

Beyond the Rhine: Harmonic Dualism in
 Vincent d'Indy's *Cours de composition musicale* (1902)

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Stephanie Venturino (Eastman School of Music, University of Rochester)

sventuri@u.rochester.edu

Figure 1. D'Indy's dualist chord construction and superposition of thirds ([1902] 1912, 101).

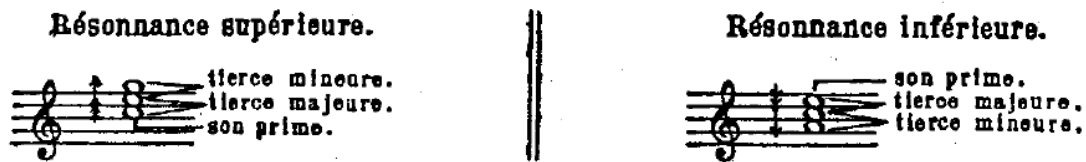


Figure 2a. D'Indy's generation of the major triad from the first six partials of the overtone series ([1902] 1912, 97).

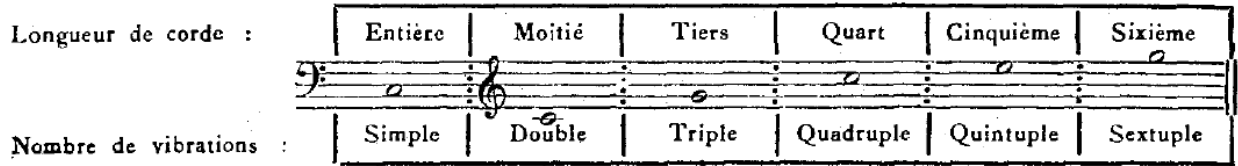


Figure 2b. Riemann's generation of the major triad from the first six partials of the overtone series ([1893] n.d., 3).



Figure 3. Registral placement for Riemann's overtone and undertone series ([1893] n.d., 3).

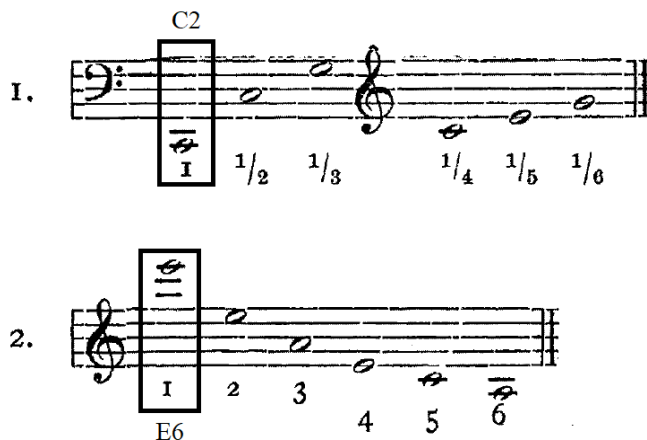


Figure 4a. D'Indy's reduction of harmonic resonance into the Chord ([1902] 1912, 101).



Figure 4b. Riemann's reduction of harmonic resonance into the Chord ([1893] n.d., 6).



Figure 5. Riemann's major and minor triad generation ([1887] 1902, 2-3).



Figure 6. D'Indy's mirror-image major and minor triads ([1902] 1912, 97; 100).



Figure 7. D'Indy's major and minor scales ([1902] 1912, 101).

Figure 7 shows two musical scales on a five-line staff. The left scale is labeled 'Résonance supérieure' and the right is 'Résonance inférieure'. Above each scale, the intervals between notes are specified: '1 ton', '1 ton', '1/2 ton', '1 ton', '1 ton', '1 ton', '1/2 ton'. Below the notes, the degrees are labeled 'I. II. III. IV. V. VI. VII. VIII.'. The notes are connected by vertical dotted lines to their respective interval and degree labels.

Figure 8. D'Indy's superior and inferior resonance combine to create the Chord and the Mode ([1902] 1912, 102).

