by their knowledge of forms. At the beginning of the discussion of philosophical rulers in Republic IV, knowledge and craft fall into a familiar pattern of interchangeability. After defining the three classes in the city, Socrates is looking for the knowledge (epistêmê) in virtue of which the city is well-counseled. He dismisses the crafts of carpentry,smithing, and farming — obviously crafts and called epistêmai (428b-c). While these focus on some partial good for the city, the epistêmê of ruling takes counsel for the city as a whole and what is best for it internally and externally (428 b-d). Then, in Republic V, Socrates introduces an altogether different notion of the knowledge that philosophers will have — one whose object is forms. Indeed this passage defines for most readers Plato's idea of epistêmê.

Knowledge (epistêmê) is the ability to know the real as it is (477b). The context shows that when Socrates talks about the real, he is referring to the forms. In the Republic, the prominent forms are the forms for the beautiful, the good, and the just. In the Symposium, Socrates describes the form of the beautiful as neither coming to be nor passing away, as not changing in any other way, as never being or even appearing to anyone as anything but beautiful (211 a-b). Since an analogous description applies to the good and the just, one can see that forms are very different from the sorts of things we experience through the sensory perception associated with the usual technai. After forms are introduced in the Republic, they are the objects of the most abstract and highest knowledge, afforded by the power of dialectic. At the end of Book VI, Socrates uses the words for knowledge that we have found in other contexts— understanding (gnôsis) and knowledge (epistêmê). However, in the Divided Line passage a new vocabulary is introduced, as though the conception of knowledge has changed in a fundamental way. As he has in other places, Socrates divides the visible world (horaton) from the intelligible (noêton). Whereas before the intelligible had been the undivided field of gnôsis and epistêmê, now it is subdivided into the fields of mathematical or deductive reasoning (dianoia) and the grasping of the unhypothetical beginning point (nous). The latter is the goal of dialectic (511a-b).

Still, it would be wrong to think of technê and epistêmê as becoming separated from one another. Even though epistêmê is tied to forms, it still has a role in technê. In fact, at the beginning of Republic VI, Socrates gives his interlocutors a peculiar description of what the philosopher will do with this knowledge of reality. Converting Socrates' negative description of the non-philosopher, we find that the philosopher has a knowledge (gnôsis) of the reality of each
Later in Republic VI there is a connection — of a different sort — between techne and epistêma. Knowledge, in the sense of epistêma, will be deductive and logical, like mathematics; unlike mathematics, its deductions will be based on foundations that need no further justification. In part it will be something like mathematical deduction based in fundamental reality. Two aspects of this development are significant. First, using a mathematical model as the root of this conception of knowledge makes it purely theoretical; it is theoretical because, like calculation in the Charmides (165e), it has no separate product. Second, in using mathematical thinking as an analogue for dialectic, Socrates is still relying on the notion of techne since both geometry and calculation are technai. So even though Plato distinguishes between techne and epistêma, their relation is more of a tension than a divorce.

In fact, that dialectic is compared to a kind of techne strongly suggests that there is a distinction between theoretical and practical technai. Practical techne brings into existence products separate from the techne itself, while theoretical techne does not. The account of dialectic in the Sophist reflects just such a distinction between theoretical and practical technai. In this account (253a ff) the Visitor from Elea begins with the idea that there is a techne for telling which letters join to which, just as there is techne for which musical notes mingle and which do not. Then the Visitor turns to the kinds (genê) that he has just introduced: being, rest, motion, sameness, and difference (254d-e). He posits a sort of knowledge (epistêma) for showing which kinds harmonize and which do not. Since this is the knowledge of how to discriminate according to kinds, discriminating is preliminary to showing what kinds harmonize. Still, knowing how to discriminate the kinds is not productive — e.g., in the way carpentry is productive. In the later part of his discussion, in the Statesman, the Visitor, in fact, introduces an intriguing distinction between epistêmai that are practical — like carpentry — and those which are for knowledge only (256d). The Visitor calls them respectively the practical (praktikê) and the theoretical (gnôstikê — clearly related to gnôsis and gignôskein)(259d). However, the theoretical is subdivided into (a) epistêmai like calculation, which only judges or distinguishes the things known and (b) epistêmai like that of the architect (architekton), which command and are thus called commanding (epitaktikê) (259e). The Visitor may seem to have blured his original distinction between practical and theoretical by including commanding knowledge (epitaktikê) in the latter category. Still, the notion that at least part of theoretical knowledge only judges the things known gives us a basis for distinguishing theoretical from practical knowledge. The former entails craft-like skill; but the skill remains focused on the objects of knowledge. In calculation the objects are numbers; in dialectic they are the kinds. This kind of knowledge has no product separate from its activity; by contrast, practical knowledge actually produces something separate, in the way carpentry does. This way of expressing the difference suggests that theoretical epistêma is not so much a body of knowledge as an ability to grasp very abstract sorts of distinctions.

