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978-0-521-83746-0 - Archytas of Tarentum: Pythagorean, Philosopher and  
Mathematician King

Carl A. Huffman

Excerpt

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PART ONE

*Introductory essays*

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## CHAPTER I

*Life, writings and reception*

## SOURCES

*(The original texts and translations of the testimonia for Archytas' life are found in Part Three, Section One)*

Archytas did not live the life of a philosophical recluse. He was the leader of one of the most powerful Greek city-states in the first half of the fourth century BC. Unfortunately he is similar to most important Greek intellectuals of the fifth and fourth centuries BC, in that we have extremely little reliable information about his activities. This dearth of information is all the more frustrating since we know that Aristoxenus wrote a biography of Archytas, not long after his death (A9). Two themes bulk large in the bits of evidence that do survive from that biography and from other evidence for Archytas' life. First, there is Archytas' connection to Plato, which, as we will see, was more controversial in antiquity than in most modern scholarship. The Platonic *Seventh Letter*, whose authenticity continues to be debated, portrays Archytas as saving Plato from likely death, when Plato was visiting the tyrant Dionysius II at Syracuse in 361 BC. Second, for Aristoxenus, Archytas is the paradigm of a successful leader. Elected general (*stratēgos*) repeatedly, he was never defeated in battle; as a virtuous, kindly and democratic ruler, he played a significant role in the great prosperity of his native Tarentum, located on the heel of southern Italy.

Archytas' connection to Plato is important in a number of ways, but it is helpful to begin by removing him from the shadow of Plato and the controversies surrounding the *Seventh Letter*, in order to see what we can determine about his life, independently of the Platonic tradition. To begin with, he was clearly a central figure in the Greek world, in the first half of the fourth century, both as an intellectual and as a man of action. He received a considerable amount of attention from important writers of the mid and late fourth century. These fourth-century authors are our most reliable sources and form the basis of what is trustworthy in

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the two brief, extant lives of Archytas in Diogenes Laertius (A1) and the *Suda* (A2). Aristotle wrote more books on Archytas than any other individual figure. He devoted three books to the philosophy of Archytas himself and wrote another consisting of a summary of Plato's *Timaeus* and the writings of Archytas (see A13). Aristotle's pupil, Aristoxenus, appears to have begun the tradition of peripatetic biography and wrote a life of Archytas, thus putting him in the select company of Pythagoras, Socrates and Plato. Aristoxenus was from Tarentum and began his philosophical career as a Pythagorean, so that it is not a surprise that he should choose to write a life of his countryman, but that choice also reflects the prominence of Archytas. Aristoxenus' contemporary, Eudemus, another pupil of Aristotle, referred to Archytas prominently in his history of geometry (A6, A14) and his physics (A23–A24).

Whereas Aristotle's works on the philosophy of Archytas, now lost, do not seem to have been much used in the doxographical tradition, Aristoxenus' life undoubtedly lies behind much of the later biographical and anecdotal tradition about Archytas. Diogenes Laertius mentions Aristoxenus twice in his brief *Life of Archytas* (A1). Aristoxenus is explicitly named by Athenaeus as the source for the debate on pleasure between Archytas and the Syracusan hedonist, Polyarchus (A9). He is also likely to be the source for the story of Archytas' unwillingness to punish in anger (A7) and may be the source of a number of Cicero's reports about Archytas as well as, perhaps, those of other Romans of the first century BC (see on A9a). Aristoxenus (born ca. 375) was somewhere between fifteen and twenty-five years old when Archytas died (360–350 BC), so he may have had some first-hand knowledge of his subject. Moreover, as a native of Tarentum he will have had a number of contacts there, most notably his father, Spintharus (A7), who was an adult during Archytas' prime years at Tarentum. Aristoxenus was thus in a position to possess very accurate information about Archytas' actions and beliefs. The testimonia show that his *Life* was not a spare catalogue of events but rather relied heavily on anecdote to make points about the character of Archytas (A7). Aristoxenus also brought out Archytas' views by dramatizing his meetings with other philosophers and putting speeches into the mouths of both Archytas and his opponents (A9). The surviving evidence suggests that Archytas was presented in a largely positive light, and we might therefore suspect that the *Life* is primarily an exercise in uncritical hagiography. Archytas' opponents, however, also appear to have been given a fair hearing and are not simply straw men (Polyarchus in A9). Archytas himself, moreover, seems to have been given a few foibles (A7 and A11).

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It may thus be better to conclude that Aristoxenus' *Life*, while favorable, was not simply panegyric (Momigliano 1993: 76).

