When Fourths and Fifths Were Major and Minor

Where the Consistent names were used and why conventional theory (TiMS) kept the Just names

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Finding. From the 1500s through the 1800s, theorists in Italy, France, German-speaking Europe, Spain, and Britain used Consistent names for fourths and fifths. Paris Conservatoire textbooks helped make Just names standard by retaining established teaching practice.

Two names for each interval

This paper calls the two systems **Consistent names** and **Just names**. These are terms used here, not names the historical writers gave their systems. Each pair is ordered narrow to wide: the two fourths first, then the two fifths. [5, 7, 10]

Example	12-TET	Consistent names	Just names
C to F	5 semitones	minor 4th (m4)	perfect 4th (P4)
F to B	6 semitones	major 4th (M4)	augmented 4th (A4)
B to F	6 semitones	minor 5th (m5)	diminished 5th (d5)
C to G	7 semitones	major 5th (M5)	perfect 5th (P5)

Read the white-note examples upward. F to B and B to F both span six semitones in 12-tone equal temperament (12-TET). Their relative widths can change with tuning: in Pythagorean tuning they are about 612¢ and 588¢, respectively.

Italy: early names, then all four

Pietro Aaron's *Compendiolo* (Milan, after 1545) used two Consistent names: *quarta maggiore* (F–B) and *quinta minore* (B–F). His smaller *diatessaron* was a different interval, a diminished fourth. His pupil Illuminato Aiguino (Venice, 1562 and 1581) used Consistent names for C–F (4:3) and F–B, and the Just name for the ordinary fifth. These are the earliest examples found here; no inventor is established. [1]

Giovanfrancesco Beccatelli's thoroughbass manuscript (before 1734) uses all four Consistent names. He calls the minor 4th and major 5th *perfect consonances*, distinguishing their consonance from their names. Vincenzo Manfredini's Venice textbook also uses all four Consistent names in 1797. [2, 3]

Where the Consistent names were used

Across languages, with no clean national boundary

German-speaking lands. In 1757 Friedrich Wilhelm Marpurg criticized musicians who called the smaller fifth *kleine Quinte* (“minor fifth”) and the larger fourth *große Quarte* (“major fourth”). In Mainz in 1817, Gottfried Weber taught all four Consistent names but noted that the Just names were common. James F. Warner’s English translation brought Weber’s terms to American readers. [4, 5]

English-speaking world. In London, William Tans’ur used Just names for C–F and C–G and Consistent names for F–B and B–F in 1743. Daniel Read’s *Columbian Harmonist* (New Haven, 1793) used all four Consistent names in a singing-school primer before Weber’s English translation. Read classed the major 5th as a perfect concord and the minor 4th as a discord. In 1874, John Hullah said “perfect” was usual for C–F and C–G in England; he preferred “pluperfect” and “imperfect” for F–B and B–F. [6, 9, 12]

France. Rameau rejected the Consistent names for F–B and B–F in 1722; Rousseau used both in his account of Boisgelou’s tuning system (1768). Pierre Galin taught all four Consistent names (1818) and explicitly rejected the Just names for diatonic F–B and B–F. Augustin Savard lists Fétis, Halévy and Bodin as proponents of naming the ordinary fifth major and its inversion minor. Savard and Danhauser taught Just names but explained the Consistent names. [7, 8, 13, 15]

Spain. Dionisio Aguado taught all four Consistent names in his 1825 Madrid guitar method. He cited Galin in the table’s notes, a direct link between French and Spanish teaching. [15, 16]

Not every use of “major” and “minor” fits the Consistent names. James Currie’s Edinburgh textbook calls C–F a “major fourth,” where Weber calls it minor. Currie took the major-scale tonic as his reference rather than comparing the two diatonic sizes. [18]

The case for Consistent names

As Savard explained, each diatonic interval from the second through the seventh has two sizes. The Consistent names call the wider one major and the narrower one minor, leaving “augmented” and “diminished” for chromatic alterations. Inversion then swaps major and minor in every pair: a minor 4th becomes a major 5th, just as a major 3rd becomes a minor 6th. Manfredini likewise distinguished the minor 5th from the major 4th even when a keyboard gave them the same pitches. [3, 7]

Why TiMS kept the Just names

The case for Just names

The ordinary fourth and fifth had long been treated as special consonances, though the fourth's status in counterpoint depended on its placement. Their just ratios (4:3 and 3:2) and octave-inversion relationship made them a natural pair. Marpurg argued that F–B and B–F are dissonant, unlike both diatonic sizes of thirds and sixths. Callcott made the same distinction in his *Musical Grammar* and rejected the Consistent names. [2–4, 11, 17]

Savard argued that the ordinary fifth helps generate the tonal system and stays fixed when a tonic triad changes from major to minor. Its inversion, the ordinary fourth, takes the same quality name. He also argued that F–B and B–F resolve like other augmented and diminished intervals. [7]

What textbooks actually did

Danhauser's *Théorie de la musique* says he kept the Just names because they were established at the Paris Conservatoire. In his endnote he cites Henri Reber, who argued that the Consistent names were not generally used in France and offered no advantage worth abandoning tradition. The Conservatoire formally adopted Savard's elementary text (1861) and Reber's harmony treatise (1862). Its textbooks helped entrench the Just names; the evidence does not show that one edition or equal temperament ended the debate across Europe. Modern TiMS textbooks retain the distinction: "perfect" for the reference unison, fourth, fifth and octave; "major" and "minor" for the diatonic sizes of the other interval numbers. [7, 8, 10, 14]

