Introduction
Eikos *in ancient Greek thought*

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This volume explores the cluster of concepts linked by the Greek word *eikos*. *Eikos* (εἰκός, τὸ εἰκός) in Greek refers to what is probable, likely, or reasonable. Derived from the verb *eoika* ("to be like, look like, seem"), it encompasses both the seemly (as opposed to the improper) and the merely seeming (as opposed to the real). It is a term of art in Greek legal thought, where it denotes a certain type of logical argument, but it also occurs in contemporary historiography, literature, political theory, philosophy, and science. At once a logical operation, a rhetorical trope, and a literary device, *eikos* is a way of thinking about the probable and the improbable, the factual and the counterfactual, the hypothetical and the real.[1]

Eikos was a seminal mode of argumentation in Greek law: in the absence of hard evidence, forensic orators argued from probabilities, tracing through a rhetoric of likelihood the "tracks of suspicion" (as Antiphon puts it, 3.10) leading from the courtroom back to the scene of the crime. Presented as a means of uncovering the truth, *eikos* was in fact a rhetorical device for producing a likely account of the truth and thus a means of reaching the equity (*to epieikes*) of a just verdict. The paradigmatic case is attributed to Corax and Tisias, the quasi-mythical inventors of oratory: in the absence of witnesses, who is more likely to have started a fight, the stronger man or the weaker? (Plato, *Phdr*. 273a–c.) The argument relies on strategic deployment of collective belief and accepted ethical typologies: "How would a man like me assault a man like him?" (*Phdr*. 273c1–2).[2] Aristotle notes a twist on this "classic" *eikos* argument: the stronger man should argue that he was unlikely to have started the fight for the very

[1] Important cognates include *eikōn* (image) and *to epieikes* (equity). *Eikēi* ("at random") is not etymologically related, although later folk etymology may have associated the two: Plut. *Quaest. conv*. 740c; Epictetus 2.12.22. Hoffman 2008: 1 n. 1 provides a thorough bibliography of scholarship on *eikos*.

[2] Plato's Tisias glosses *to eikos* as "what the majority believe," *to tōi plēthei dokoun*, *Phdr*. 273b1. Arist. *An. Pr*. 70a2–10 defines *eikos* as a "generally admitted proposition," based on "what people know for the most part"; cf. Anaximenes, *Rhetorica ad Alexandrum* 7.4.

reason that he would seem the more likely to have done so (*Rh*. 1402a17–23). This reverse *eikos* argument has not only the orator but the criminal himself figuring the probabilities, calculating before he throws the first punch what will seem likely to a jury of his peers. *Eikos* arguments thus draw on – and provide an invaluable window onto – the Greeks' shared assumptions about human psychology, social norms, and narrative verisimilitude.

While orators used *eikos* arguments to construct plausible accounts of an unwitnessed crime, historians used probability to recreate an unwitnessed past: lacking written records, Thucydides remarks that he composes the speeches in his *History* "as it seems to me each of the speakers would have spoken given the demands of the circumstances" (1.22.1). This practice situates the project of Thucydides' historiography within the realm of *eikos*: probable motives affect and effect real outcomes.[3] At the same time, Thucydides' counterfactual statements project *eikos* into the past in order to imagine alternative possible presents and to meditate upon the necessity or contingency of historical outcomes. Such probabilistic thinking also dominated ancient political debate, for, as Aristotle says, "we deliberate about those things that seem capable of turning out in two different ways since there is no point in deliberating about things that cannot be different in past, present, or future" (*Rh*. 1357a4–7). Situated between *anankē* (necessity) and *tukhē* (contingency), a regularity that never hardens into a rule, *eikos* delineates the field of collective political deliberation and individual ethical action.

Eikos operates widely across the various domains of ancient Greek thought. The *Epidemics* of Hippocrates show early medicine as a science of the probable, as doctors diagnosed hypothetical internal states from patients' external signs – complexion, sweat, excretions – and extrapolated from individual cases to general likelihoods useful for prognosis. Here *eikos* denotes a pattern – what happens, as Aristotle says, "for the most part" (*hōs epi to polu*) – that links universal and particular, genus and species, in a relation of likeness (*Rh*. 1357a34–b1, 1402a3–28). This mimetic relation between the general rule and its individual instance is the theoretical foundation of scientific thought, logical argumentation, and jurisprudence.[4] It is also a defining feature of *poēsis* (fiction) which universalizes the particular by eschewing the random quiddity of "what has happened" for

[3] On *eikos* in Thucydides see Westlake 1958, Woodruff 1994; and on Thucydides' counterfactuals, Flory 1988 and Tordoff in this volume.

