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Non-bifurcatory Diairesis and Greek Music Theory:
A resource for Plato in the *Statesman*?
Mitchell Miller

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At 287c the Eleatic Visitor and Young Socrates turn back from their lengthy digressive reflections on due measure, the arts, and dialectic (283b-287b) to the appointed task, giving a diairetic account of statesmanship. They have long ago identified the generic form that statesmanship falls under — “care” (276bff.) —, and to orient their account-giving they now have the paradigm of the diairetic account of weaving. That account has disclosed that the search for the statesman must go through two phases: the distinction of statesmanship from the various kinds of art that, while “akin” to or like it (συγγενῆ, 280b3), do not share in its work, and the distinction of it from the various kinds of art that, while not necessarily like it, do share in its work (συνεργοί, 280b2), contributing either indirectly or directly, as συναίτιοι or αἰτίαι, to “care” for the city.¹ The task of differentiating statesmanship from its kindred arts, all the sorts of herdsmen, is now done, and at 287c the Visitor turns to the task of separating it from the cooperative arts. And then he surprises us. Having proceeded by bifurcation throughout the *Sophist* and in all the divisions up to this point in the *Statesman*, he suddenly declares that it is “difficult” (287b10), then that it is “not possible” (c5) to “cut” the remaining kinds of art “into two.” Instead, he says, “let’s divide them limb by limb, like a sacrificial animal” (κατὰ μέλη ... οἷον ἱερεῖον, 287c4). And though he says that “we must always cut into the closest number we can” (εἰς τὸν ἐγγύτατα ὅτι μάλιστα τέμνειν ἀριθμὸν ἀεί, c5), what he goes on to offer Young Socrates is not at all “close” to a two. If we set aside his long digression on the party politicians at 291a-303d on the grounds that his diaireses operate within the field of τέχνηαι and ἐπιστήμμαι (recall 258cff.) and the party politicians practice no art or science, we find ourselves given a sorting of fifteen kinds of work or function. Here is the Visitor’s finished list:

the indirectly contributive arts (συναίτιοι):

{1} the providing of “raw materials” (τὸ πρωτογενές,² 288e, 289a)

¹ Though I am responsible for all the translations in this essay, I have consulted and benefited from those of Harold Fowler (*Plato*, vol. VIII of the Loeb Library edition [Cambridge, MA: Harvard University Press, 1975 [1925]]); J.B. Skemp (Ostwald, M. [ed.], *Plato's Statesman* [Indianapolis: Hackett, 1992 [1957]]); and Christopher Rowe (in Cooper, J. [ed.], *Plato, Complete Works* [Indianapolis: Hackett, 1997]).

² In working through the first seven kinds and then gathering them into a summary list at 289a-b, the Visitor offers for each kind a singular

- {2} the providing of “tools” (ὄργανον, 287d, 289b)
- {3} the providing of “containers” (ἀγγεῖον, 287e, 289b)
- {4} the providing of “bearers” (ὄχημα, 288a, 289b)
- {5} the providing of “defenses” (πρόβλημα, 288b, 289b)
- {6} the providing of “playthings” (παίγνιον, 288c, 289b)
- {7} the providing of “nourishments” (θρέμμα, 289a, 289b)

the directly contributive arts (αἰτίου):

- {8} the service provided by slaves (289d)
- {9} the service provided by traders and merchants (289e-290a)
- {10} the service provided by heralds and clerks (290b)
- {11} the service provided by priests and mantics (290c-e)
- {12} the service provided by the orator (304a, c-d)
- {13} the service provided by the general (304a, e-305a)
- {14} the service provided by judges (304a, 305b-c)
- {15} statesmanship (305e and ff.)

Needless to say, this break from bifurcation is puzzling. But the Visitor gives no help in understanding either why he abandons bifurcation or why he replaces it with, so to speak, a ‘fifteen-furcation’. “The reason [why we cannot continue to bifurcate] will become clear,” he says at 287c1-2, “as we proceed.”³ And that is his last and only acknowledgment of the problem. Evidently, this is a question that the Visitor deems inappropriate to pursue with Young Socrates — or, to shift focus to the level of Plato’s indirect communication with his hearers, that Plato leaves for us to work out for ourselves.

What, then, shall we say? The paradigm of the weaver helps us begin. Whereas the herdsman takes all of the work of caring for his herd upon himself, a weaver takes his place in a field of divided labor, sharing the work of making woolens with others; that is why, by contrast with the herdsman, he has συνεργοί, partners. Accordingly, to know the weaver — and, by analogy, to know the statesman — we must recognize those whom he recognizes as his partners. And this calls for a new mode of analysis. If the Visitor continued to bifurcate, he would leave the left-hand sides of his dichotomies undifferentiated, and so even while we might succeed in isolating the statesman, we would fail to discern the other kinds of art that the statesman recognizes as his collaborators. And since this recognition is essential to the statesman’s work, to fail to discern these other kinds would be to fail to understand statesmanship itself. Accordingly, we need to replace bifurcation with a mode of division that, to borrow a phrase from the closing reflections on λόγος in the *Theaetetus*, “goes right through [the whole] part by part”

term that brings into focus the basic function or work that the various things produced by the various arts in that kind perform.

³ This standard translation captures the idiomatic force of the Visitor’s phrase, προιοῦσιν οὐχ ἥττον ... καταφανές — which, rendered literally, is not “clear as we proceed” but rather “no less clear as we proceed.” Is Plato punning here, using the same words at once in their idiomatic sense to have the Visitor defer giving Young Socrates an explicit explanation and in their literal sense to flag for the reader that there is indeed an unclarity that requires stepping back and seeking an explanatory interpretation?

(207b) — or, to repeat the Visitor’s own highly charged simile, that treats the city that “cares” for itself like a “sacrificial animal” and divides it “limb by limb” (287c).⁴

But this first interpretive step only helps us focus the problem. Back at 268c, the Visitor spoke of the contestants to the statesman’s status as a field of “tens of thousands” (μυρίων, c2). How, then, does he — or how does Plato — make his way through this vast and heterogeneous field?⁵ To put the question in terms of one the key heuristic teachings in the *Statesman*: if the paradigm of the weaver shows him that there is a host of *συνεργοί* to sort out, by what further paradigm does he orient himself in order to do this sorting?