Still, by including commanding knowledge, the Visitor has left a middle ground between the purely theoretical and the practical. Certainly architecture is not practical since it does not directly produce anything, in the way carpentry does. However, it does give commands, whose effects are practical; thus, it is not for knowledge only, in the way in which calculation is for knowledge only. Insofar as architecture is an analogue for the political craft, the Visitor seems to be exploiting this middle ground (259e). It is as though the Visitor is trying to associate the political craft with the most abstract disciplines, like geometry, even though it has to have practical impact. In fact, including commanding knowledge under theoretical knowledge reflects again the tension between the knowledge needed to rule and the elaboration of that knowledge. The ruler needs to be able to engage in purely theoretical investigation; he also needs to bring order into the city. The Visitor turns to the latter activity when he compares the kingly or political knowledge to weaving. Finally, he arrives at the conclusion that the kingly knowledge weaves together all the other epistêmai — like generalship and judging — as well as the laws and those things having to do with the city (305e). While no resolution is offered to this tension two features of this long discussion are suggestive. If the kingly or political epistêma is like weaving, it depends on the ability first of all to distinguish what it will weave together. Insofar as dialectic is the skill of distinguishing the things known, it can serve as preliminary to weaving because it is preliminary to showing how the kinds harmonize. Further, if political knowledge is like architecture, it is a commanding knowledge (epitaktikê epistêma); it gives commands. If we search for the source of these commands, a likely source is the relations and distinctions to be found among forms. If so, the abstract structures discovered by gnôstikê are normative for the city, the way the forms are in the Republic.

3. Aristotle

The obvious place to begin a consideration of epistêma and techne in Aristotle’s writings is in Book VI of the Nicomachean Ethics. Here Aristotle makes a very clear distinction between the two intellectual virtues, a distinction which is not always observed elsewhere in his work. He begins with a distinction between two parts of the rational soul, the calculating part (to logistikon) and the scientific part (to epistêmémonikon). With the calculating part we consider (theôroumen) things which admit of change whereas with the scientific part we consider things which do not admit of
change (1139a5-15). Things which admit of change are, e.g., the contingencies of everyday life; things which do not
admit of change are, e.g., the necessary truths of mathematics. Then Aristotle becomes somewhat more specific about
these parts of the soul. Within the calculating part we find practical thinking. In practical thinking (praktikê dianoia) we
attain truth and falsity with respect to action. In the scientific part theoretical thinking ( theorêtikê dianoia) attains truth
and falsity. Truth and falsity is the goal of all thinking; but with practical thinking the goal is truth and falsity in relation
to correct desire (1139a25-30). Given these capacities, Aristotle turns to the virtues of the rational part of the soul.

There are five virtues of thought: technê, epistêmê, phronêsis, sophia, and nous (1139b15). Various translations have
been offered for each of these terms. Most often, technê is translated as craft or art. While epistêmê is generally
rendered as knowledge, in this context, where it is used in its precise sense, it is sometimes translated as scientific
knowledge. However, one must not confuse this usage with our contemporary understanding of science, which includes
experimentation. Conducting experiments to confirm hypotheses is a much later development. Rather, translating
epistêmê as scientific knowledge is a way of emphasizing its certainty. In any event, as soon as Aristotle introduces
these five terms, he turns to the distinction between the first two virtues. First he defines epistêmê, as he says, in its
accurate sense and leaving aside its analogous uses. Scientific knowledge is distinguished by its objects, which do not
admit of change; these objects are eternal and exist of necessity. More precisely, scientific knowledge comprises
demonstration, starting from first principles; the latter must also be known, although they are not known by
demonstration (1139b15-30). The full account of epistêmê in the strict sense is found in Posterior Analytics, where
Aristotle says that we think we know something without qualification ( epistasthai…haplôs) when we think we know
(gignôskein) the cause by which the thing is, that it is the cause of the thing, and that this cannot be otherwise (71b10-
15). As though to emphasize the necessity of what is known, he most frequently uses geometry as an example of
epistêmê. In this regard, it should be pointed out that Aristotle uses the notion of cause ( aitia) in a broader sense than it
usually has in contemporary thought. Thus, understanding how the geometrical axioms lead to a theorem that right
triangles have a certain property would be an instance, for Aristotle, of understanding the cause of the proven property
of the right triangle.