[4] Anaximenes, *Rhet. ad Alex*. 7.4: *eikos* is when the audience have in mind an example (*paradeigma*) of what has been said. On jurisprudence see Eden 1986: 43–54: equity (*to epieikes*) extends general laws to particular cases through probable accounts of intention.

the patterned plot-lines of "what might happen according to probability" (*kata to eikos*, Arist. *Poet.* 1451a36–38). *Eikos* is the governing modality of art and literature inasmuch as they deal in *eikones* (images): *eikos* grants verisimilitude to art's mimesis, simultaneously likening it to and distancing it from reality.[5] This same ambiguous verisimilitude makes *eikos* an object of intense ambivalence in the discourse that aims at truth itself, not its likenesses. Plato, for one, associates *eikos* with the deceptive rhetoric of the sophists, for whom plausible fictions trump real facts (*Phdr.* 267a6–b1, 272d1–273a1).[6] Yet for us mortals such semblances may be the best we can do and in lieu of certain knowledge, philosophy builds whole theories – even whole cosmologies – on "likely stories" (*eikōs logos*, *eikōs muthos*).[7]

Eikos thus opens onto a broad array of questions, logical and psychological, physical and metaphysical, epistemological and ontological. It allows us to see how the ancient Greeks conceptualized historical truth and literary fiction, the laws of nature and human behavior, social propriety and logical necessity. A broad but coherent concept that served different purposes in science, jurisprudence, historiography, philosophy, politics, and literature, *eikos* also shows how these different discourses intersected and interacted at a time when they were only just beginning to emerge as discrete modes of thought and expression.

This volume looks at *eikos* in ancient Greek thought from a variety of disciplinary perspectives. Its chronological scope is broad, stretching from Homer to Galen, and its conceptual field capacious. The chapters examine *eikos* in all of its temporalities – probability in the present, hypotheticality in the future, counterfactuality in the past – and across its full semantic range: seeming and seemliness, likeness and likelihood, the regularly expected and the scarcely possible.[8] That said, the presence of the word *eikos* and its cognates is not our sole criterion: the volume does not offer a series of word searches.[9] Instead, *eikos* functions here as a lexical shorthand for a specific conceptual field. The historical emergence of a word to name a concept is not a matter of indifference, of course, but a narrow focus on the lexical entry would exclude the many other ways in which the probable was expressed in ancient Greek thought: embedded in the syntax of the Greek conditional sentence and potential optative, for example, or embodied in

[5] On *eikos* and verisimilitude in ancient literature, see Lanza and Longo 1989, Gill and Wiseman 1993, Scodel 1999.
[6] Cf. Pl. *Tht.* 162d3–163a1.
[7] Pl. *Ti.* esp. 29b1–d3, on which see Johansen 2004: 48–68; Burnyeat 2005; Bryan 2012: 114–91.
[8] On the semantic range of *eikos* see the detailed taxonomy of Synodinou 1981; cf. Schmitz 2000: 68–72 and Hoffman 2008.
[9] For the limitations of such an approach, see Dalfen's review of Synodinou: Dalfen 1985: 3.

objects (like Odysseus' bed) or individuals (like Helen of Troy) which functioned as switch-points between alternative versions of reality, casting the shadow of the counterfactual over the real.

Finally, the volume does not aim for comprehensive coverage of the topic; with a topic such as this, *ouk eikos esti*: it is neither reasonable nor fitting. *Eikos* could be tracked in countless authors and areas beyond those discussed here and a counterfactual alternative volume might have contained numerous other hypothetical chapters. This actual volume presents, in place of a comprehensive survey, a series of case studies in ancient Greek probabilistic thinking, each examining the way in which *eikos*, broadly defined, operates – whether as a modality of analysis, its object, or both – in a particular Greek text, genre, or discourse. Our hope is that this necessarily selective study will serve as a provocation to further work on the topic and perhaps even other potential volumes.