Figure 8 illustrates the combination of superior and inferior resonance. It features two staves. The top staff is labeled 'Résonance supérieure' and contains an 'Accord majeur' (major chord) with notes G, B, and D. The bottom staff is labeled 'Résonance inférieure' and contains an 'Accord mineur' (minor chord) with notes G, Bb, and D. A series of numbers from 1 to 16, labeled 'Harmoniques', are placed between the two staves, with vertical dotted lines connecting them to specific notes on both staves. The notes on the top staff are G, B, D, E, F#, G, A, B, C, D, E, F, G, A, B, C. The notes on the bottom staff are G, Bb, D, E, F, G, Ab, Bb, C, D, Eb, F, G, Ab, Bb.

Figure 9. Riemann's melodic fundamental scales derived from superior and inferior resonance ([1893] n.d., 5).

Figure 9 shows two examples of Riemann's melodic fundamental scales. The first example, labeled '6.', shows 'Sons 8-16 de la série harmonique supérieure' (notes 8-16 of the upper harmonic series) on a treble clef staff and 'Echelle fondamentale' (fundamental scale) on a bass clef staff. The second example, labeled '7.', shows 'Sons 8-16 de la série harmonique inférieure' (notes 8-16 of the lower harmonic series) on a bass clef staff and 'Echelle fondamentale' on a bass clef staff. Asterisks (*) are placed above certain notes in both examples, and a question mark (?) is placed below a note in the second example. Vertical dotted lines connect the notes between the two staves in each example.

Figure 10. D'Indy's combination of dualist chord construction with scales on D axis (1909, 29).

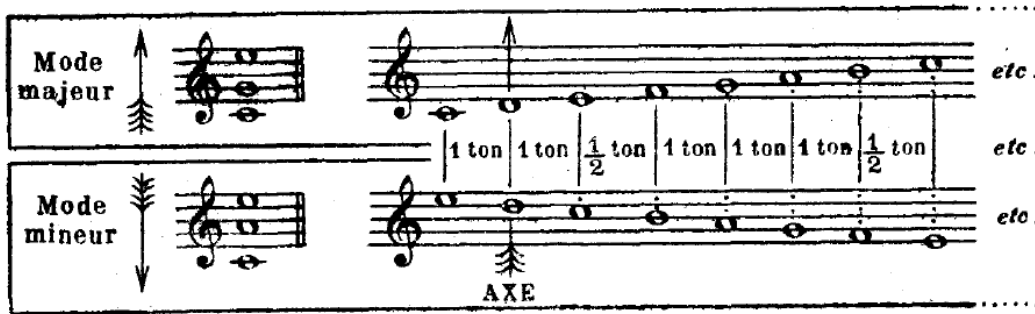


Figure 11. Oettingen's diatonic scales derived from tonality and phonality (1866, 66).

$$\begin{array}{cccccccc}
 & & & & & \longrightarrow & & \\
 c & - & d & - & e & - & f & - & g & - & \bar{a} & - & \bar{h} & - & c \\
 & & 9 & & 5 & & 4 & & 3 & & 5 & & 15 & & 2 \\
 1 & - & \frac{9}{8} & - & \frac{5}{4} & - & \frac{4}{3} & - & \frac{3}{2} & - & \frac{5}{3} & - & \frac{15}{8} & - & 1 \\
 \\
 c & - & \underline{des} & - & \underline{es} & - & f & - & g & - & \underline{as} & - & b & - & c \\
 & & 8 & & 3 & & 2 & & 3 & & 4 & & 8 & & \\
 \frac{1}{2} & - & \frac{8}{15} & - & \frac{3}{5} & - & \frac{2}{3} & - & \frac{3}{4} & - & \frac{4}{5} & - & \frac{8}{9} & - & 1 \\
 & & & & & & & & & & & & & & \\
 & & & & & \longleftarrow & & & & & & & & &
 \end{array}$$

Figure 12. Oettingen's C tonic and ē phonic scales (1866, 71).