## CHRONOLOGY

It is impossible to determine the chronology of Archytas' life with any certainty. Most reconstructions of it are based heavily on the problematic tradition about the dealings of Archytas with Plato, to which I will return below. The best estimate based on the remaining evidence is that Archytas was born sometime between 435 and 410 and died sometime between 360 and 350. Strabo clearly associates Archytas with the flourishing of Tarentum, after which the city entered a period of decline, which in turn led it to hire a series of mercenary generals to fight its wars (A4). Since the mercenaries start ca. 340, Strabo's account suggests that Archytas was gone by 350 at the latest. The *Erotic Oration* (A5c1) groups Archytas with Timotheus (died 355–4) and the fact that Archytas is listed after Timotheus might indicate that Archytas died after 355. The external history of the Greek city-states of southern Italy suggests that Tarentum was particularly likely to have flourished after 379, when Croton fell to Dionysius I (see below). This suggests a period of 379 to 360 for the height of Archytas' political activity in Tarentum.

The beginnings of Archytas' career are just as hard to pin down. The catalogue of geometers in Proclus' commentary on Book I of Euclid, which goes back to Aristotle's pupil Eudemus, connects Archytas with Leodamas of Thasos and Theaetetus as contemporaries of Plato (A6). These figures are not exact contemporaries, since Theaetetus is usually thought to have been born ca. 415, on the basis of Plato's dialogue which was named after him (see *RE* under Theaetetus), while Plato was born in 428–7, when Leodamas is also likely to have been born.<sup>1</sup> So far as Eudemus' evidence goes then, Archytas' birth should be dated somewhere between 435 and 410, since it is unlikely that he would have been more than twenty years different in age than those who are named as his contemporaries (Plato and Leodamas ca. 430 and Theaetetus ca. 415). This would make Archytas between 30 and 55 when Tarentum starts to emerge as a power in 380 and between 60 and 85 at death, if he died in 350. It is hard to see how he can be

<sup>1</sup> A certain Neoclides is said to be younger than Leodamas, but still the teacher of Leon, who was likely to have been born around 400, since he was a little older than Eudoxus, who was born ca. 390 (Procl., *In Euc.*, Prol. 11, 66.18 ff.; See *RE* under Leodamas). We can make sense of all this if we assign the following birth dates: Leodamas ca. 430, Neoclides ca. 420, Leon ca. 400.

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much older than Plato and still classed as a contemporary of Theaetetus, but he could be fifteen to twenty years younger than Plato. Whether born in 435 or 410 Archytas could quite plausibly be the teacher of Eudoxus (A6c) and could have written the *Harmonics* by the 370s, when Plato quotes from it in composing the *Republic* (530d; cf. Guthrie 1975: 437; Kahn 1996: 59).

## FAMILY, TEACHERS AND PUPILS

Diogenes Laertius first identifies Archytas' father as Mnesagoras (A1), and the *Suda* adds the variants Mnesarchus and Mnasagetes (A2). Diogenes also tells us, however, that Aristoxenus gave his father's name as Hestiaeus. It is hard to see how Aristoxenus could have been wrong about something like this, given his sources, and we should therefore follow the *Suda* in preferring Hestiaeus as his father's name. Hestiaeus also appears under the heading of Tarentum in the catalogue of Pythagoreans preserved in Iamblichus (*VP* 267) and thus might be Archytas' father or son. None of the other names appear in the catalogue. The other names have a suspicious similarity to the name of Pythagoras' father, Mnesarchus (D.L. and Porphyry) or Mnemarchus (Iamblichus). We know nothing else about Archytas' father or family.

We also know surprisingly little about Archytas' teachers and pupils, given the doxographical tradition's interest in philosophical successions. There may already have been a Pythagorean community in Tarentum by 509, when according to Dicaearchus, Pythagoras took refuge there in his flight from Croton (Porph. *VP* 56). His visit was short-lived, since Dicaearchus goes on to say that Pythagoras and his followers soon suffered the same sort of persecution in Tarentum as they had at Croton, leading Pythagoras to flee to Metapontum. There continued to be Pythagoreans in Tarentum, however. In the middle of the fifth century, when the Pythagorean meeting place in the house of Milo at Croton was attacked (ca. 454), the only two Pythagoreans to escape, Lysis and Archippus, were Tarentines; Archippus is reported to have fled to Tarentum (Iamb. *VP* 250). Aristoxenus tells us that, after this attack on the Pythagoreans, all the Pythagoreans left Italy except for Archytas (Iamb. *VP* 250 = A6b). This report oddly associates Archytas with events twenty to thirty years before his birth but can be understood, if we step back and take a broader view. We know that both Philolaus and Lysis spent time in Thebes (Huffman 1993: 1–7). Aristoxenus also reports that the last Pythagoreans whom he knew, in the first half of the fourth century, came from the mainland: Phlius and the