The chapters are united by a recurring set of themes and issues: the relation between contingency and necessity; the possibility of certain knowledge and the constraints on ethical action; the unclear distinction between truth and its various semblances. But these issues take on different contours in different discourses. The theme of likeness, for instance, recurs in philosophy, art and literature, and science, but the relation between original and copy, and the significance of that relation, varies markedly. So too the question of contingency and necessity is differently articulated and bears different ramifications in speculative philosophy or retrospective historiography than in the urgent present of political debate. Certain texts feature centrally in a number of papers, especially Plato's *Phaedrus* and *Timaeus* and Aristotle's *Poetics* and *Rhetoric*. These paradigmatic philosophical treatments often influence but by no means exhaust the probabilistic thinking of Greek poets, artists, historians, and scientists: philosophy is not the only discourse with a stake in and take on questions of likeness and likelihood. By adopting a pointedly interdisciplinary approach to the topic, this volume aims to show both the coherence of *eikos* as a concept and its modulation across the diverse topographies of ancient Greek thought.

The history of modern probability has been written from two principal perspectives, both placing its origin in the early modern period. Ian Hacking examines the emergence of the modern mathematical and philosophical understanding of probability in the 1660s, when developments in inductive reasoning and in the concept of evidence effected a combination of the "aleatory" understanding of probability (as a tendency of chance to develop stable frequencies) with the "epistemological" sense of the term (as

the degree of belief merited by the evidence).[10] Others have analyzed the role of probability in the "invention of fiction," in particular the rise of the novel in the eighteenth century. Robert Newsom, for instance, argues that the emergence of the novel was made possible by an "antinomy of fictional probability" by which the reader occupies real and fictional worlds simultaneously. "Of course Aristotle does not know about the antinomy of fictional probability," he remarks.[11]

But that claim is perhaps too hasty. Stephen Halliwell has shown how *eikos* functions in Aristotle to mediate between the "world-reflecting" and "world-creating" facets of literary mimesis and thus to situate fiction in its characteristically equivocal relation to reality.[12] Aristotle already had a well-developed theory of fictionality in which probability played a central role. Likewise, his association of *eikos* with what happens "for the most part" (*hōs epi to polu*) and his distinction between this regularity and the certainty of "signs" (*sēmeia*) anticipates both the aleatory and the epistemological aspects of probability that Hacking identifies,[13] although, to be sure, Aristotle understands both regularity and certainty and the relation between them in distinctly different ways from Leibniz. And it is not just Aristotle: historians, scientists, and forensic orators speculated about the epistemological and evidentiary reliability of *eikos*, while tragedy traced its "aleatory" oscillation between the pure randomness of *tukhē* and the iron regularity of *anankē*. This volume thus hopes to demonstrate that the Greeks were thinking in sophisticated ways about probability many centuries before its supposed emergence in the modern era.

This "prehistory" of probability itself has a history, of course. Plato's attribution of the *eikos* argument to Corax and Tisias locates its origin as a formal type of rhetorical argument in the early fifth century.[14] Needless to say, probabilistic thinking existed long before this "invention." Characters in Homer imagine both hypothetical futures (Hector and Andromache in *Iliad* 6, for instance) and unrealized counterfactuals that would have

[10] Hacking 1975: 17: "there was no probability until about 1660 . . . It is true that we may find in Aristotle sentences translated as, 'the probable is what usually happens', but that was too long ago for us." See further Sambursky 1956, B. J. Shapiro 1983, Daston 1988.

[11] Newsom 1988: 169. He also, however, stresses that "the logical space occupied by probability remains very much the same for us as it was for Aristotle" (13). See further Patey 1984, Pavel 1986, Gallagher 1994, and especially Gallagher 2006, who sees the suspension of disbelief required by the novel's plausible stories as one facet of the "expedient fictionality" that underwrites modern subjectivity.

[12] Halliwell 2002: 151–76. On the ancient Greek "discovery" of fictionality, see Rösler 1980, Bowie 1993, Lowe 2000.

[13] Arist. *An. Pr.* 70a2–10, *Rh.* 1357a34–b21.