With this distinction between the spheres of scientific knowledge and of craft we seem to have, at last, the classic
division between the purely theoretical and the purely practical. Scientific knowledge concerns itself with the world of
necessary truths, which stands apart from the world of everyday contingencies, the province of craft. Still, there are
many problems of interpretation surrounding this description of scientific knowledge in Posterior Analytics. While we
cannot address them in this article, we can at least point out a central one. The description just given of epistêmê
makes scientific knowledge into a deductive system in which the relations among terms are invariable and necessary.
The problem for commentators has been how to reconcile this description of epistêmê with Aristotle's actual procedure
in such treatises as the Physics and De Anima, where one does not find a deductive system of invariable and
necessary relations. One possible explanation is that these treatises are preliminary sketches for a truly scientific
treatise. So one could envision another Physics which would be a series of deductions, all expressing invariable and
necessary truths about nature. However, this charitable assessment does not avoid all problems. In Metaphysics II,
Aristotle explicitly undermines the possibility of an epistêmê, in the strict sense, with respect to nature. At the end of
Book II, Aristotle makes a distinction between the accuracy to be found in mathematics and that in other disciplines.
Mathematical accuracy, he says, cannot be expected in all things but only in those which do not contain matter. In
particular, then, one cannot expect mathematical accuracy in the study of nature since it is concerned with matter
(995a15-20). If 'mathematical accuracy' means the grasp of necessary and invariable relations among terms, then the
study of nature will, by definition, have no such accuracy because what it studies contains matter. About nature, then,
we might have to settle for something less than epistêmê in the strict sense. Indeed, in Book VI of the Metaphysics,
Aristotle seems to make a major concession on the issue of epistêmê when he says that there is no knowledge of the
accidental, i.e., what happens infrequently, because all epistêmê is of that which is always or for the most part ( hós epi
to polu) (1027a20). Instead of grasping what is always and necessary, knowledge can then grasp what happens for the
most part, e.g., the regularities of nature, to which there are exceptions.

There is, then, some ambivalence in Aristotle's use of the term epistêmê. For our purposes in this article, we will leave
suspended the question whether epistêmê in the strict sense is achievable in the study of nature. Still, we can
recognize a secondary sense of epistêmê, since Aristotle in some contexts uses epistêmê although the strict conditions
do not hold. One of these contexts appears to be the study of nature. As we shall see, this secondary sense is
important for understanding the relation between technê and epistêmê.

Let us return to the definition of craft in the Nicomachean Ethics. Having distinguished craft from scientific knowledge,
Aristotle also distinguishes it from virtue ( aretê). To do so he begins by distinguishing between making something
(poièton) and action ( praktikon), since the disposition ( hexis) with respect to making is different from the disposition with
respect to acting. Technê is a disposition ( hexis) that produces something in a way of true reasoning; it is concerned
with the bringing into existence ( peri genesin) of things that could either exist or not. The principle ( archê) of these
things is in the one who makes them, whereas the principle of those things that exist by necessity or by nature is in the
things themselves (1140a1-20). Presumably Aristotle means to distinguish between activity, whose end is in itself, and
making, whose end is a product separate from the activity of making. When someone plays the flute, e.g., typically
there is no further product of playing; playing the flute is an end in itself. This distinction is clearer in the opening
paragraphs of the Nicomachean Ethics. There Aristotle says that each technê, investigation, action ( praxis), and
undertaking seems to aim at some good. The ends vary, however; some ends are the activities themselves and some
ends are products ( erga) beyond the activities. As examples of ends, he cites health as the end of medicine, a ship as
the end of shipbuilding, and victory as the end of generalship; these ends are products separate from the respective
This distinction between making and acting is important for the distinction between craft (technē) and virtue (aretē) because virtue is a disposition for acting. The value of the works (ginomena) of technai is in the works themselves — because they are of a certain sort. By contrast, the value of a virtuous action depends on the agent, who must act with knowledge and deliberately choose the action for itself; finally, the action must come from a fixed disposition of character. The latter two features do not belong to technē (1105a25-1105b5). Presumably, then, the craftsman does not choose his activity for itself but for the end; thus the value of the activity is in what is made. In the case of virtue, by contrast, the value is not in a separate product but in the activity itself. Indeed, Aristotle has another important reason for distinguishing technē from virtue. As a rational potency (dunamis meta logou) technē is capable of contrary effects. Medicine, e.g., can produce both disease and health. The reason is that knowledge (epistêmê) is a rational formula (logos) which explains a thing and its privation. Presumably, then, medicine includes a rational formula or definition of health and its privation, disease; hence, it is a capacity to produce either of these opposite states. Aristotle goes on to say that, while the knowledge is relevant to both states, in a sense it is most relevant to the positive state (Metaphysics, 1046b5-25). Of course, virtue is not a potency for contrary effects in any way at all.

Now that we have traced Aristotle’s way of distinguishing craft from scientific knowledge and from virtue, we can focus on craft as productive. As we have just seen, craft is productive because it has an account to give of what it produces — a notion we have seen in Plato. Aristotle also gives us a very interesting sketch of the way this account is the basis for practical reasoning. In an important example from Metaphysics VII we see how the account of the goal is the basis for reasoning which ends in action. In production the form is in the soul of the one who produces; in the case of medicine, health is such a form. To begin with, health is knowledge (epistêmê) and an account (logos) in the soul. Then the physician engages in the following kind of reasoning: since health is this particular state, if the patient is to be healthy, he should have this other particular state, for instance homogeneity, and if he is to have homogeneity, he should have heat. The physician continues to reason in this way until he arrives at the last step, the thing he can do. From this point the process, which aims at health, is called production (1032b1-10).