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Thracian Chalcidice (D.L. VIII. 46). It is in contrast to this general eastward movement that Archytas can be described as alone remaining in Italy. Aristoxenus calls the last Pythagoreans students of Philolaus and Eurytus (who was an older pupil of Philolaus). He calls both Philolaus and Eurytus Tarentines, although Philolaus is elsewhere identified as coming from Croton. Philolaus was probably originally from Croton but, after his visit to Thebes, may have returned to Tarentum to teach in his old age (Huffman 1993: 6).

If Archytas was in his formative years (ages 15–30) in the late fifth or very early fourth century and became a Pythagorean in his maturity, it would be logical to assume that he had studied with the most important Pythagorean of the day, Philolaus (ca. 470–390 BC), who, as we have seen, might have spent his last years in Tarentum.<sup>2</sup> Certain aspects of Archytas' philosophy (see A20, A21 and the overview of Archytas' philosophy) make it plausible that Philolaus was indeed an important influence on him. Archytas may also have studied with Eurytus, since Theophrastus cites Archytas as the source for our most important testimony about Eurytus (*Metaph.* 6a = A13, Text H), but we know too little of Eurytus' views to trace any influence on Archytas. Archytas' use of his predecessors (see the philosophical overview) suggests that he might also have studied with non-Pythagoreans such as Hippocrates of Chios, but we have no direct evidence for this.

The *Suda* reports that Archytas had famous pupils, but the only example it provides is, rather problematically, Empedocles (ca. 492–432), who probably died before Archytas was born (A2). The only famous philosopher, who can be identified as a pupil of Archytas with some degree of confidence, is Eudoxus (ca. 390–340). Even here the evidence is meager; the sole source is Diogenes Laertius (A6c). Eudoxus will not have learned his famous hedonism (Arist. *EN* 1172b9–10) from Archytas, who attacked bodily pleasure (A9a), but Diogenes is, in fact, careful to say that it was specifically geometry that Eudoxus learned from Archytas. Archytas, whose solution to the duplication of the cube made him one of the leading geometers of the day and who did considerable work with proportions might well have been sought out by the young Eudoxus, who went on to develop the general theory of proportion found in Book 5 of Euclid and to construct a mathematical system to explain the motions of the heavenly bodies. One problematic tradition (A5b1–12), to which I will return below, makes Plato a pupil of Archytas. Aristoxenus presents Archytas as meeting with

<sup>2</sup> Cicero, however, is the only source to name Philolaus as Archytas' teacher (A5c2), and his report may not be based on an independent source but on the logic which I have just given.

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associates in the sacred precincts of Tarentum, in order to walk about and discuss philosophical questions (A9). The only name which we can give to these associates is provided by the *Seventh Letter* and Plutarch, who identify Archedemus as one of Archytas' associates (A5, 339a–b; A5a).<sup>3</sup>

The later tradition uniformly presents Archytas as a Pythagorean (D.L., *Suda*, Iamblichus, Strabo, Cicero etc.). The difficulty is in determining what exactly it means for him to be called a Pythagorean and to what extent it defines his thought. On the one hand, the Platonic evidence is mixed. Neither Archytas nor his associates are called Pythagoreans in the *Seventh Letter*, just as Philolaus is not called a Pythagorean in the *Phaedo*. When Plato quotes from Archytas' *Harmonics* at *Republic* 530d, however, he presents Archytas' words as what "the Pythagoreans say." Clearly in the realm of harmonics Archytas is labeled a Pythagorean, which indeed makes sense in light of Philolaus' earlier work in the area. On the other hand, Aristotle makes a distinction between "the so-called Pythagoreans," to whom he refers extensively in his extant writings and about whom he wrote two separate treatises, and Archytas, who is not called a Pythagorean in Aristotle's extant treatises and about whom Aristotle wrote three books distinct from those he wrote about the Pythagoreans (A13). All of this suggests that it may have been much more common in the later tradition than in the fourth century to simply label Archytas a Pythagorean. In the fourth century he may have been viewed as an important thinker in his own right, who was also a Pythagorean in his way of living and who developed themes treated earlier in the Pythagorean tradition by figures such as Philolaus. When Archytas' name was mentioned, the labels "philosopher" and "mathematician" may have popped into people's heads first and "Pythagorean" only second. In the later tradition, on the other hand, Archytas was first of all a "Pythagorean." Aristoxenus says that the last Pythagoreans, whom he knew of, were the pupils of Philolaus and Eurytus (D.L. VIII. 46). Was Archytas independent enough from the Pythagorean tradition that his pupils were not regarded as Pythagoreans?