My proposal in this paper is that Plato looks to harmonic theory,⁶ in particular to that matrix of notes — later to be called the “Greater Perfect System” — by which some

⁴ In the practice of sacrifice the sacred victim would be dismembered and then its organs would be laid out on the altar in a reconstruction of their fit with one another, in order that the priest might discern in them the will of the gods. See R.B. Onians, *The Origins of European Thought* (Cambridge: Cambridge University Press, 1954), 60 n28. In the myth, the Visitor has taught that with the god’s and his daimons’ departures from the cosmos at the periodic shift from his directing its rotation to the cosmos’ directing itself, the god left behind “instructions” (*διδασχῆν*, 273b2) as to how the cosmos and, in particular, humankind might best order itself; and in closing he supplements this with the traditional stories of how Prometheus and the Olympian gods gave us various of the arts (274c-d). In now laying out the kinds of work by which the city “cares” for itself, then, the Visitor is in effect playing the role of the priest; he attempts to reconstruct the “sacrificial victim” in a way that discerns, in the order of its “limbs” (*μέλη*), the way the various artisans, following the god’s instructions, can do together and for themselves what he and his daimons did for the cosmos and mankind when they were present in the world in the preceding epoch. — To this reading of the Visitor’s simile of a dismembering of the kinds of “care” “limb by limb,” I now want to add a further level of meaning. See p. **XX** on the musical meaning of the Visitor’s term for “limb,” *μέλος*.

⁵ In this essay I will not address this question in its full generality. I have attempted that elsewhere, offering an account of the new form of dialectic that the Visitor’s ‘fifteen-furcation’ exhibits (“The God-Given Way: Reflections on Method and the Good in the Later Plato,” in McCleary, J. and Shartin, D. [eds.], *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, Volume VI, 1990, pp. 323-359) and then tracing the ontological commitments that this form of dialectic implies (“Dialectical Education and ‘Unwritten Teachings’ in Plato’s *Statesman*,” Van Ophuijsen, J.M. [ed.], *Plato and Platonism* [Catholic University of America Press, Washington, D.C., 1999, 218-241], republished in my *The Philosopher in Plato’s Statesman* [Parmenides Publishing Co., Las Vegas, 2004]); I will not repeat those reflections here. In this essay I want instead to suggest what the major resource may have been, not explicitly acknowledged in the *Statesman* proper, that Plato may have been drawing on in first designing the ‘fifteen-furcation’.

⁶ As a general matter, this is not surprising. In *Republic* VII Plato has Socrates give harmonic theory the status, in the series of five mathematical studies he proposes for philosophers-to-be, of the last and, so, the closest to dialectic, and in the sketch of non-bifurcatory

of his predecessors and contemporaries were beginning to thematize the systematic fit of the various ἄρμονίαι or “modes of attunement” in music. To see the plausibility of this, we need to move in several steps. First we should bring to focus the key musical concepts that are in play in the Greater Perfect System. That will position us to set it side by side with the Visitor’s ‘fifteen-furcation’ and to make out — again, step by step — an isomorphism between the two structures that is too pointed to be accidental.

(1) Key musical concepts: tetrachords, *harmoniai*, and the Greater Perfect System

Sketchy as our knowledge of ancient Greek musical theory⁷ is, there are a few structures we can identify with some confidence. Ancient tuning, first of all, was based on the notion of concords between notes, and of these concords the basic ones were the octave, the fifth, and the fourth: notes at the intervals of 1:2 (or approximately six whole tones), 2:3 (or approximately three tones and a semitone), and 3:4 (or approximately two tones and a semitone) were heard as fitting together harmoniously. The octave scale, accordingly, was taken to consist of a fourth and a fifth or, equivalently, of two fourths separated by a whole tone. Each of these fourths was filled by a tetrachord, a set of four notes with the two outer or “boundary” notes (ὄροι) fixed at an interval of 3:4 (two and a half tones) and the two inner notes spaced in a systematic variety of ways. The three primary spacings of the tetrachord were the “enharmonic,” which set the four notes at intervals of a ditone and two quarter-tones; the “chromatic,” which set them at intervals of a tone-and-a-half and two semitones; and the “diatonic,” which set them at intervals of a tone, a tone, and a semitone. (Philolaus and Archytas, the great Pythagorean theorists contemporary with Socrates and Plato, respectively, were the first to work out ratios to express these internal intervals.⁸) We might diagram these basic genera for spacing notes and intervals as follows:

dialectic at *Philebus* 16c-18d, he has Socrates look to harmonic theory for an exhibition of the sort of eidetic field that dialectic discloses. For discussions of these key passages, see my “Figure, Ratio, Form: Plato’s Five Mathematical Studies,” in McPherran, M., *Recognition, Remembrance and Reality: New Essays on Plato’s Epistemology and Metaphysics* (= *Apeiron* 32, 4 [Dec. 1999]), 73-88 and my “A More ‘Exact Grasp’ of the Soul? Tripartition in *Republic* IV and Dialectic in the *Philebus*,” in Pritzl, K. [ed.], *Truth* (Catholic University of America Press: Washington, D.C., 2010), 57-135.

⁷ For the technical information in this section I am very much in debt to Andrew Barker, *Greek Musical Writings*, vol.s I and II (Cambridge: Cambridge University Press, 1984) [henceforth “Barker”] and to M.L. West, *Ancient Greek Music* (Oxford: Oxford University Press, 1992) [henceforth “West”].

⁸ See Barker’s remarkable reconstruction of Archytas’ ratios in his *GMW* II, 46-52. That all these intervals could be expressed as ratios is important for our understanding of the possible relation of harmonic theory and the unwritten teachings. But because the expression of the intervals in terms of tones, semitones, and quarter-tones allows the relation of the Greater Perfect System and the Visitor’s ‘fifteen-furcation’ to be more visible and that is the aim of this essay, I have for the most part confined myself to this latter way of expressing the musical intervals.