With this sketch of practical reasoning we can come to closer grips with what sorts of things admit of change. Let us begin with health and the claim that the physician has an account of health. It is health that is the cause of the steps in the practical reasoning because it explains what is to be done. In what way does health admit of change? One possibility is that what constitutes health is not invariable; thus the account of health would not be invariable. While it seems unlikely that health is variable in this sense, what obviously admits of change is whether health exists in this particular case or not. If health does not exist in this case, it is up to medicine to restore it. In this sense, as well, all of the steps prescribed by the practical reasoning admit of change. In the case of this patient, homogeneity may or may not exist; heat may or may not exist. However, there is another sense in which the steps in the syllogism might admit of change. Each step alleges a productive relation — e.g., heat produces homogeneity. Now, there is a sense in which these relations admit of change. While heat produces homogeneity, in a particular case heat causing homogeneity may or may not exist because there may or may not be heat. To say of all these conditions that they admit of change, then, implies that they could or could not exist. Whether these conditions exist or not depends on an agent bringing them into existence. So the field of craft is those conditions that can be brought into existence by an agent.

To this kind of contingency, however, another must be added. The productive relation can be contingent in another sense. It is contingent whether heat, e.g., produces homogeneity. Heat does not invariably nor necessarily produce homogeneity, although it does do so for the most part (Prior Analytics, 32b5-20). There are, then, two kinds of contingency possible in practicing medicine. The first kind has to do with whether the physician acts or not; the second kind has to do with whether the productive relation holds or not. On the one hand, if the first kind of contingency held but the second did not, the physician would have a nearly sovereign command of health. If the productive relations between heat and homogeneity and between homogeneity and health were invariable and necessary, then so long as the physician could produce heat, he could invariably produce health. On the other hand, if the productive connections were not invariable and necessary — but only held for the most part — then the physician could reliably but not invariably produce health (Metaphysics, 1026b30-1027a25). One could say of contingent productive connections that they hold unless something unusual happens, that, e.g., heat always causes homogeneity unless something unusual intervenes. Accidental factors — by definition factors which arise infrequently — can defeat the causal link between heat and homogeneity. But since accidental factors are infrequent, one can claim that for the most part heat causes homogeneity. In view of this kind of contingency, what the physician can claim to know is that heat produces homogeneity unless something unusual intervenes. In his deliberations, what he does not know is when something unusual will happen (Nicomachean Ethics, 1112a20-1112b10).

Scientific knowledge, in the strict sense, does not deal with these kinds of contingency. Nevertheless, Aristotle still describes medicine — which does deal with contingency — as an epistêmê, as we have seen. Indeed, from time to time, Aristotle mentions epistêmê and technē in the same breath, as though they are not as distinct as Nicomachean Ethics VI would make them seem. In the Physics (194a20), Aristotle argues that the student of nature will study both form and matter. To illustrate he says that it belongs to the same epistêmê to study the form as well as the matter; the physician, for instance, studies health as well as bile and phlegm. In Nicomachean Ethics, in his polemic against the Platonic notion of the good itself— using epistêmê and technē indifferently — Aristotle says the physician does not study health as such but human health — even the health of this human because it is individuals that he cures (1097a10-15). Clearly, if medicine is an epistêmê which studies health, it is also a technē which produces health. If he were using epistêmê in its strict sense, he ought not to have called medicine epistêmê. Indeed, the mixing of epistêmê
and technê is not confined to medicine. In *Nicomachean Ethics* II, when he illustrates the notion of the mean between extremes, he cites experts in physical training. Then he says that every epistêmê achieves well its goal (ergon) by looking at the mean and using that as a standard in its products. His use of the words techntai (craftsmen) and technê to describe this phenomenon shows that he is not thinking of epistêmê in its strict sense (1106b5-15).

Thus, a mixed picture of epistêmê and technê begins to emerge. While technê deals with things which change, Aristotle still has a tendency to call it epistêmê. The reason for this tendency is probably that, while the person with technê does not have epistêmê in the strict sense, he has something close to it. At the beginning of the *Metaphysics*, Aristotle says that the person with epistêmê and the person with technê share an important similarity. There Aristotle contrasts the person of experience (empeiria) with someone who has technê or epistêmê. The former knows that, when Callias had such and such disease, thus and such helped him, and the same for Socrates and many others. However, the person who has a technê goes beyond experience to a universal judgment. This judgment is that this remedy helped all individuals of this type, with this disease. Examples of the types of individuals are the phlegmatic and the bilius, when afflicted with a burning fever (981a5-15). However, it is important to note that the universals cited — phlegmatic and bilius — have a role to play in explaining a fever and, thus, a role to play in the account of a cure. As Aristotle says, the master craftsman (techntês) is wiser than the person of experience because he knows the cause, the reasons that things are to be done. The mere artisan (cheirotechnês) acts without this knowledge (981a30-b5). Aristotle goes on to say that in general the sign of knowing or not knowing is being able to teach. Because technê can be taught, we think it, rather than experience, is epistêmê (981b10). Presumably the reason that the one with technê can teach is that he knows the cause and reason for what is done in his technê. So we can conclude that the person with technê is like the person with epistêmê; both can make a universal judgment and both know the cause.