#### ARCHYTAS AND TARENTUM

In contrast to some figures such as Philolaus, who were associated with several different cities in southern Italy, Archytas is universally associated

<sup>3</sup> It is true that Archedemus also appears in two surely spurious letters of Plato (II and III), but it is perfectly possible for such spurious letters to refer to historical figures. We know nothing further about Archedemus. It is tempting to suppose that it is Archytas' associate who figures in the title of one of Xenocrates' books: *Archedemus or Concerning Justice* (D.L. IV. 13.9)

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with Tarentum. This suggests that he was both born there and also spent his entire life there. In order to make sense of Archytas' career in Tarentum, it is necessary to understand some features of the history of the city. According to the literary tradition, Tarentum was founded by colonists from Sparta in 706 BC (Strabo vi. 3.4; Brauer 1986: 3 ff.). It is situated where the heel meets the instep of the "boot" of Italy. Tarentum had by far the best harbor on the south coast of Italy, and it was a natural stopping point for ships sailing west from mainland Greece (Plb. x. 1). Initially, however, Tarentum was overshadowed by the Greek colonies founded by the Achaeans further west on the gulf of Tarentum: Croton and Sybaris.

On their arrival, the Greeks found the region around Tarentum occupied by native peoples known as Iapygians, who were divided into three main groups, the Messapii, who inhabited the heel of Italy, the Peucetii who were north of the Messapii and the Daunians who lived still further north (Plb. iii. 88.4; there is much confusion in the use of these names). Tarentum's history was characterized by continuing conflict with these native peoples. Dedications at Delphi commemorated victories over the Messapians (Paus. x. 10.6) and Peucetians/Iapygians (Paus. x. 13.10) in the first half of the fifth century. Even more important was a defeat suffered by Tarentum and her ally Rhegium at the hands of the Iapygians in 473 (D.S. xi. 52). Herodotus says that this was the greatest slaughter of Greeks of which he knows; 3,000 soldiers from Rhegium alone died, with no number having been put to the Tarentine dead (vii. 170). Aristotle tells us that so many Tarentine nobles were killed in this battle that democratic elements in the state were able to change the constitution to a democracy from a constitutional government (*Pol.* 1303a). We know little of the constitution at Tarentum before this time, although Herodotus reports that a king, Aristophilides, was in power ca. 492 (iii. 136). The new democracy still retained its traditional Dorian connections, taking the Peloponnesian side against Athens in the Peloponnesian War. Tarentum refused anchorage and water to Athens in 415 (Thuc. vi. 44), providing safety to the Spartan general Gylippus in 414 (Thuc. vi. 104) and finally sending ships to help the Peloponnesian cause, after the Athenian disaster in Sicily (Thuc. viii. 91). The Athenians for their part were allied to Tarentum's traditional foes, the Messapians (Thuc. vii. 33).

Pressure from another native people, the Lucanians, and worries about the tyrant of Syracuse, Dionysius I, led the southern Greeks to form a league in 393, which included at least Rhegium, Croton, Thurii, Hipponium, Caulonia and Elea and in which Croton played the leading role (D.S. xiv. 91 and 100–06; Polyaeus vi. 11; Plb. ii. 39; Purcell 1994: 387).

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Dionysius I of Syracuse attacked Rhegium in 390, who appealed to the league for support, leading Dionysius to ally himself with the Lucanians (D.S. xiv. 100). Dionysius eventually came to control southern Italy as far as Thurii, with Croton falling in 379/8 (D.H. xx. 7; Justin xx. 5; Livy xxiv. 3; Caven 1990: 196). There is no indication either in the literary sources or from coinage that Tarentum played any role in the Italian league at this point. Evidence from coinage suggests but does not prove that her colony, Heraclea, was a member, and this might indicate that Tarentum was part of the alliance, at least insofar as it was directed against the Lucanians (Wuilleumier 1939: 65). It is more difficult to believe that Tarentum played any role against Dionysius I of Syracuse, since Syracuse was a Dorian colony like Tarentum and since Tarentum had been a virtual ally of Syracuse earlier during the Peloponnesian War and would later be the ally of Dionysius II of Syracuse. The evidence might be read as indicating that Tarentum was the ally of Dionysius I (Purcell 1994: 387). Whatever the exact situation, it is clear that Tarentum was not significantly involved in the conflicts with the Lucanians and Dionysius I in the years between 393 and 379. In general Tarentum must have benefitted from the decline of the other Greek cities in southern Italy, which resulted from those conflicts.