	2T		1/4T		1/4T		enharmonic
	1 1/2T		1/2T		1/2T		chromatic
	1T		1T		1/2T		diatonic

Harmoniai, or “modes,” were the various sets of notes — usually but not always an octave in length — that stringed instruments were tuned to play. Plato gives us interesting reflections on their different qualities of sound and, more deeply, of ethical disposition in the *Republic*, and Aristotle develops his own interesting observations on these issues in the *Politics*. What is of concern for us, however, is the efforts by late fifth century theorists to see how the various *harmoniai* might be fit together so as, so to speak, to be shown to belong to and derive from a single comprehensive matrix of possibilities. The Greater Perfect System was just such a matrix, and the earliest thinkers likely to have constructed a form of it were Eratocles and his school, probably circa 420 bce. They apparently proceeded by taking a mode, most likely the Dorian,⁹ in, again most likely, the enharmonic genus,¹⁰ and cycling its opening intervals to the end, and its ending intervals to the beginning, thereby transforming the initial mode, step by step, into six variants, with its intervals in each case ordered into a new sequence.

To see the operation of cycling, first take the Dorian mode in the enharmonic genus, to wit,

| 2T | 1/4T | 1/4T | 1T | 2T | 1/4T | 1/4T |

and move the first interval to the end, to wit,

| 1/4T | 1/4T | 1T | 2T | 1/4T | 1/4T | 2T |

This new so-called species of the octave was the equivalent of the Phrygian mode. Repeating this operation twice more yields the equivalents of the Lydian and Mixolydian modes (see below). To generate the three modes above the Dorian, start again from the Dorian and repeat the same operation in reverse, now moving its final interval to the beginning, to wit,

| 1/4T | 2T | 1/4T | 1/4T | 1T | 2T | 1/4T |

yielding first the equivalent of the Hypolydian mode and, following the same procedure twice more, yielding the equivalents of the Hypophrygian and the Locrian modes (see below). By this set of operations, or something very like it, Eratocles and his school generated all seven modes, to wit,

⁹ Barker, *GMW I*, writes that the Dorian is “the norm to which all other [modes] must be related, not only in the context of moral theory but in abstract harmonics too” (167).

¹⁰ West 162, 174, 227, esp. n 26.

2T 1/4T 1/4T 2T 1/4T 1/4T 1T	Locrian mode
1/4T 1/4T 2T 1/4T 1/4T 1T 2T	Hypophrygian
1/4T 2T 1/4T 1/4T 1T 2T 1/4T	Hypolydian
2T 1/4T 1/4T 1T 2T 1/4T 1/4T	Dorian
1/4T 1/4T 1T 2T 1/4T 1/4T 2T	Phrygian
1/4T 1T 2T 1/4T 1/4T 2T 1/4T	Lydian
1T 2T 1/4T 1/4T 2T 1/4T 1/4T	Mixolydian

Taken together, the seven modes occupied a stretch of the tone continuum just one tone short of a double octave. To complete the double octave, a note was added¹¹ — called, transparently, the “added-on note” (ὁ προσλαμβανόμενος) — with the full matrix, the later so-called Greater Perfect System, constituted thus:

2T 1/4T 1/4T 2T 1/4T 1/4T 1T 2T 1/4T 1/4T 2T 1/4T 1/4T 1T	ὁ προσλαμβανόμενος
[high -----low]	

Notice these key features: there are fifteen notes in all; these are ordered as two sets of seven, separated by a whole tone, with the “added-on” note added on to complete the double octave; each set of seven is structured as a pair of conjoined tetrachords, with the fourth note serving both as the end boundary note of the first tetrachord and the beginning boundary note of the second tetrachord and, in turn, the eleventh note playing just the same dual role in the second pair of conjoined tetrachords; the eighth note, that is, the first note of the second set of seven, was called the μέση, “middle note,” for it is the exact mid-point of the whole double octave stretch; and the final note, the “added-on note,” stands outside the two sets of seven, at once completing the double octave concord marked by the fixed notes of the four tetrachords and yet standing apart from them.

To begin to ‘see’ — and, at this early stage, have one’s hunger for analysis both oriented and quickened — the apparent isomorphism of this harmonic matrix with the Visitor’s ‘fifteen-furcation’, one needs only set them side by side:

2T 1/4T 1/4T 2T 1/4T 1/4T 1T 2T 1/4T 1/4T 2T 1/4T 1/4T 1T	μέση	ὁ προσλαμβανόμενος
[high -----low]		

the indirectly contributive arts:

rm to co b

the directly contributive arts:

d pl n sl tr cl pr o g j st

¹¹ So far as I know, we don’t know just when or by whom “the added-on” note was first “added on.” West makes the interesting observation about the name προσλαμβανόμενος that “its masculine form shows that its inventor had forgotten all idea of a string (*chordê*); he was thinking of it simply as a note (*phthongos*)” (222). So the name was presumably coined by a theorist.

(2) Points of analogy: the Greater Perfect System and the kinds of work done by the arts

Arresting as I hope this is, still, to allow its due weight to the thesis that Plato took his bearings from some such early version of the Greater Perfect System, we must look more closely. To begin by stating the obvious: there can be no question of any relation of substantive derivation between the two structures; harmonic order and political order are different in kind and each requires that it be understood in its own way and context. But this is not an argument against harmonic theory's serving as a paradigm for political analysis. To consider that, we need to ask: do their various points of structural analogy make it plausible that Plato's understanding of the harmonic matrix of the Greater Perfect System provided an occasion and guidance for his discovery of the order of the kinds of work by which a good city "cares" for itself?