$$\begin{array}{cccccccc}
 \text{ton. } c : c & - & d & - & \bar{e} & - & f & - & g & - & \bar{a} & - & \bar{h} & - & c \\
 & & 9 & & 5 & & 4 & & 3 & & 5 & & 15 & & 2 \\
 1 & & \frac{9}{8} & & \frac{5}{4} & & \frac{4}{3} & & \frac{3}{2} & & \frac{5}{3} & & \frac{15}{8} & & 2 \\
 \\
 \text{phon. } \bar{e} : \bar{e} & - & f & - & g & - & \bar{a} & - & \bar{h} & - & c & - & \bar{d} & - & \bar{e} \\
 & & 8 & & 3 & & 2 & & 3 & & 4 & & 8 & & \\
 \frac{1}{2} & & \frac{8}{15} & & \frac{3}{5} & & \frac{2}{3} & & \frac{3}{4} & & \frac{4}{5} & & \frac{8}{9} & & 1 \\
 \\
 \text{Dort haben wir den Ton } d & = & \frac{9}{8} \cdot c & = & \frac{9}{10} \cdot \bar{e} \\
 \\
 \text{hier } \bar{d} & = & \frac{8}{9} \cdot \bar{e} & = & \frac{10}{9} \cdot c
 \end{array}$$

Figure 13. D'Indy's circle of fifths with D as the axis of symmetry ([1902] 1912, 106).

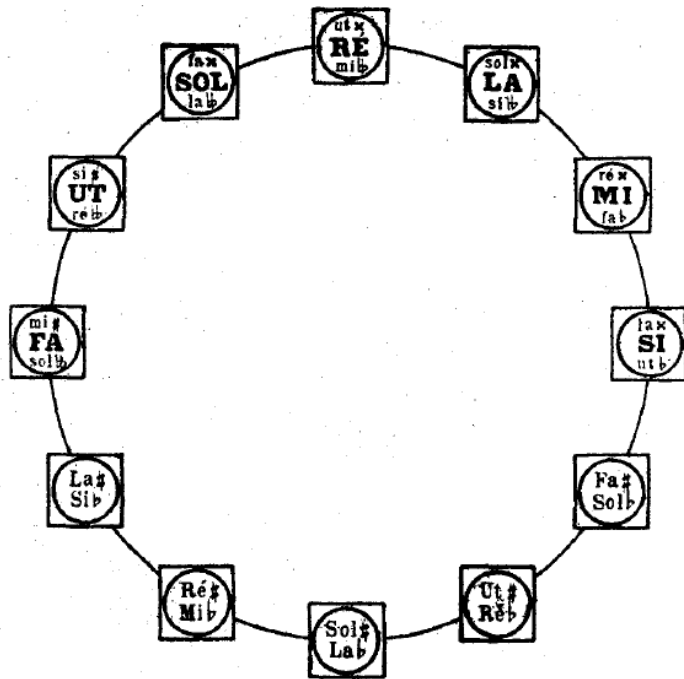


Figure 14. D'Indy's modified circle of fifths with "change of direction" ([1902] 1912, 114–115).