[14] See Kennedy 1963: 30–32, 58–61; Goebel 1989; Cole 1991a: 23–27, 82–83, and 1991b; Gagarin 1994. For a concise history of the concept, see Schmitz 2000: 48–51.

produced a different present ("would that I had been borne off by a whirlwind on the day my mother bore me," says Helen at *Iliad* 6.345, hypothetically undoing the entire war and poem). In Homer one sometimes finds contradictory possibilities paratactically juxtaposed. In the paired stories of Helen and Menelaus in *Odyssey* 4, for instance, Helen is depicted first as aiding, then as betraying the Greeks. Helen introduces her speech with the promise (or warning) that she will speak *eoikota* (4.239) but it is not clear whether in this context the word means "what is fitting," "what is likely," or "what seems like truth" (i.e. lies), and the poet does not adjudicate which account is true. This oscillation between two different realities recurs in Stesichorus' palinode, where Helen both went to Troy and did not, and in the programmatic statement of Hesiod's Muses, who know how to speak both the truth (*alēthea*) and "lies similar to truth" (*pseudea . . . etumoisin homoia*, *Theog.* 27–28) but see no need to distinguish clearly between the two and offer no guidance as to how one might do so.

The need for such a distinction and *eikos* as a means of making it come to the fore only in the early fifth century, to judge both from Plato and from the first attested example of the "classic" *eikos* argument. In the *Homeric Hymn to Hermes* (dated to the early fifth century), the baby Hermes defends himself against the charge of having stolen the cattle of Apollo by noting the improbability that a one-day-old infant like himself could have committed such a crime (265–73). The ambiguous parataxis of alternate realities (Hermes stole the cattle; Hermes did not steal the cattle) will be resolved through appeal to *eikos*: the more likely story is the truth, Hermes proposes – disingenuously, since he did in fact steal the cattle.[15]

Such probabilistic reasoning permeated all modes of ancient Greek thought and both distinguished and united them. On the one hand, the role of *eikos* within a discourse or genre could serve to mark its boundaries and to identify it as a discrete intellectual domain: the philosophers' rejection of the likenesses and (mere) likelihoods of poetry or rhetoric defined philosophy, in contrast to these other fields, as a discourse of truth.[16] Meanwhile on the side of fiction, the attitude toward *eikos* – the degree of

[15] The argument is marked as deceptive (*muthoisin . . . kerdaleoisin*, 260) and is consonant with the trickery and theft that characterize the god (cf. 13–16). Contrast Gorgias' *Palamedes*, where the (truly innocent) speaker deploys multiple arguments from probability (ethical, logical, and practical) on his own behalf: see further Gagarin 1994: 54–55 and in this volume.

[16] Pl. *Phdr.* 273d2–274a5, *Soph.* 235d–236d. Bryan 2012 shows how the Presocratic philosophers engage with and distance themselves from poetry (Xenophanes) and rhetoric (Parmenides) on the nature of *eikos* and the epistemology it implies. Gagarin 1994 suggests that, despite Plato's opposition between philosophy and rhetoric on the question of *eikos*, early Greek orators and rhetorical theorists used *eikos* to examine serious philosophical issues, such as causality, agency, language, and truth.

verisimilitude, the place of the miraculous – was one distinguishing feature of literary genre. One can think of the difference between Old Comedy, with its ostentatious mélange of the probable and the improbable, the actual and the impossible, and New Comedy, where generic and social probabilities drive the plot with a force approaching inevitability.[17] Bound to its grounding logic and fundamental ontological presuppositions, *eikos* lets us see how a genre or discourse frames its own realities and imagines possibilities that fall beyond it.[18]

On the other hand, *eikos* cuts across these different realms of thought and points toward a shared mental substructure beneath them. Thus Kathy Eden shows how *eikos* joins Aristotle's thinking on law, ethics, rhetoric, and poetry. The same hypothetical reasoning allows for probable motive in the courts and plausible characters on the tragic stage: equity (*to epieikes*) in law and ethics is thus closely akin to poetic fiction.[19] Reviel Netz links the hypothetical projections of early Greek mathematicians and their "multi-layered ontology" to the suspension of disbelief in contemporary literature, to the competing realities debated in the courts and political assembly and, more broadly, to a society "already willing to embrace the radical thought experiment, the counterintuitive, the merely hypothetical."[20] In making this argument he draws on the claim of G. E. R. Lloyd (1990) that the exceptional methodological self-awareness and explicitness about grounding principles that characterize Greek science had their roots in the open and agonistic political culture of the polis, especially the democratic polis, where every truth was subject to scrutiny, challenge, and revision, and each position had to justify itself in its contest against others. *Eikos* would feature in this cultural ethos both as a strategy of self-justification and as a mode of radical inquiry, both an expedient of eristic rhetoric and an imagination of alternatives to the status quo. Literature's (more or less) plausible fictions and art's (more or less) faithful likenesses, historiography's diagnostic counterfactuals and science's hypothetical prognostications, the "likely stories" of philosophy and the utopian projections of politics: all were instances of a probabilistic thinking – thinking through and about *eikos* – that characterized the mental world of the ancient Greeks. Studying