It is likely that Tarentum eventually became head of the Italiote league, whose meeting place was probably moved, some time after the fall of Croton ca. 378, to the Tarentine colony, Heraclea. The evidence is sketchy. What might be a federal coinage began to be issued around 380 in the form of diobols of identical type at Tarentum and Heraclea, which were imitated in other cities (Brauer 1986: 55–56; Purcell 1994: 388). The reverse of the coin had Heracles wrestling the Nemean lion, which suggests the centrality of Heraclea. The clearest assertion of Tarentum's leadership of the league by the literary tradition is found in the rather imprecise language of the entry for Archytas given in the *Suda* (A2). In that entry Archytas is said to have had the leadership of the Italian league and to have been chosen *stratēgos* both by his own citizens and by the Greeks of the area. The literary evidence for Heraclea as the meeting place for the league is also indirect. Strabo (vi. 3.4) reports that Alexander the Molossian, a mercenary general, who first served Tarentum and then became disaffected, tried to move the festival assembly of the Greek peoples of that region, which had been meeting in Tarentine territory at Heraclea, to Thurii, out of hostility to Tarentum. Alexander was involved in Tarentine affairs from 334–331 (Purcell 1994: 391). This suggests then that some time after the fall of Croton in 379/8 and before the time of Alexander in 334–331, the meeting place of the league was moved to Heraclea and also that, since Heraclea was a Tarentine colony, Tarentum

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was the leader of the league. It seems likely that this move occurred shortly after the fall of Croton, and it is indeed plausible that Tarentum's leadership of the league was encouraged by Dionysius I (Purcell 1994: 388).

If Archytas was born between 435 and 410, he will have spent his childhood or youth in a Tarentum that was aiding Syracuse and the Peloponnesian cause against Athens. He will have been between 20 and 45 when Dionysius I intervened in southern Italy, and between 30 and 55 when Croton fell, and Tarentum assumed leadership of the league. For about a thirty year period between 380 and 350 conditions were right for Tarentum to increase considerably in power amid the weakened Greek states in southern Italy and with Dionysius II, who was considerably weaker than his father, in control in Syracuse. Indeed, it is quite plausible to regard Tarentum as one of the most powerful of all Greek city-states in this period (Purcell 1994: 388). It is clear then that, although Archytas undoubtedly had great leadership ability and outstanding character, he was also fortunate to reach his maturity at a time when external conditions had favored Tarentum so significantly. Archytas was the right man, but it was also the right time for Tarentum.

Strabo reports that, at its height, Tarentum “possessed the greatest fleet of those in the region and sent to battle 30,000 footsoldiers, 3,000 cavalry, and 1,000 mounted javelin throwers” (Strabo VI 3.4 = A4).<sup>4</sup> These are impressive numbers. It is worth noting for comparison that, according to Thucydides, Athens had a total of 29,000 footsoldiers and 1,200 cavalry at the beginning of the Peloponnesian War (II. 13; see Gomme 1956 and Hornblower 1991 ad loc.), so that fourth-century Tarentum may have been comparable to fifth-century Athens in size. Strabo does not provide any precise dating for this description of Tarentum except that it occurred under the democracy (established in 473), and before the age of the mercenary generals (330s), but he associates Archytas with this flourishing, so it must belong to the first half of the fourth century. This may also be the period to which applies Florus' description of Tarentum as “capital of Calabria, Apulia and all of Lucania, . . . famous for its size, walls and port” and as “situated at the very entrance to the Adriatic sea, sending forth ships into all lands” (A4a).

<sup>4</sup> It is not clear whether the numbers Strabo gives apply just to Tarentum or whether they also include allied forces, but the most straightforward reading suggests that the numbers apply just to Tarentine forces. By ancient standards 4,000 is a very large cavalry, although Diodorus refers to cavalries of 1,000 to 3,000 in southern Italy and Sicily (Spence 1994: 30–31). Tarentum was, indeed, famous for her cavalry. Some of her coins display a cavalry rider (Spence 1994: 31). Military tactics of the third and second centuries may have been influenced by the Tarentine cavalry (Wuilleumier 1939: 666–68; Griffith 1935: 246 ff.).