Still, even if the craftsman is capable of a universal judgment about the cause of disease, the accuracy of the judgment is not absolute, as we have seen, but holds only for the most part. In this regard it is reminiscent of the kind of accuracy Aristotle says is to be expected in the study of the supreme good. In *Nicomachean Ethics* I 3, he says that it is political science (politikê epistêmê) which pursues this study (1094b1). Since there is disagreement and error surrounding the topic of the good, we must be content, concerning such a subject and relying on similar premises, to show the truth roughly and in outline. Given a subject and premises that hold for the most part (hôs epi to polu) similar conclusions will follow. He adds that it is the mark of an educated person to seek the amount of accuracy (takribes) that the nature of the subject matter permits (1094b20-25). Later in Book I, Aristotle returns to the problem of the accuracy appropriate to different undertakings; one must seek accuracy (akribeian) according to each subject matter and to the degree that is appropriate to the method for investigating it. He illustrates this problem by comparing geometry with carpentry. Both seek (epizétaous) the right angle, the latter insofar as it is useful for his product and the former as to what it is and its properties, since he is looking for the truth (1098a25-30). Here Aristotle suggests the notion of practical accuracy, clearly distinct from mathematical accuracy, is possibly distinct from the accuracy of the study of nature.

### 4. The Stoics

Among the Stoics, the relation between epistêmê and technê is the richest and most focused of all the accounts we have so far considered. That relation is enmeshed in the Stoic account of virtue, in which the two notions of knowledge and craft flow together in forming the science and art of living. Zeno refers to a technê which cures the diseases of the soul (SVF, i.e., *Stoicorum Veterrum Fragmenta*, I 323) and Chrysippus says that practical judgment (phronêsis) is a kind of technê concerning the things having to do with life (SVF II 909). While virtue is compared to a technê, it is also a complete and unshakeable understanding of the universe. It has then some of the features of an epistêmê in Aristotle's strong sense. Clearly, such a position rests on the basis of peculiar Stoic doctrines. We can begin with the Stoic idea of impulse to action. Diogenes Laertius says that, according to the Stoics, an animal has self-preservation as the object of its first impulse (hormê). So, the first thing appropriate (oikeios) to every animal — including humans — is its own constitution and the consciousness of this. Impulse leads every animal to seek what is appropriate to it and rejects what is not appropriate. In addition, the constitution of adult humans includes reason; so, reason supervenes on what would be purely automatic impulses in other animals. Stoics say that reason is itself the craftsman (techntês) of the adult's impulses (Diogenes Laertius 7.85-6).

For the Stoics, however, reason's being the craftsman of all adult human impulses does not imply a division between the rational and any non-rational parts of the soul. Orthdox Stoics do not divide the soul into reason and non-rational desires. Without this division there is no basis for a distinction between epistêmê as an intellectual virtue and reason as exercising a kind of technê with respect to some non-rational element. Rather, there is only the reasoning (dianoia) and governing principle (hêgemonikon) which is capable of opposite states and thus becomes either virtue or vice (Plutarch, *On moral virtue* 441 C-D). Moral weakness or hesitancy comes from alternating judgments about what is morally right (446E-447A). Such an account implies that reason controls impulse solely by its judgments. One's emotions, then, are not independent of reason; they cannot pursue as good something different from what reason takes to be good. In those who do not know what the good is, reason gives rise to mistaken impulses to action. For instance, the belief that health is good is mistaken because only virtue is good; still, this mistaken belief is expressed as fear at the prospect of losing one's health, which, in turn, can move one to preserve health at the expense of virtue. However, in the one who knows that virtue is the only good — the sage — reason, unimpeded by fear, gives rise to impulses that aim only at virtue. If reason is the craftsman of impulse and if technê implies knowledge, then it molds one's impulsive feelings, i.e., the ones that lead one to act, through knowledge of the good.

However, this knowledge of the good locates what is good for the sage in what is good for the whole universe. Zeno
says that the end of life is to live in accordance with nature. In fact, living in accordance with nature is the same as virtue (Diogenes Laertius, 7.87). Chrysippus modifies Zeno’s claim when he says that living in accordance with virtue is equivalent to living in accordance with the experience of what happens by nature. What happens by nature is governed by universal law, which is right reason pervading everything and is identical with Zeus, who is the leader of the governance of everything (Diogenes Laertius, 7.87-8). The consequence is that the sage’s reason, endowed with knowledge of the way right reason pervades the universe, supervenes on impulse with the good of the whole in view. Chrysippus says that there is no other or more appropriate way of approaching the account of things which are good and bad or the virtues or happiness than from universal nature and from the governance of the universe. (Plutarch, On Stoic Self-contradictions 1035 C-D)

