

ZGMTH

Zeitschrift der
Gesellschaft für Musiktheorie

Gollin, Edward (2003/05): Neo-Riemannian Theory. ZGMTH 1–2/2/2–3, 153–155.
<https://doi.org/10.31751/520>

© 2003/05 Edward Gollin



Dieser Text erscheint im Open Access und ist lizenziert unter einer
Creative Commons Namensnennung 4.0 International Lizenz.

This is an open access article licensed under a
Creative Commons Attribution 4.0 International License.

veröffentlicht / first published: 01/04/2005
zuletzt geändert / last updated: 15/01/2010

Neo-Riemannian Theory

Edward Gollin

Neo-Riemannian Theory (NRT) denotes a range of speculative and analytical studies concerned with the relation of the mathematical structure of tonal pitch materials (e.g. harmonic triads, tertian seventh chords, diatonic collections, and so forth) to the properties and functions of those materials in musical systems and in individual musical works. The name honors the nineteenth-century music theorist Hugo Riemann whose harmonic theories (as well as those of the harmonic dualists Moritz Hauptmann and Arthur von Oettingen) inspired the modern work. NRT arose in response to the failure of traditional theories of tonality to adequately describe as 'coherent' certain chromatic repertoires of the late nineteenth century (music of Wagner, Franck, et al.). NRT replaces a notion of coherence in which phrase structure and cadences are organized hierarchically and unified by a single overarching tonic with a notion of coherence that views particular harmonic gestures and voice-leading routines as elements of finite mathematical groups; group structure and group closure offer a means to understand the unity of passages whose gestures manifest and project those group elements. NRT is a sub-discipline of transformational theory, though it also shares certain perspectives and insights with diatonic set theory.

Three features that characterize the neo-Riemannian perspective may be outlined as follows (though all three items listed should not be considered requisite for any individual neo-Riemannian study):

1. The interpretation of triadic relationships as transformations that constitute the formal elements of mathematical groups.

In the earliest neo-Riemannian literature (Lewin, 1982, 1987, 1992; Hyer 1989, 1995), attention was focused largely upon the dualist *Harmonieschritte* that underlie the *Scheinkonsonanzen* of Riemann's *Funktionstheorie*: the *Leittonwechselschritt*, the *Terzwechselschritt*, and the *Quintwechselschritt* (in the American literature these are generally labeled L, R, and P for "*Leittonwechsel*," "*Relative*," and "*Parallel*," respectively, although they correspond to Riemann's "*Leittonwechsel*," "*Parallele*," and "*Variante*" relations, respectively) as well as the non-dualist transformations that map triads to their dominants or mediant. These relations were considered generators from which other relations could be derived through combination. It was later recognized (Klumpenhouwer, 1994) that all the relations in Riemann's *Systematik der Harmonieschritte* (Riemann, 1880), with the inclusion of a group identity element and when understood to act on triads in equal temperament, form a group identical to that which arises through the

exhaustive combination of the L, R and P transformations (in the literature, this is called the PLR-group or the *Schritt / Wechsel* group). More recently, Julian Hook has developed a notation and means to categorize all possible uniform triadic transformations (UTTs), dualist and otherwise (Hook, 2002), although the transformations may be defined to act on any asymmetric set class.

2. *The privileging of transformations that maximize common tones while minimizing the displacement of moving voices (known as voice-leading parsimony).*

The transformations P, L, and R are unique among the triadic transformations in that they each preserve two tones of the triads they map while requiring that the remaining tone be displaced by only one or two semitones (e.g. under L, an a-minor triad maps to F-major, retaining the tones A and C while E moves to F; under P, an a-minor triad maps to A-major, retaining the tones A and E while C moves to C#). One of the most astonishing results in the neo-Riemannian literature is the observation by Richard Cohn that the ordinary harmonic triads of tonal music – historically privileged for their acoustic properties – are mathematically unique structures in the 12-tone chromatic universe because they can participate in three distinct parsimonious relationships and hence can progress smoothly in a rich variety of ways in both diatonic and chromatic settings (Cohn, 1997). McCreless (1996) describes this ability of the (historically diatonically-conceived) triad to function so well in chromatic passages using the evolutionary metaphor of pre-adaptation. Subsequent studies have explored parsimonious relationships among members of other set classes, notably sc (0258), the dominant seventh / Tristan chord and the Mystic chord (Lewin, 1996; Childs, 1998; Gollin, 1998; Callender, 1998).