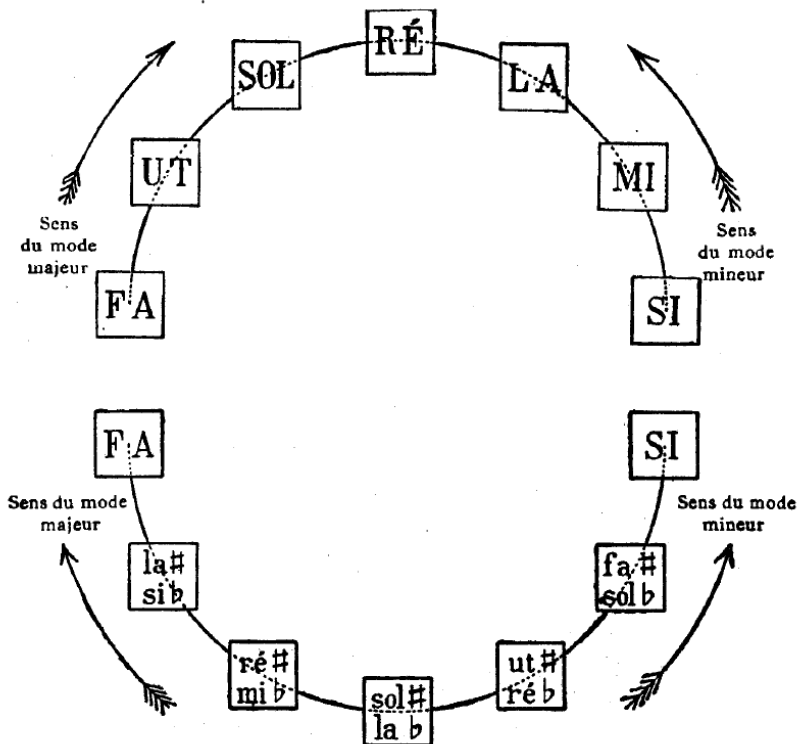


Figure 15. D'Indy's table of tonal functions ([1902] 1912, 110).

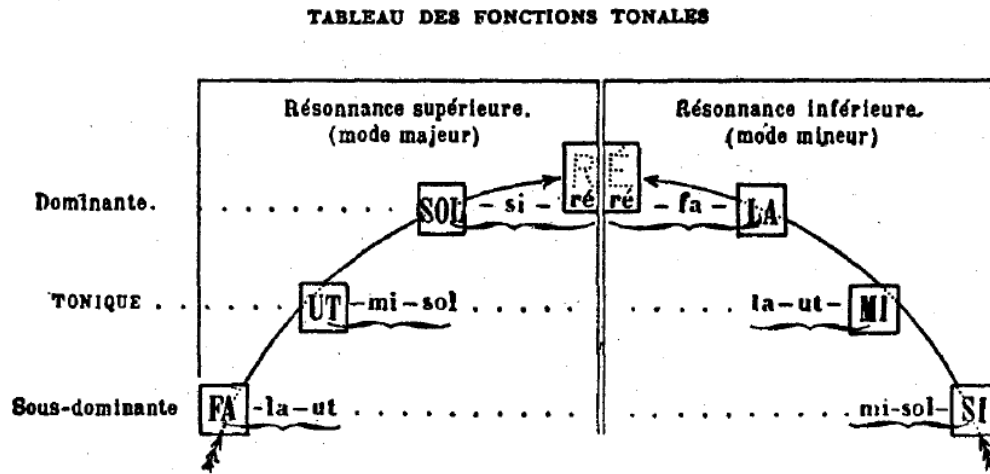


Figure 16. Riemann's minor mode functions ([1893], n.d., 8).

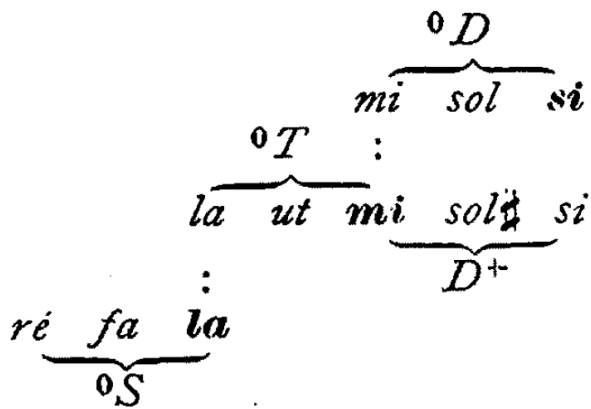


Figure 17. D'Indy's minor mode cadential figure ([1902] 1912, 111).