[i] Numbers: 15, as 7, 7, and 1

Once he reaches the "third" of the first group of seven kinds, "the indirectly contributive arts," the Visitor makes a conspicuous point of counting out the remaining five: note τρίτον at 288a3, τέταρτον at b1, πέμπτον at c1, ἕκτον at d5, and ἑβδομον at 289a1. This of course calls our attention to their being a group of seven — it also inclines us to count the subsequent kinds of work done by the "directly contributive arts," those of "service" (ὕπηρετικὴν, 289e4, also c3, d6, 290a5, b2, b5, 304e1, 305a9, c8), and to notice that they too are seven and, with the final addition of statesmanship, make up a total of fifteen divided into seven, seven, and one. This correlates perfectly with the Greater Perfect System's matrix of 15 notes, divided into conjunct tetrachords of 7 notes each and completed by the "added-on note." The Visitor also makes a point of acknowledging that there are some arts whose work may need to be distinguished into parts in order to be made to fit into his scheme (289b-c); and, of course, just by grouping various pluralities of arts into each of his kinds of work, he tacitly acknowledges that there are many more particular arts than fifteen. By implication, then, he might have distinguished his kinds of work much more fine-grainedly than he does; this makes the facts that he does not, and that he sorts his kinds into just the same numbers — 15, divided into groups of 7, 7, and 1 — as those of the Greater Perfect System very striking indeed.

[ii] The collaborative character of the notes and of the kinds of work

Beginning to recognize the analogy of the manifold of kinds of work with the Greater Perfect System helps with one of the most obvious and pressing puzzles about the 'fifteen-furcation'. Most of the Visitor's kinds are very far removed from statesmanship; and if we consider each kind by itself, many of them seem quite unimportant and, so, unlikely candidates for inclusion in an enumeration of the modes of "care" vital to a good city. For instance, is the production of "containers" really significant enough to be included? Or, again, of "bearers" (that is, ὄχημα, "support" or "vehicle," 288a8)? If, with the Eleatic Visitor at 288c, we take it that ornamentation, portraits, poems, and music are just different sorts of "plaything" (παίγνιον, c6), things merely "for pleasures" (πρὸς

τὰς ἡδονὰς, c3), why include them on the list? Do shopkeepers and traders, or clerks and heralds, or temple keepers and those who manage public rites really belong side by side with the general or the judge, much less the statesman himself? The doubts expressed by such skeptical questions begin to seem hasty and ill-conceived, however, once we come to think of the Visitor's kinds on the model of the notes in the double octave matrix. The first truth of musical harmony is that no note stands alone; it is only in the various fits of each note with other notes — the fits that make them all members of a “mode” and, so, potentially ‘on pitch’ and melodious — that each instantiates Pitch in its normative sense. Likewise, the Visitor's fifteen kinds of “work” take on a new look if we consider each one not by itself but in its various relations with each of the others. Thus, for instance, the physical health of a city requires not only the production of “nourishments” but also, on the one hand, the “tools” for this production and, on the other, the commercial transactions of traders and merchants by which these “nourishments” are distributed to the citizens; and, again, these “tools” must themselves be made — by means, of course, of still other “tools” — from “raw materials,” while commercial transactions require “containers” to preserve and “bearers” to move the goods between fields and markets and shops and homes. Commerce also requires the communications and clerical work that heralds and clerks do, the sense of justice that religious rites and the courts in their very different ways preserve, and the maintenance of peace for which the citizens can thank their walls (“defenses”) and their generals. And so on. With such reflections we begin to trace some of the many melodies, so to speak, that the life of the city involves. The Visitor's own language at 289b helps us articulate the key point: like a musical note, each of the fifteen kinds shows its real significance and value only in its harmonious “fit” (ἀρμόττειν, 289b3) with various of the others, in the ways it “sounds harmoniously together” (συμφωνήσει, 289b7) with them; accordingly, by articulating the kinds of “work” in such fine grain, the Visitor brings into focus the various components, both productive and practical, of the manifold cooperative activity of the city.

[iii] The structural analogies of the two series of fifteen

The preceding reflections begin to show us why, if Plato is taking his bearings from some form of the Greater Perfect System, he has the Visitor distinguish *fifteen* kinds, and *these* fifteen: to make explicit the pun in the words he has the Visitor speak, Plato has him dividing κατὰ μέλη (287c), “limb by limb” or, to take μέλος in its special musical sense, “fitting note¹² by fitting note.” But we have only begun. If we focus still more closely, we will be struck by a number of more particular points of structural analogy between the two series.

¹² For μέλος LSJ has, first, “limb,” then “musical member, strain.” At *Philebus* 51d Socrates speaks of the unmixed pleasure afforded by ἐν τι καθαρὸν... μέλος, “a single pure μέλος.” Does he mean an isolated “note” or a “strain” in the sense of a melodious string of harmonious notes? However we decide this in the *Philebus* passage, in our *Statesman* passage there is the strong presumption, carried over by the pun from the primary sense of “limbs” to the secondary musical sense, that the μέλη must be harmonious or fitting. Hence my translation.

1. *The extremes of low and high, and of the providing of “raw materials” and statesmanship.* The double octave matrix of the Greater Perfect System stretches between the relative extremes of high and low, with the first note of the first conjunct tetrachord the highest¹³ and, at the opposite end, the “added-on” note as the lowest. The analogous relation holds between the first¹⁴ of the “indirectly contributive” kinds of work, namely, the production of raw materials (πρωτογενές, literally the “first-produced” or “first-arisen,” 288e5), and the fifteenth kind, statesmanship. The “raw materials” were the “unsynthesized” (ἀσύνθετον, e5), unshaped kinds of matter first acquired from the natural world by, to cite several of the Visitor’s examples, mining, timbering, and animal skinning (288d-e). Statesmanship’s key work lies, by contrast, in the forming and integrating of good character. The statesman supervises the educators, assuring that the citizens are of moderate and courageous stock, then uses the “divine” and “human bonds,” respectively, of true opinion with regard to just, noble, and good things and of shared honors and marriage to weave these types together (308d-311a). Thus the Visitor’s first kind picks out the arts that meet the most material of the requirements of the city, the need for physical stuffs to work on, and the last kind, statesmanship, picks out the work that attends to its most spiritual requirements, the need that the characters of the souls of the citizenry be virtuous.