3. *The spatial representation of transformational relationships as formal graphs or networks (i.e. Caley diagrams).*

Such networks impose a metric upon harmonic relationships modelled therein and motions through such graphs can be understood as metaphors for harmonic gestures in music. The relation of Riemann's *Tabelle der Tonverwandtschaft* (or *Tonnetz*) to the network underlying the PLR-group has been observed and discussed by Hyer (1989, 1995) and Mooney (1996). Lewin (1996, 1998) has explored the analytical potential of certain non-triadic spaces.

NRT was the topic of special issue of the *Journal of Music Theory* vol. 42 no. 2 (1998). The introduction to that issue (Cohn, 1998) provides a historical review of the development of NRT, and a union bibliography lists a large number of important articles related to the field.

Bibliography

- Callender, Clifton. 1998. "Voice-leading Parsimony in the Music of Alexander Scriabin." *Journal of Music Theory* 42: 219–233.
- Childs, Adrian. 1998. "Moving Beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords." *Journal of Music Theory* 42: 181–193.
- Cohn, Richard. 1996. "Maximally Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions." *Music Analysis* 15: 9–40.
- . 1997. "Neo-Riemannian Operations, Parsimonious Trichords, and Their Tonnetz Representations." *Journal of Music Theory* 41: 1–66.
- . 1998. "Introduction to Neo-Riemannian Theory: A Survey and Historical Perspective." *Journal of Music Theory* 42: 167–180.
- Gollin, Edward. 1998. "Some Aspects of Three-dimensional Tonnetze." *Journal of Music Theory* 42: 195–206.
- . 2000. "Representations of Space and Conceptions of Distance in Transformational Theories." Ph.D. Diss., Harvard University.
- Hook, Julian L. 2002. "Uniform Triadic Transformations." Ph.D. Diss., Indiana University.
- Hyer, Brian. 1989. "Tonal Intuitions in 'Tristan and Isolde'." Ph.D. Diss., Yale University.
- . 1995. "Reimag(in)ing Riemann." *Journal of Music Theory* 39: 101–138.
- Klumpenhouwer, Henry. 1994. "Some Remarks on the Use of Riemann Transformations." *Music Theory Online* 0.
- Lewin, David. 1982. "A Formal Theory of Generalized Tonal Functions." *Journal of Music Theory* 26: 23–60.
- . 1987. *Generalized Musical Intervals and Transformations*. New Haven: Yale University Press.
- . 1992. "Some Notes on Analyzing Wagner: The Ring and Parsifal." *19th-Century Music* 16: 49–58.
- . 1996. "Cohn Functions." *Journal of Music Theory* 40: 181–216.
- . 1998. "Notes on the Opening of the F# Minor Fugue from WTC I." *Journal of Music Theory* 42: 235–239.
- McCreless, Partrick. 1996. "An Evolutionary Perspective on Semitone Relations in the Nineteenth Century." In *The Second Practice of Nineteenth-Century Tonality*, edited by William Kinderman and Harald Krebs. Lincoln: University of Nebraska Press, 87–113.
- Mooney, Michael Kevin. 1996. "The Table of Relations and Music Psychology in Hugo Riemann's Harmonic Theory." Ph.D. Diss., Columbia University.
- Riemann, Hugo. 1880. *Skizze einer neuen Methode der Harmonielehre*. Leipzig: Breitkopf und Härtel.