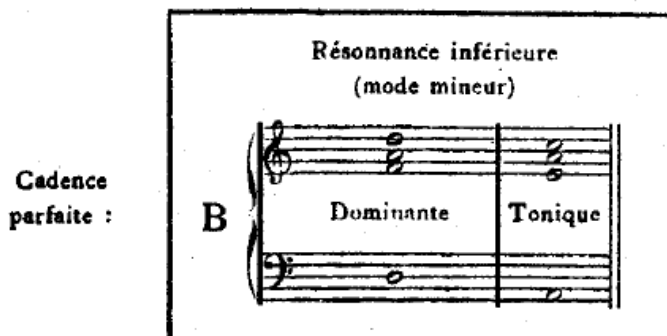


Figure 18. D'Indy's passing dissonances in perfect major and minor cadences ([1902] 1912, 112).

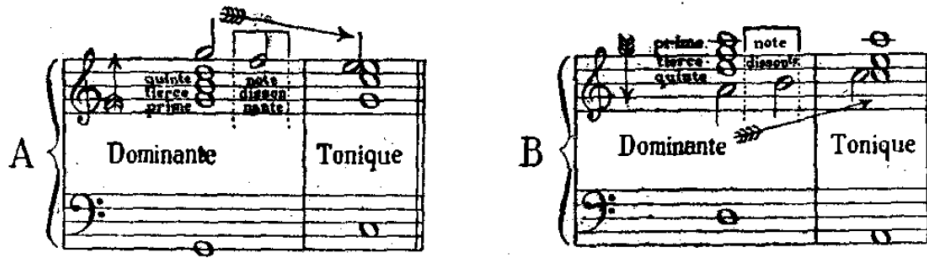


Figure 19. Catel's perfect major and minor cadences without regard for bass direction (1802, 34).

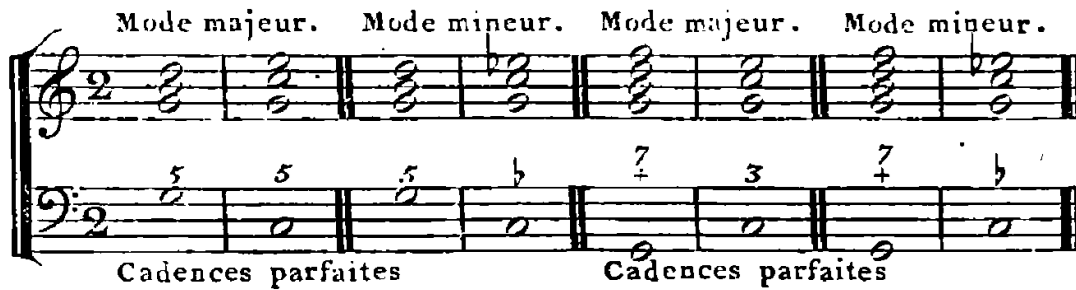


Figure 20. D'Indy's major and minor mode cadential formulae ([1902] 1912, 111).