At this point, we can appreciate the way Stoicism presents a distinct view of the relation between epistêmê and technê. Socratic intellectualism holds that what one knows to be good is sufficient for one to do what is good; but it has no moral psychology to justify the claim. Finding the claim itself paradoxical, Plato explains the hesitancy to do what one knows to be good by introducing non-rational elements into the soul. (See the entry on ancient ethical theory, especially the sections on Socrates and on Plato.) Finally, the Stoics return to a form of Socratic intellectualism. However, Stoicism provides the missing moral psychology with its doctrine of the unity of the soul. In the soul of the Stoic sage, the knowledge of the good is an unshakeable grasp of what is good both for the sage and for the whole universe. Because of its unity, there is nothing in the soul of the sage to oppose this knowledge. It is as though the Stoics assume that, without opposition, this sort of knowledge would naturally pass over into action once the connection is made with a particular situation. Any reason to think otherwise is false. One type of false opinion is theoretical (and external to moral reasoning) and comes from mistaken views about moral psychology that clutter the soul up with non-rational parts. The other type is practical (and internal to moral reasoning) and comes from failure to know that virtue is living in accordance with nature and is the only good. This type of false opinion gives rise to such emotions as fear, which impede living in accordance with nature. Once these are swept away, knowledge of what is good is motivation enough to act. In the sage, then, where the unity of the soul is perfected, the theoretical grasp characteristic of epistêmê just is a technê.

The way this technê works is illustrated in another widely held Stoic teaching, i.e., the unity of the virtues. Zeno held that virtue is practical knowledge (prhonêsis) in various forms. When prhonêsis deals with what is owed to others it is justice (dikaiosunê); when it deals with what should be chosen it is moderation (sôphrosunê); when it deals with what must be endured it is courage (andreia). In all of these definitions Zeno means prhonêsis to be knowledge (epistêmê) (Plutarch, On moral virtue 441A). According to Sextus, the Stoics say that prhonêsis, being knowledge (epistêmê) of the good and the evil, provides a technê concerning life (SVF III 598). Here we can see the  ‘sage’ or fully perfected human being has a kind of insight into what is good and bad in each situation of life. In its particularity, this insight is like that of a master craftsman, who knows what is appropriate at each juncture of his practice. And like the master craftsman, the sage reacts appropriately both in the way he feels and in the way he acts.

Still, there is room for a distinction between epistêmê and technê. Several authors attribute to Zeno the notion that a technê is a systematic collection of cognitions (katalêpseis) unified by practice for some goal advantageous in life (SVF I 73). The difference between technê and epistêmê properly speaking is that the latter is said to be secure and unshakeable by reason (Stobaeus 2.73.16-74.3). In general, however, technê does not have the same kind of stability (Cicero, On Ends III.50). Indeed, such technai as love of music, and liberal arts in general, are not even called knowledge (Stobaeus, 2.67, 5-12; cf Seneca, Letters 88). Nevertheless, such distinctions between epistêmê and technê do not keep the Stoics from characterizing virtue as technê. This special technê does consist in a secure and unshakeable insight into what is appropriate at each juncture of life.

A significant refinement of this technê is found in Cicero’s On Ends. In Book V, Piso, representing the views of Antiochus of Ascalon, gives an overview of philosophical schools. The account depends on the notion of the highest good (summum bonum) because differences about the highest good define the possible schools. The explication of these differences begins with an analogy drawn from the crafts (artes, Cicero’s Latin for the Greek technai). First of all, the art is different from its object. Second, as medicine is the art of health and navigation the art of guiding ships, so prudence (practical wisdom) is the art of how to live (vivendi ars est prudentia). Piso presents this last claim as common to all the schools, or at least as a good way to present an element which is common. Next he says that whatever prudence would aim for is something suited to our nature and the object of natural impulse (what the Greeks call hormê). Stoics hold that prudence aims for the primary objects of nature. The primary objects of nature include such things as life and health. However, Stoics do not hold that actually obtaining the primary objects of nature is the highest good. Rather they maintain that making every effort to obtain them (i.e., appropriate ones among them, given the circumstances), even if one is unsuccessful, is morality and is the only thing desirable for itself and the highest good (V.16-20).

If life and health are among the primary objects of nature, then the Stoic teaching is that doing everything to obtain life and health is morality. But this claim must be qualified; it is not moral to strive for life and health in an unjust way. Another of the primary objects of nature is human solidarity. Thus, making every effort to obtain life and health (and the other primary objects of nature) is the same as being virtuous, just as making every effort to cure a patient is the same as following the craft of medicine. Whether the sage actually obtains life and health (or his other specific objectives in his actions) is beyond his control. Finally, however, virtuously striving for these is more important than obtaining them — it is, in fact, the only true good.

In Book III, the Stoic Cato explains this complicated position. Human beings begin life automatically and instinctively
Alexander returns to this theme in his commentary on Aristotle's need such things as health and prosperity. But what is divine is free of all need (contrast between the divine and the human also figures in another auxiliary argument. In passing, Aristotle says that action — has no end outside itself, he immediately offers an argument to the effect that even virtuous actions have

In his commentary on the kind of syllogism relative to what happens for the most part, Alexander calls the technai that use this kind of syllogism stochastic. The root sense of ‘stochastic’ is the ability to aim or hit. Obviously there is an ambiguity in the notion. A necessary condition of being able reliably to hit the target is being able to aim; but aiming and hitting are different. If one aims well, she usually hits, but contingencies can intervene. Stochastic technai are ones subject to this kind of contingency. Alexander calls them stochastic, in the sense of conjectural (In An.Pr. 39, 15-40, 5). When the physician, e.g., aims at health, his aiming is a kind of conjecture, albeit grounded on, that such and such treatment will produce health.