[17] The Tractatus Coislinianus observes that humor comes from the impossible, the illogical, the unexpected. O'Sullivan 1995: 61–62: "Not only does Old Comedy have no need of probability, but . . . it is quite hostile to it."

[18] I argue this point in regard to legal discourse in Wohl 2010: 133–45, 153–54.

[19] Eden 1986: 25–64. Schmitz 2000 likewise argues that the forensic use of *eikos* arguments must be understood in the context of contemporary Greek thought about the pseudo-referentiality of fictional mimesis.

[20] Netz 2009: 48.

eikos in all its various guises, this volume offers a unique perspective onto that world.

The volume begins with *eikos* in its most fully developed and familiar form. Michael Gagarin traces the development of the juridical *eikos* argument and its ubiquitous opposition to *erga*, facts or reality. This opposition is enshrined in Aristotle's distinction between "artistic proofs" (rhetorical arguments) and "nonartistic proofs" (such as witness testimony or written documents). Forensic speakers uphold this dichotomy in principle, giving evidentiary priority to documents and facts over arguments from probability. Yet while prioritizing *erga* in theory, in practice, Gagarin shows, forensic orators also acknowledged the inextricability of the two. Wills, for example, are introduced in inheritance cases as incontrovertible evidence, but when the validity of a will is contested, its authenticity is proved or disproved through *eikos* arguments. Likewise, laws are cited as an objective yardstick by which to measure the case, but laws must be interpreted and their relevance shown through argumentation, including *eikos* arguments. The very facticity of the fact – including the law itself – is the product of argumentation. In this sense, forensic practice both gives ammunition to Plato's charge in the *Phaedrus* that in the law courts no one cares about truth, only about what is persuasive or likely, and is one step ahead of it: the realities of the case are tacitly accepted to be artifacts of probability.

The ontological implications of such a hypothetical reality might make a philosopher uncomfortable, but the next two chapters show that the philosophical repudiation of *eikos* is not as clear-cut as one might expect. Both Jenny Bryan and James Allen take aim at the opposition, in Plato and Aristotle respectively, between *eikos* and philosophical truth. Jenny Bryan looks directly at the seminal passage in Plato's *Phaedrus* that contains the first explicit philosophical discussion of *eikos*. There we hear that "likelihood comes about for people because of a similarity to the truth (*alētheia*)" (*Phdr*. 273d3–4). While this passage is usually read as setting rhetoric's mere plausibilities in antithesis to philosophical truth, Bryan argues that its "similarity to truth" puts *eikos* in an intrinsic but ambiguous relation to *alētheia*. As an *eikōn* or likeness of truth, *eikos* can be redeemed as an instrument of persuasion by the dialectician who knows the truth and can recognize the nature of its similarities. Philosophy and rhetoric are thus distinguished less by *eikos per se* than by their understanding of it and the use to which they put it. In this way, Socrates rehabilitates *eikos* "as something perfectly compatible (indeed, only really compatible) with the project of philosophical psychagogic rhetoric informed by truth set out in the *Phaedrus*."