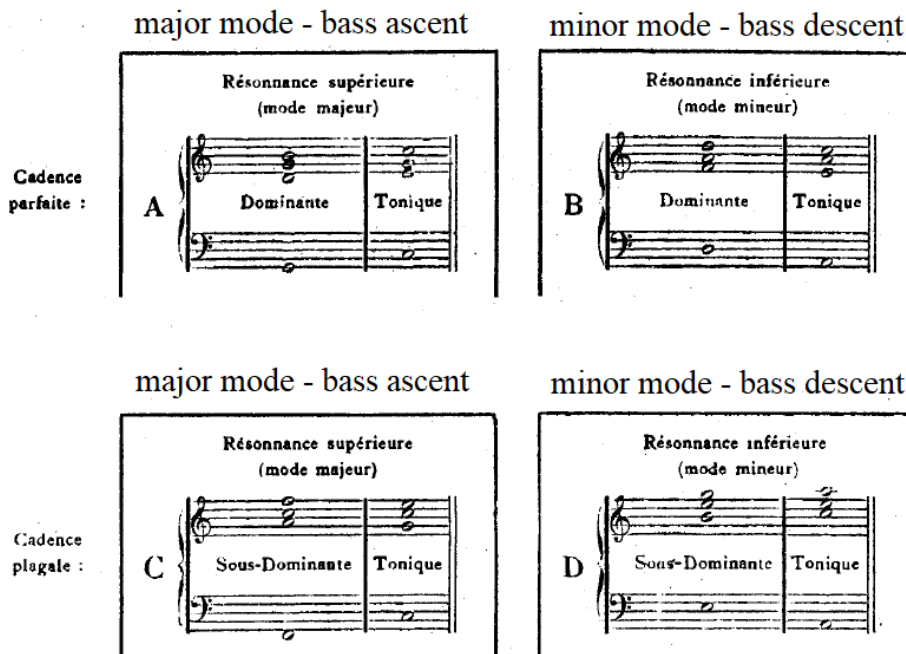


Figure 21. D’Indy’s relationship of the three orders ([1902] 1912, 113–116).

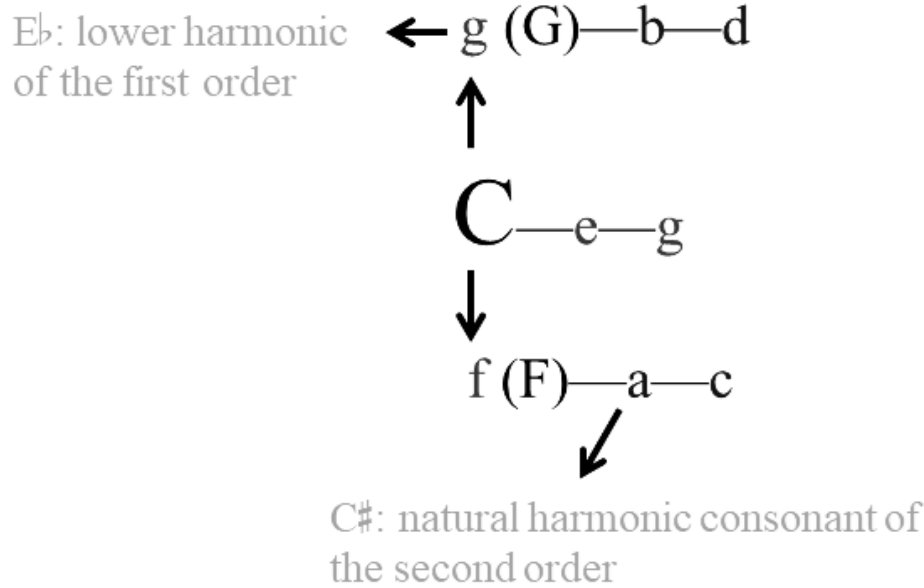


Figure 22. D’Indy’s table of neighboring tonalities ([1902] 1912, 129).

TABLEAU DES TONALITÉS VOISINES

RÉSONNANCE SUPÉRIEURE	UT majeur	la mineur	RÉSONNANCE INFÉRIEURE
:LA♭- ut - mi♭ : :ut♯- mi - SOL♯ : :MI - sol♯ - si : :mi - sol - SI :	LA♭ majeur ut♯ mineur MI majeur mi mineur	ut♯ mineur LA majeur fa mineur FA majeur	:ut♯- mi - SOL : :LA - ut♯- mi : :fa - la ♭- UT : :FA - la - ut :
<i>Fonctions tonales</i>			
FA - la - UT - MI - SOL - si - ré fa - la♭ - UT - MI - SOL - si - ré	SOL majeur FA majeur fa mineur	ré mineur mi mineur MI majeur	ré - fa - LA - UT - MI - sol - SI ré - fa - LA - UT - MI - sol♯ - si
:fa - ut - MI : :LA - ut♯- mi : :ut - mi♭- SOL : :MI♭- sol - si♭ :	la mineur LA majeur ut mineur MI♭ majeur	UT majeur ut mineur LA♭ majeur fa♯ mineur	:UT - mi - sol : :ut - mi♭- SOL : :LA♭- ut - mi♭ : :fa♯- la - UT♯ :

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