In commenting on the notion of contingency in Aristotle's Prior Analytics, Alexander introduces the idea of stochastic technê — an idea important for the Stoic explanation of virtue that we have just seen. Aristotle himself recognizes a kind of knowledge that deals with things that happen for the most part; what happens for the most part is distinct from what may or may not happen (Prior Analytics, 32b5-20). In his commentary on the kind of syllogism relative to what happens for the most part, Alexander calls the technai that use this kind of syllogism stochastic. The root sense of ‘stochastic’ is the ability to aim or hit. Obviously there is an ambiguity in the notion. A necessary condition of being able reliably to hit the target is being able to aim; but aiming and hitting are different. If one aims well, she usually hits, but contingencies can intervene. Stochastic technai are ones subject to this kind of contingency. Alexander calls them stochastic, in the sense of conjectural (In An.Pr. 39, 15-40, 5). When the physician, e.g., aims at health, his aiming is a kind of conjecture, albeit grounded on, that such and such treatment will produce health.

In a different vein, Alexander makes an interesting addition to Aristotle's distinction between epistêmê and technê. In his account of wisdom in Book One of the Metaphysics, Aristotle argues that knowledge is valued for its own sake. In one place, Aristotle says that what distinguishes experience (empeiria) from technê is that the latter has a rational account, which explains what it does. Of course, the one with experience may be more effective than the inexperienced person who has only the rational account. Still, we think the craftsman wiser than the empiric because of his knowledge of the account (Metaphysics 981a 5-30). The suppressed conclusion is that wisdom is characterized by knowledge of causes quite apart from the utility of knowing the causes. Another argument shows that wisdom is not productive knowledge. Since wonder is the beginning of philosophy, satisfying that wonder is an end in itself. In fact, this kind of pursuit arose when the requirements of necessity and ease were satisfied (Metaphysics 982b 10-15). So wisdom is knowledge without practical utility, an end in itself.

In his commentary on the Metaphysics, Alexander interprets these arguments as showing that pure knowledge is superior to action. But there is a difference between the claim that there is a kind of knowledge which is an end in itself and the claim that pure knowledge is superior to action. The latter idea is a distinct development in thinking about the relation between knowledge and craft. This development rests on the notion that action implies need and it is better to be without need. So knowledge that fills no need is superior to action, which fills some need or other. We see this idea at work in the auxiliary arguments which Alexander offers to back up or explicate claims made in Aristotle's text. For instance, when Alexander first claims that Aristotle means to show that knowledge is more honorable than action, he says that action aims at some end other than itself. As though remembering that virtuous action — unlike productive action — has no end outside itself, he immediately offers an argument to the effect that even virtuous actions have reference to the passions. Divine beings, who are without passions, have no need of virtue. Those who have passions need the virtues in order to control the passions (In Metaph. 2, 1-10). Obviously, to have passions is to be in need. The contrast between the divine and the human also figures in another auxiliary argument. In passing, Aristotle says that one might justifiably think that wisdom is beyond human ability because in many ways human nature is in slavery (Metaphysics 982b30). Alexander explicates the remark about slavery by saying that humans are slaves in that they need such things as health and prosperity. But what is divine is free of all need (In Metaph. 17, 15-20).

Alexander returns to this theme in his commentary on Aristotle's Prior Analytics. At the beginning of the commentary,
he claims that theorizing is the highest of human goods. In making out this claim, Alexander points to the situation of the gods, who are without emotions and therefore do not need the moral virtues. Nor do they need to deliberate. What is left is contemplating the truth. For the gods, theorizing about truth is continuous and uninterrupted. Such a state is impossible for humans in general; but some may approach it. By leaving behind emotions and the human condition, one may engage in the divine activity of pure theorizing. Insofar as one is engaged in this activity, a human becomes like the gods. If becoming like god (homoiôsis theô(i)) is the greatest good for humans, then syllogistic, the method for theorizing, is most valuable (In An. Pr. 5.20 - 6.10). Although expressed hypothetically, becoming like god is being put forth as the greatest good for humans. Even if a human cannot always be in such a state, when he is in a state of continuous and uninterrupted theorizing about the truth, he is just so far forth like god. In this discussion Alexander is building on themes found in Aristotle’s Nicomachean Ethics (X.7-8). There Aristotle argues that the life of contemplation is happiness because it is the virtue of the highest part of the soul, reason. Since this part is the most god-like, contemplation is in some sense divine activity. Still, in these passages, Aristotle continues to talk about integrating contemplation of truth within the context of a human life. By contrast, Alexander suggests that one might lead — or at least strive for — a god-like life of pure contemplation. In such an account, pure theory is expressly divorced from practice and promoted over it.