James Allen makes a similar case for *eikos* as a tool for philosophy in Aristotle. He too starts from Plato's distinction in the *Gorgias* and *Phaedrus* between rhetoric as the art of plausible likelihoods and dialectic as a practice aiming at truth. For Plato this antithesis entails, at best, the subordination of rhetoric to philosophy. Aristotle, by contrast, is more optimistic about the positive potential of rhetoric as an argumentative method that, like dialectic, leads toward the truth. Allen homes in on Aristotle's claim in the *Rhetoric* that "it belongs to the same faculty to see the true and what is like the true" (1355a14–18). For Allen, as for Bryan, this "likeness" is ambiguously situated in relation to truth, neither identical with nor fully divorced from it; this ambiguity allows rhetoric to draw out our natural affinity for the truth in a way not unlike the practice of dialectic. But whereas dialectic aims primarily at the understanding of fixed and immutable truths, "rhetoric is especially useful in spheres where immutable truths are few and prone to exceptions, where constantly renewed deliberation on the basis of shifting and inconclusive evidence is required to make the decisions on which action is based and where there is no such thing as a fixed and settled condition of the intellect in which all the truths proper to the domain are grasped." Argument by way of plausible likelihoods is a fitting vehicle for this pragmatic, fluid, partial – and quintessentially human – knowledge.

This latter is the realm of knowledge addressed in the next two chapters, the realm of politics. Like Allen, Ryan Balot argues that *eikos* has a positive role to play in this sphere, and he proposes that this is one thing that differentiates politics as a practice from philosophical dialectic. Balot examines the role of "likely stories" in Plato's *Laws* and the consequences of founding a city upon such stories. Are the Athenian Stranger's likely stories intended to lead the citizens toward greater wisdom, or are they simply a tool of social control? The status of these stories is insistently questioned in the text, and their relation to truth and justice, on the one hand, and political expediency, on the other, is left troublingly indeterminate. But this indeterminacy is, in Balot's view, precisely the point. By showing the Athenian's uncertainty about many of the most basic elements of his own political theory, the *Laws* reveals a fundamental problem of political life: our simultaneous inability, as human beings, to know "the whole" and our need to make political decisions even in the absence of such knowledge. The lawmaker's likely stories draw attention to this problem without resolving it, exposing "the discomforts involved in actualizing political theories in real legislation." *Eikos*, on this reading, characterizes the political sphere as such, in both its provisionality and its pragmatism, and recognizing our likely stories for what they are – merely likely, for all that we might wish to

endow them with the certainty of truth and enshrine them in immutable law – can help to prevent politics from congealing into dogmatism.

Vincent Farenga's chapter excavates the cognitive underpinnings of this contingent political practice and proposes that *eikos* forms a cognitive bridge between the mind of the individual citizen and the collective decisions of the polis. One of the key challenges of democratic theory, both ancient and modern, is to understand the process by which the partial and subjective worldviews of individuals, realms of *doxa* (opinion) and *eikos*, are transformed into communal knowledge and collective agency. Farenga shows how the archaic thinkers Solon and Xenophanes addressed this problem and the place of *eikos*, as a limitation or a resource, in their thought. For the former, *eikos* – the subjective situatedness of the individual that makes him able to grasp only what seems true to his own mind – places a limit on the possibility of collective agency, a possibility embodied in an enlightened leader like Solon himself. For the latter, by contrast, it is precisely this epistemological uncertainty at the individual level that serves as an inducement toward collective knowledge: only through collaborative thinking can we transcend the mere seeming of individual intelligence and reach toward the holistic truth represented for Xenophanes by the mind of Zeus. As a practical instantiation of this theoretical process, Farenga points to the Athenian practice of *parrhēsia*, frank speech in the public realm: through *parrhēsia*, what seems plausible to the mind of the individual speaker becomes what seems best to the community, the communal *doxa* that enables political deliberation and action.

Politics is the sphere of probabilities in part because it deliberates about the unknowable future. But the past is no less hypothetical, as we see in the next two chapters. Robert Tordoff's contribution on Thucydides' counterfactual history shows how evaluation of the probabilities of the past enables the sort of contingent political deliberation discussed by Balot and Farenga. Tordoff observes that counterfactual thinking became prominent in Athens after the disastrous end of the Peloponnesian War: in forensic and epideictic oratory and even in the deliberative processes of the democratic Assembly, the Athenians deployed counterfactual logic to imagine how things might have turned out better. Thucydides, he argues, engaged with this contemporary debate, but, in contrast to his contemporaries, his counterfactuals pose the possibility that things might in fact have turned out worse. The Athenians' optimistic counterfactual thinking in the wake of the war allowed them to write off the recent calamities as mere contingencies. Thucydides' pessimistic counterfactual speculation is an antidote to this blithe interpretation of historical probabilities and a defense against