2. *The midpoints: the μέση and slaves.* In the Greater Perfect System, the exact midpoint between the extremes of high and low is the eighth note, appropriately called the μέση, the “middle.” This is the note in which high and low are in equipoise, perfectly balanced.¹⁵ Its structural correlate in the Visitor’s series of fifteen is the eighth kind, that of slaves. The substantive sense of this correlation presents itself when we realize that whereas the first seven kinds of art provided material stuff and material things — in the Visitor’s repeated language, “possessions” (κτῆματα, 287e1, also 288e5, e8, 289a7) —, the final seven kinds provide deeds and, in the case of the statesman, the governing directives for deeds. Slaves are, on the one hand, themselves “possessions” (κτητούς, 289d10) but, on the other, also agents; or, more precisely, slaves represent that moment in the series of fifteen when, seen from the side of the “indirectly contributive arts,” thinghood grades into agency and, seen from the side of the “directly contributive arts,” agency grades into thinghood. Indeed, it is because the slave no more belongs on the one side than on the other that, as the Visitor says so cryptically at the outset, “we can’t cut [the kinds of care] into two” (287c4).

¹³ This note was called ἡ νήτη ὑπερβολαίων, the “bottom-most” or “lowest,” on account of its physical place among the strings; but of the fifteen notes of the Greater Perfect System it was the highest in pitch.

¹⁴ Plato has the Visitor call attention to the status of the providing of raw materials as first by having him initially follow the paradigm of the diairesis of weaving and start with tools, only later, when he pauses to gather the first seven kinds in a summary list, to correct himself and place it in the first position: “[the production of] raw materials ought in justice (δικαιοτάτα) to have been placed at the beginning, then after this [the production of] tools, containers, etc.” (289a)

¹⁵ Hence Plato’s word for the middle of the tonal range in the *Philebus*: ὁμότονον, “even-” or “equal-toned” (17c4).

These first three correlations — of the extremes of high and low and the μέση with the providing of raw materials, statesmanship, and slaves, respectively — do not stand on their own, however. They imply a host of further correlations and stand or fall with these; the truth, so to speak, is a matter of the whole. To bring these further correlations into view, we need continue to move step by step.

3. *The underlying continua marked by the notes and by the Visitor's kinds of work.* That the μέση is that note in which high and low are in equipoise bears important implications. First, every note in the Greater Perfect System represents a distinct balance of high and low, with the full set of fifteen shifting, if we begin from the relatively high and move towards the relatively low, from the predominance of high over low to the mirroring predominance of low over high. Thus the fifteen notes trace, by the gradual shifting in these predominances, the tone continuum. Does the same structure hold, in its own way and sphere, of the Visitor's fifteen kinds? That is, to pose this question more explicitly and precisely: if we start from our preceding recognition of {1}, the providing of raw materials, and {15}, statesmanship, as, like the extremes of high and low, extremes of the physical and the spiritual and our recognition of {8}, slaves, as, like the μέση, the equipoise of physical and spiritual, do we see the Visitor's fifteen kinds tracing, by a gradual shifting from the predominance of physical over spiritual to the mirroring predominance of spiritual over physical, a continuum-like range of these opposites?

Consider first the “indirectly contributive” arts. {1} “Raw materials” are in fact produced by art; they are πρωτογενές (288e5), the result of the first stage of productive labor. In this respect, and also insofar as they are produced with the anticipation that they will be subjected to specific forms of fabricative “synthesis,” the notion of “raw materials” already involves the spiritual factors of artifactual form, human uses, and the social life of the community; but these are only minimally present, relative to their presence in the things produced by the kinds of art the Visitor lists next in the series. If we turn to the following six kinds we can trace in the steps from each to the next the way in which, even within what is in each case a kind of physical product, the element of the spiritual becomes increasingly present. {2}, “tools,” both are fully formed for use and themselves are used to fashion other useful things. {3}, “containers,” in their work of preserving, presuppose the fabricative work of tools and at the same time extend the life of what tools fabricate. And {4}, “bearers,” that is, things made in order to support and transport, presuppose the work of fabrication and of preservation and at the same time expand the circle of those who can make use of what is first made and preserved. With {5}, “defenses,” the increasing presence of the spiritual first becomes qualitatively conspicuous: whereas in {2} - {4} one set of things is in each case produced for the sake of another set of things, in {5} - {7} the things produced are for the sake not of things but of persons, albeit in their physical being.

Within {5}-{7}, in turn, the Visitor moves stepwise from things that are relatively external to the persons they are for to things that are relatively internal to them. The Visitor's word, πρόβλημα (288b6, also b4, 289b2), “defense,” is, more literally rendered, “what is pro-

jected” or “put before [one] as a defense,”¹⁶ and what the Visitor includes within it ranges from walls to armor to clothing (288b). Hence — and at first surprisingly — “defenses” grade into {6}, “playthings,” namely, the “ornamentation” we wear (περὶ τὸν κόσμον, 288c1-2) and the “painting and all the imitations created by the use of painting and music” (γραφικὴν ... καὶ ὅσα ταύτη προσχρώμενα καὶ μουσικῆ μμήματα τελείται, c2-3) — that is, the portraiture and dramatic masks and sung verses of theatre — by which we fashion representations of ourselves in the arts. The production of {6}, in turn, grades into the production of {7}, “nourishments”; for the health and looks secured by what is external to the body in {5} and {6} is achieved, in {7}, in the body itself.¹⁷ “Nourishments” include both food stuffs, “the parts of which, mixed with the parts of the body, have the power to keep it in health” (288e8-289a1),¹⁸ and the instructions of doctors and gymnastic trainers (289a3-4), which are expressed in the proportions and strength of the body and in the strength and grace of its movements, respectively. At this point we are but a step away from the midpoint of the series, {8}, the slave’s art, which, in producing by the movements of the body the deeds of service ordered by others, marks the “even” or equal balance of physical thinghood and spiritual agency.