MeloPresto's tuning argument. Consistent names describe a diatonic relationship, not a fixed ratio: the minor 4th stays the narrower fourth and the major 5th the wider fifth as the tuning changes, wherever the two sizes of each remain distinct. Read acoustically, "perfect" is exact only when the 4th and 5th are tuned just, at 4:3 and 3:2. Read as chromatic alterations, "augmented" and "diminished" misdescribe diatonic F–B and B–F in every tuning: neither note pair is chromatically altered. TiMS uses those words as conventional labels for departures from a reference interval, not as claims about the tuning or the presence of accidentals. [7, 10, 15, 19]

Bottom line. MeloPresto keeps the Consistent names even at the cost of breaking backward compatibility with TiMS. Myhill's Property gives each diatonic interval from the second through the seventh two sizes. Occam's Razor favors one rule for all six: *minor* for the narrower, *major* for the wider. Across Dynamic Tonality's valid tuning range, the sizes change but the rule holds. A name that is acoustically exact only at a just ratio is no reason to make fourths and fifths exceptions. [19, 20]

Sources and reading notes

Numbered references point to the original text, a scholarly transcription, or a facsimile reproduced in another work. Foreign-language explanations in this brief are translated or paraphrased. Page numbers refer to the printed editions unless indicated.

[1] Pietro Aaron, *Compendiolo di molti dubbi* (Milan: Io. Antonio da Castelliono, undated, after 1545), chs. 52–53, supplied pp. [51]–[52]. Text. Illuminato Aiguino, *La illuminata* (Venice, 1562), I.13 and III.22; *Il tesoro illuminato* (Venice, 1581), I.9–11 and I.16.

[2] Giovanfrancesco Beccatelli, *Documenti, e Regole per imparare à suonare il Basso continuo*, Bologna, Museo Internazionale e Biblioteca della Musica, MS F 8, pp. 14–18 (author died 1734), ed. Massimo Redaelli. Transcription.

[3] Vincenzo Manfredini, *Regole armoniche*, 2nd ed. (Venice: Adolfo Cesare, 1797), Part II, ch. 1, §§ II–IV, and notes 21–23. University of North Carolina copy.

[4] Friedrich Wilhelm Marpurg, *Handbuch bey dem Generalbasse und der Composition*, vol. II (Berlin, 1757), p. 95. German transcription.

[5] Gottfried Weber, *Versuch einer geordneten Theorie der Tonsezkunst* (Mainz: Schott, 1817), I, § 60, pp. 60–61; Warner's English translation, *The Theory of Musical Composition*, I, pp. 49–50 (1852 scan).

[6] Daniel Read, *The Columbian Harmonist*, no. 1 (New Haven, 1793), p. 8. The original interval table is reproduced in Scott G. Sims's 1987 master's thesis, fig. 2.

[7] Augustin Savard, *Principes de la musique et méthode de transposition*, 4th ed. (Paris: Hachette and Girod, 1875), nomenclature observations, pp. 86–87, and n. 42; see also the 1861 adoption notice in the front matter. Scan-backed text.

[8] Adolphe Danhauser, *Théorie de la musique* (Paris: Lemoine et Fils, 1889), p. 34, n. 1, and note g, quoting Reber [14].

[9] John Hullah, "On Musical Nomenclature," *Proceedings of the Musical Association* 1 (1874), pp. 74–87. Publisher's text.

[10] Robert Hutchinson, *Music Theory for the 21st-Century Classroom*, § 5.1.2, "Interval Quality: Perfect versus Major/Minor." University of Puget Sound textbook.

[11] Gioseffo Zarlino, *Le istitutioni harmoniche* (Venice, 1558), discussion of the diapason, diapente and diatessaron as perfect consonances. Utrecht reading edition.

[12] William Tans'ur, *A Compleat Melody, or, The Harmony of Sion*, 5th ed. (London: Robert Brown for James Hodges, 1743), book I, p. 41. Boston Public Library scan.

[13] Jean-Philippe Rameau, *Traité de l'harmonie* (Paris: Ballard, 1722), book II, p. 168. Library of Congress scan; English translation.

[14] Henri Reber, *Traité d'harmonie* (Paris, 1862), p. 4, n. **, with the 26 April 1862 Conservatoire adoption notice in the front matter. Scan.

[15] Jean-Jacques Rousseau, *Dictionnaire de musique* (first published Paris, 1768), "Système," discussion of Boisgelou, pp. 667–68 in the Geneva collected edition. Rousseau Online. Pierre Galin, *Exposition d'une nouvelle méthode pour l'enseignement de la musique* (Paris: Rey et Gravier, 1818), pp. 84–86, 107. Scan.

[16] Dionisio Aguado, *Escuela de guitarra* (Madrid, 1825), §§ 87–88. First-edition scan.

[17] John Wall Callcott, *A Musical Grammar*, 4th ed. (Boston: James Loring, 1838), p. 76, arts. 179–82. University of North Carolina copy.

[18] James Currie, *The Elements of Musical Analysis*, new ed. (Edinburgh and London: Thomas Laurie, undated), §§ 163–166, pp. 134–137. Scan.

[19] Andrew Milne, William Sethares and James Plamondon, "Tuning continua and keyboard layouts," *Journal of Mathematics and Music* 2, no. 1 (2008), pp. 1–19, on the valid tuning range. Authors' paper.

[20] Norman Carey and David Clampitt, "Aspects of Well-Formed Scales," *Music Theory Spectrum* 11, no. 2 (1989), pp. 187–206, esp. p. 201. Article.