6. Plotinus

As might be expected, Plotinus’ philosophy does not have much use for the concept of technê. Its account of knowledge is fuller than that of craft and is close to Aristotle’s idea of epistêmê in the strong sense. In the Enneads, epistêmê is not directly associated with technê. In the first place, epistêmê refers to the particular cognitive state of the first hypostasis from the One, Nous, in which there is an identity between knowledge and what is known (VI. 6. 15). Our souls gain true knowledge by the presence of Nous, although Nous knows non-discursively while our souls characteristically know in a discursive way (V. 9. 7; IV. 3.18). Discursive knowledge is the sort of knowing that moves from, e.g., premise to conclusion; non-discursive thought, then, is a unitary grasp or understanding. Discursive knowledge, through dialectic, is able to speak in a reasoned way about each thing, say what it is and in what way it differs from others, and what it has in common with those with which it exists, and so on. It does all these things with certain knowledge (epistêmê) and not by opinion (I. 3. 4). Plotinus also uses epistêmê in another sense to refer to the various branches of knowledge which are articulated in theorems (e.g., IV. 3. 2). Since the ideal state for a human is to enjoy the knowledge which is found in Nous and then, beyond that, the contemplation of the One, Plotinus gives short shrift to the civic virtues of courage, justice, and moderation. Once one attains the higher levels, he gives up the civic virtues in their usual sense. At this level, moderation, for instance, is not measure and limit but rather separation from one’s lower nature (I. 2. 7. 25).

Technê, then, is even further down Plotinus’ list of concerns. He gives as examples of technê grammar, rhetoric, lyre playing, music, housebuilding, medicine, and farming (II. 3. 2. 10-15; IV. 4. 31. 15-20). The most important use of the nature of technê is to illustrate points about the coming to be of the universe. Plotinus holds that Nous gives rise to the rational principle (logos) which is responsible for the existence of our universe (III. 2. 2) although the rational principle does not create the universe because the universe neither comes into existence nor perishes (III. 2. 1). Still, Plotinus uses analogies with technê to explain the work of the rational principle. In the treatise on beauty, he says that beauty in the material world comes from shape or form and rational principle; insofar as matter is ordered by these it is beautiful. As an illustration of this point he cites the way technê can bestow beauty on a house and its parts (I. 6. 2). In justifying the presence of both good and evil in the universe, he cites the way a painter includes varying and contrasting elements in painting (III. 2. 11). In another very striking passage, Plotinus invokes the technê of dance, music, and drama to explain the way contrasting elements in the life of the universe are blended (III. 2. 16). Nevertheless, there are ways in which the activity of the rational principle is different from technê. The most important is that rational principle does not reason that the universe should exist; the creative power of rational principle is the power to make another thing without striving for its being made. This power is not acquired or learnt the way a technê is (III. 2. 2). In explaining the way nature works, Plotinus says that nature is productive because of its contemplation of realities in Nous. Its act of contemplation makes what it contemplates — as though the very act of contemplation were automatically productive (III. 8. 4). In a similar vein he says that the universe is an image of reality but does not exist by discursive thought (dianoia) nor by contrivance of craft (epitechnêsis) (II. 9. 8). Plotinus, then, is proposing the interesting notion that pure thought, while distinct from craft, can be productive in its own right.

Hence Plotinus can dismiss technê as later than soul and intimidating it, making unclear and weak copies, childish things not worth much, stacking up many devices in making an image of nature (IV. 3. 10). Still, Plotinus makes some interesting claims about craft when he is being less severe. Making an analogy with the beauty in Nous, Plotinus says that the statue is beautiful not because of the stone but because of the form which craft puts in it. Moreover, this beauty which exists in the craft is much better than the beauty expressed in the stone (V. 8. 1). Drawing another analogy between Nous and technê, he says that the forming principles of the universe come from Nous the way the forming principles in the souls of craftsmen come from their crafts (V. 9. 3). Finally he raises the question whether technê might be based somehow in the intelligible world. In answer, he distinguishes those crafts which imitate nature from those which consider proportion in general. The former are painting, sculpture, dance, and mime. However, music deals with proportion of an intelligible kind (V. 9. 11). Music, then, has some grasp of purely intelligible proportion.

Bibliography
Primary Sources


Secondary Literature


Epistème and Techne. First published Fri Apr 11, 2003; substantive revision Sun Jun 22, 2014. Epistêmê is the Greek word most often translated as knowledge, while technê is translated as either craft or art. Xenophon’s only sustained discussions of epistêmê and technê are in two of his Socratic works, Memorabilia and Oeconomicus. Episteme and Techne (Stanford Encyclopedia of Philosophy) First published Fri Apr 11, 2003; substantive revision Sun Oct 28, 2007 is the Greek word most often translated as knowledge, while is translated as either craft or art. These translations, however, may inappropriately harbor some of our contemporary assumptions about the relation between theory (the domain of “knowledge”) and practice (the concern of “craft” or “art”). Outside of modern science, there is sometimes skepticism about the Techne and Episteme: Aristotle’s “reasoned production” in spite of wide usage within Plato, he never offers a clear philosophical definition of techne. Presumably, the use of the word was common enough in everyday speech that a special 17.