What, in turn, of the last seven kinds of “work,” {9} – {15}? If the analogy with the double octave matrix continues to hold, {9} – {15} should mirror inversely the shifting balance of physical and spiritual that we have observed in the first seven, and this does seem to be the case. At the opposite end from {1}, the production of “raw materials,” stands {15}, statesmanship, with its focus on the formation of virtuous character. As we have observed, it is directly concerned with the souls of the citizens, and its crowning achievement is to “unite the eternal part of their souls by means of [the] divine bond” of “true opinion concerning what is good and just and noble” (309c); but it prepares the way for and reinforces this “divine bond” by binding the citizens together with the “human bonds” (310a) of eugenic marriages (310b-e) and the sharing of honors and offices (310e-311b). Thus, analogously as {1}, the production of “raw materials,” already refers in various ways to the artisanal and social life for which these materials are destined, so in {15}, statesmanship, that form of “care” in which attention to the spiritual is greatest, there is attention as well to the bodies and social passions of the citizens.

Kinds {12} – {14} and {9} – {11}, in turn, appear to mark stages in the gradual shift from the predominance of the spiritual to its equality with the physical in {8}, the slave’s art. For the judge ({14}), the general ({13}), and the orator ({12}), first of all, the index of this is the order of the Visitor’s treatment: he leads from the orator to the general to the judge to, finally, the statesman (304c-305e). The key to recognizing in this a series in the shifting

¹⁶ LSJ II.

¹⁷ Is it in order to suggest the way “nourishments,” first given the collective title τροφόν at 289a2, come to be internal to the body they nourish that Plato has the Visitor later title them θρέμμα, “nursling,” in his synoptic list at 289b1-2?

¹⁸ “to keep it in health” is Harold Fowler’s insightful translation of θεραπεύσαι at 289a1 in the Loeb Classical Library edition of the *Statesman*.

balances of spiritual and physical is recognizing the four as correlatives of the four cardinal virtues, as these are explicated in the psychology of *Republic IV*: whereas the statesman is the sole possessor of “wisdom,”¹⁹ the judge, the general, and the orator are the agents through whose work he realizes justice, courage, and moderation, respectively, in the practices of the city. The reach of the judge’s work comes closest to the statesman’s: as the impartial “guardian of the law” (305b-c), his focus is the “true opinion” that, written into the laws by the statesman as law-giver (see νομοθέτου βασιλέως, 305b), expresses the statesman’s wisdom in a general and generally accessible way²⁰; but the law is thus an approximation of the statesman’s insight and not that insight itself, and so the judge, while crucial to the spiritual good order of the citizenry, marks a step down from statesmanship itself. The next steps are {13}, the general, expert in the “great and terrible art of war” (305a), and {12}, the orator, expert in “persuading mass and crowd not by teaching but by story-telling” (304c-d). Seen against the background of *Republic IV*, these kinds of “work” present themselves as appeals to the citizenry’s θυμός (its passion for honor and victory), for courage, and to its desires, for moderation in the sense of obedience to the statesman. Thus the Visitor appears to trace a line of descent from the highest to the lowest parts of the embodied soul.

This brings us, finally, to {9} - {11}, loosely titled as the arts of traders and merchants, of heralds and clerks, and of diviners and priests, respectively. These represent the sets of skills necessary (again to move back toward the center of the continuum, now starting from {11}) for the practices and rites of conventional religion, next {10} for the middle level management and communications required by all manner of business and government, and then {9} for the distribution of the products of the first seven kinds of art between countryside and marketplace and from city to city. In {11}, the spiritual focus implied by pious practices is both diluted and made mundane by their conventional, ceremonial, and even *quasi*-commercial cast; in words that recall *Euthyphro* 14b-15b, Plato has the Visitor make a point of how

the priests, according to law and custom (ὡς τὸ νόμιμόν φήσι), know how by sacrifices to give gifts to the gods that are pleasing to them and, on the other hand, how by prayers to petition for us to get good things from them. (290c8-d2)

In {10}, the Visitor gathers into a class the administrative and secretarial expertise that joint ventures and institutional processes require. Such expertise lacks the spiritual focus of the work of religious functionaries, much less of orator, general, and judge as agents of the virtues; but it involves a high degree of literacy and managerial versatility.²¹ In these

¹⁹ Recall the characterization of him as “the wise and good man” (ὁ σοφὸς καὶ ἀγαθὸς ἀνὴρ, 296e3) who governs “with understanding and art” (μετὰ νοῦ καὶ τέχνης, b1).

²⁰ For this distinction between the law and the insight it expresses, see 293e-295b, especially the Visitor’s analogy of the gymnastic trainer’s instructions at 294d-e.

²¹ Hence the clerical class includes “those who become expert in letters” (περὶ γράμματα σοφοί) and “certain other very able fellows (πάνδεινοι) who

respects it falls properly to the spiritual side of {9}, the commercial skill required by all those who, buying and selling, distribute material goods among the citizens. As a social practice freely undertaken, on the one hand, that is occupied with the products of the “indirectly contributive” arts, on the other, the arts of traders and merchants bring us back toward the middle of the continuum, into proximity with {8}, the art of slaves. ‘Acting,’ but without freedom, slaves are themselves the limit case of products that can be bought and sold; hence, again, the slave’s art marks the “even” or equal balance of spiritual and physical.

* * *

We have now brought into focus three major respects in which harmonic theory provides an analogue for the Visitor’s ‘fifteen-furcation’: the double octave matrix of what would come to be called the Greater Perfect System provides the same *numbers* of basic units and groups as the Visitor’s ‘fifteen-furcation’, 15 divided into groups of 7, 7, and 1; these units, the notes that compose the various *harmoniai* or “modes,” are defined by their fitness for collaborative interplay; and they mark out places or regions on an underlying continuum that stretches from the predominance of one opposite over its other through a relative equipoise of these opposites to the opposed predominance. I am inclined to think that this is enough to establish the likelihood of our historical hypothesis, that Plato took the double octave matrix of the Greater Perfect System as a paradigm in orienting the non-bifurcatory divisions he has the Visitor present to Young Socrates. But, albeit with a *caveat*, there is still more to notice. To begin with the *caveat*: the further we push into the fine grain of the Greater Perfect System, the more speculative our analysis becomes. This is inevitable, given the limits of our knowledge both of the state of harmonic theory in Plato’s time and of what Plato himself knew of it. Nonetheless, the next few steps are too arresting to forego.

4. *Micro-structural analogies: the transition points and sub-grouping of the notes and the kinds of art.* When I first reconstructed Eratocles’ reported cycling of the intervals, I began from the Dorian mode and set the internal notes of each of the two tetrachords at the intervals required by the so-called “enharmonic” genus; moving from high to low, the first interval was two whole tones, and the second and third intervals were each a quarter-tone, to wit:

| 2T | 1/4T | 1/4T |

This was not the only possibility, for as we noted at the beginning of section (1), the Greeks recognized two other genera as well, the chromatic and the diatonic, with, moreover, three versions, called “colorings,” of the chromatic and two versions of the diatonic. In using the enharmonic spacing, I followed West, who, citing an assertion by Aristoxenus, claims “that theoreticians before [Aristoxenus] ... concerned themselves

do a host of different sorts of things connected with public offices (πόλλ’ ἄλλα ἕτερα περὶ τὰς ἀρχάς).” (290b1–3)

exclusively with [the enharmonic] genus.”²² To readers of the *Timaeus*, this claim should seem questionable, for there Plato has Timaeus fill the tetrachords that structure the world-soul with the intervals required by the (again, later named) “tense” coloring of the diatonic genus, to wit,

| 1T | 1T | 1/2T |

or, using Timaeus’s Pythagorean ratios,

| 9/8 | 9/8 | 256/243 |

Nonetheless, I have followed West for two reasons. First, of the six possible spacings, namely,

enharmonic 2T, 1/4T, 1/4T
 soft chromatic 1 5/6T, 1/3T, 1/3T
 hemiolic chromatic 1 3/4T, 3/8T, 3/8T
 tonic chromatic 1 1/2T, 1/2T, 1/2T
 soft diatonic 1 1/4T, 3/4T, 1/2T
 tense diatonic 1T, 1T, 1/2T

in all but the tense diatonic the first interval is larger than or equal to the sum of the second and third intervals. Hence, in using the enharmonic spacing, I am following, so to speak, the general pattern rather than the one exception to it. Second — and here, I acknowledge, I am moving in a hermeneutic circle — I shall argue shortly for what is already made visible in our final figure in section 1 above, namely, that the bunching of kinds in the Visitor’s ‘fifteen-furcation’ conforms to that general pattern as well.

Before we turn back to the *Statesman*, note one other structural feature of the double octave matrix of the Greater Perfect System: the first and second tetrachords, and again the third and fourth, are conjoined. Accordingly, the seven notes of each pair share a common note at their center: the fourth note serves both to complete the first tetrachord and to begin the second, and the eleventh note serves both to complete the third tetrachord and to begin the fourth.

If we start with this second point, notice that the fourth and the eleventh of the Visitor’s kinds — {4}, the providing of “bearers,” and {11}, the arts of priests and mantics — play an analogous role in the first and in the second of the two groups of seven kinds, respectively. Kinds {2}, {3}, and {4}, we noted, provide things — “tools,” “containers,” and “bearers,” respectively — for the sake of other *things*, whereas {5}, {6}, and {7} provide things — “defenses,” “playthings,” and “nourishments” — for the sake of *persons*. But in fact {4} is ambiguous on this score. At 288a6-7 the Visitor declares that “bearers” are ἐνεκά τινος ἐφέδρας ..., θάκος αἰεί τιτι γιγνόμενον. How shall we read these two variants of τι? The first, τινος, may modify ἐφέδρας, giving the phrase the

²² West 164, also 227 and n. 26.

straightforward meaning, as Rowe renders it, “for the sake of some supporting or other.” But the second, *τινι*, stands apart as a pronoun indicating that for which the *θᾶκος*, “seat,” is a *θᾶκος*, and it is irresolvably ambiguous: it may refer either to a thing or to a person. “Bearers,” accordingly, may equally well be understood as providing a seat “for *something*,” as Rowe has it, or as providing a seat “for *someone*,” as Fowler has it. Hence {4} at once completes the group of {2}, {3}, and {4}, which provide things for the sake of other things, *and* introduces the group of {5}, {6}, and {7}, which provide things for the sake of persons. The same point holds for {11}, the arts of priests and mantics. We have already noted how the conventional, ceremonial, and even *quasi*-commercial cast of the work of priests and mantics dilutes their spiritual focus and locates them along with {9} and {10}, traders and merchants and clerks and heralds, in the ordinary commercial and social life of the city; diluted though it is, however, there *is* a spiritual character to the work of priests and mantics — they are the agents of demotic piety, and in this way they introduce us to {12}, {13}, and {14}, the orator and the general and the judge as the agents who cultivate the moderation, courage, and justice of the citizenry.

Seeing the transitional placement, so to speak, of {4} and of {11} positions us, finally, to notice the *quasi*-enharmonic clustering by which Plato has the Visitor order his two groups of seven. With apologies for returning one last time to observations we have already made in several different contexts and with different purposes: kinds {2}, {3}, and {4} stand closely together and, in this proximity, relatively distant from {1} in that the arts belonging to {2} - {4} produce definite things while the arts in {1} produce only the “raw,” itself “unsynthesized” stuff out of which definite things are first made; and while its ambiguous *τινος* allows {4} to turn us toward kinds {5}, {6}, and {7}, nonetheless, these stand closely together and in relative distance from {2} - {4} in that the things produced in {2} - {4} — “tools,” “containers,” and “bearers” — are for the sake of *other things* while the things produced in {5} - {7} — “defenses” (that is, protective barriers like walls and clothing), “playthings,” and “nourishments” — are for the sake of *persons*. This pattern of clustering orders the second seven kinds as well. Kinds {9}, {10}, and {11} stand together in relative distance from {8} in that the slave, while a provider of services, ‘acts’ without freedom, hence is in that respect himself as much a kind of thing as an agent, while the deeds provided by merchants and traders, by clerks and heralds, and by priests and mantics are all freely undertaken and imply genuine agency; kinds {12}, {13}, and {14}, in turn, stand together and in relative distance from {9} - {11} in that, as we have noted, the deeds of {12} - {14} have as their points of focus *the virtues* of moderation, courage, and justice while the deeds of {9} - {11} belong to the more *mundane social transactions* of commerce, management, and public rite. Thus, analogously with each conjunct tetrachord in the double octave matrix, so each of the two sets of seven kinds is internally grouped or spaced according to the pattern: 1 - 3 - 3.

5. *A final parallel: the ambiguous externality of the “added-on” note and of {15}, statesmanship.* We come, finally, to one of the most intriguing points of structural analogy, the odd status of the fifteenth note in the Greater Perfect System, ὁ προσλαμβανόμενος (“the added-on note”), and of the Visitor’s fifteenth kind, statesmanship. The *caveat* I gave just prior to the last subsection is at full strength here.

As I noted earlier,²³ we don't know when or by whom the fifteenth note was first "added on" to complete the double octave; accordingly, our interpretation of the significance of "the added-on note" to Plato is speculative. That said, it is intriguing to observe that the "added-on" note, while [i] necessary to complete the double octave and [ii] standing just one whole tone lower than the lowest boundary note of the lower conjunct tetrachord, nonetheless [iii] stands apart and by itself, external to both conjunct tetrachords. Each of these points resonates with the substance of the Visitor's 'fifteen-furcation'. With regard, most obviously, to [i], without statesmanship (or, as we shall consider shortly, the law as its functional substitute), a city's "care" for itself is fundamentally incomplete; to put this in terms of the Visitor's simile at 287c, this is the "limb" — or in the other sense of μέλος, the "fitting note" — that all the other limbs or notes require if they are to constitute a well-formed whole. And — to turn to [ii] — we have already seen the relative proximity of {15}, statesmanship, to {12} – {14}: the statesman's insight is the wisdom that is expressed in the moderation-, courage-, and justice-establishing practices, respectively, of his "precious and kindred" aides (τίμια καὶ συγγενῆ, 303e9-10), the orator, the general, and the judge. This close relation makes [iii] all the more striking. Is there a sense in which, analogously with "the added-on note," statesmanship also stands apart and by itself, external to the two groups of seven kinds?

There are two possible affirmative responses. The first is straightforward and unproblematic; from the beginning of the dialogue the Visitor has insisted on the point he invokes with special force in distinguishing the statesman from his "precious" aides, orator, general, and judge: the statesman does not himself engage in practical activity but only directs the practical activities of others (304d-e, recalling 259c-260b). He neither produces, as do the artisans gathered under {1} – {7}, nor engages in practical activity, as do the agents gathered in {8} – {14}; rather he instructs and interweaves the productive and practical activities of others, and so he at once stands apart from and expresses himself in their collaborative work. The second response is more venturesome. "The added-on note," we should first remind ourselves, is not a member of any of the musical modes; this implies that it is not itself directly and distinctly sounded in the melodies that are played, always in one mode or another, but is at best only implicitly present, so to speak, in the harmonies they presuppose. The political-theoretical correlate to this is the Visitor's sobering point that "as things are in the present day" (vûv δέ γε, 300d8), there is no one among us whom we actual citizens can recognize as a true statesman (301c-d); the time when the human community was blessed with a divine shepherd — a "king bee," as it were, "immediately superior (εὐθὺς ... διαφέρων) in mind and body" (301e2) — belongs to our mythical past, and we must adopt the "second best" possibility, imitating statesmanship as best we can by the rule of law (301e, with 300b-c).²⁴ But it is important

²³ See n. 11 above.

²⁴ Does Plato intend the Visitor's reference to the "king bee" to remind us of Socrates' use of that figure to refer to the philosophers educated in Kallipolis at *Republic* 520b — or, more generally, the figure of the shepherd to refer back to Socrates' use of the figure of flock, dogs, and herdsman at a number of points in the *Republic*? It would carry us beyond the topic of this essay to explore the ambiguity of the *Statesman* on the question of whether Plato maintains any real hope of a true statesman, one who possesses the σοφία that statesmanship requires,

to bear in mind that the Visitor's notions of "second-best" and of "imitation" are positive as well as negative. The laws, he says, "represent the fruit of long experience" (ἐκ πείρας πολλῆς, 300b1-2)²⁵ and are "written with the advice of those who know so far as is possible" (τὰ παρὰ τῶν εἰδόντων εἰς δύναμιν ... γεγραμμένα, 300c6-7)²⁶. If, then, our need for the rule of law reflects the absence of any actual true statesman among us, the law itself, as our best effort at approximation, provides statesmanship with a kind of partial or secondary presence; insofar as the collaboration of the fourteen other kinds, the city's "limbs" or "fitting notes," is oriented and ruled by the law, statesmanship is implied by their coordination or harmony. Was part of what may have drawn Plato to the Greater Perfect System as a paradigm in designing the Visitor's 'fifteen-furcation' this odd analogy in the absence and presence of "the added-on note" and of statesmanship?

arising in our actual political life. The Visitor's acknowledgment of the fact of the pervasive skepticism that motivates the turn to law is not itself an endorsement of that skepticism, and by his "so it seems" (ὡς ἔοικεν) at 301e3, Plato seems to have him leave the door open to the possibility of a true statesman. In this respect the Eleatic Visitor seems to side more with Socrates' faint hope at *Republic* 540d than with the Athenian Visitor's denial of it at *Laws* 874e-875d. But this is a big topic and deserves a more thorough-going discussion elsewhere.

²⁵ This is Skemp-Ostwald's felicitous translation.

²⁶ This is the alternative translation offered by Rowe in Cooper, 345 n65.