

# The Oxford Handbook of NEO-RIEMANNIAN MUSIC THEORIES

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## THE OXFORD HANDBOOK OF

# NEO-RIEMANNIAN MUSIC THEORIES

*Edited by* EDWARD GOLLIN and ALEXANDER REHDING



## OXFORD

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# Preface

The theoretical work of Hugo Riemann (1849–1919) has attracted much attention in recent years. The past decade has seen a new comprehensive biography of Riemann by Michael Arntz; Tatjana Böhme-Mehner and Klaus Mehner have edited and contributed to a collection of studies by German scholars; and Alexander Rehding has produced a monograph placing Riemann's work in its cultural and intellectual context.<sup>1</sup> Yet in North America, the study of Riemann's work itself has been dwarfed in recent years by a new theoretical and analytical subdiscipline named for Riemann and inspired by his ideas. In numerous academic conference panels, specialized meetings, journal and book publications, and doctoral dissertations, the renewal of Riemann's ideas has reinvigorated the discipline of music theory, offering the prospect of establishing a new music-theoretical paradigm, to complement and stand alongside the two well-established systems of Heinrich Schenker and Allen Forte.

The approaches that are now grouped together under the name neo-Riemannian theory first emerged over twenty-five years ago. The theory first grew out of the work of David Lewin and Brian Hyer, who treated certain functional triadic relationships in Riemann's harmonic theory as mathematical transformations acting on triads, using those transformations (and their attendant group structures) to model structural relations in late-nineteenth-century music.<sup>2</sup> Subsequent work by John Clough and Richard Cohn, bringing aspects of set theory to bear on the materials and relations of tonal music, led to a number of striking insights about the structural properties of diatonic scales and triads-in particular, the realization that the familiar triads of Western music, long valued as ideal acoustical objects, are also in many ways ideal mathematical objects from the perspective of voice leading.<sup>3</sup> Clough, together with Lewin, Cohn, Jack Douthett, and others, convened a series of conferences at the State University of New York at Buffalo, beginning in the 1990s, to share their work and ideas. The field of neo-Riemannian theory was truly born out of the activities of this "Buffalo working group."<sup>4</sup> Neo-Riemannian theory has since overflowed the vessel of the Buffalo conferences, further developed by some of its initial practitioners, but also by generations of graduate students inspired by their research. It seems, therefore, that the time is ripe, given the maturation of the neo-Riemannian project and of the field of historical music theory, for a reassessment of Riemann's theories-old and new-in light of these developments.

The present volume has a twofold intent: to provide contemporary perspectives on Riemann's scholarship and to illustrate the way the Riemannian perspective shapes and informs contemporary analytical and theoretical scholarship. The essays collected within were chosen to refocus attention somewhat toward the theories of the original Riemann, and to bring a historical dimension to the neo-Riemannian project. In the spirit of broadening its outlook, then, it seemed advisable not to maintain a strict distinction in this book between the essays focusing on the "historical Riemann" and those that fall squarely into the field of contemporary neo-Riemannian theory. In so far as all these essays are fed by the recent renewed interest in Riemann's ideas, regardless of their outlook, they all constitute aspects of a broadly conceived field of neo-Riemannian studies.

The chapters are divided into six parts, which address particular aspects of Riemann's work or the analytical traditions that have arisen therefrom. Part 1 explores Riemann's legacy and the intellectual, cultural, and philosophical traditions within which his work arose and became transmitted. Parts 2-5 address particular components of Riemann's theoretical project: dualism, tone relations and spaces, harmonic relations and spaces, and rhythmic-metric theories. The final part critically explores the analytical practices of Riemannian and neo-Riemannian theory, and their ability to interact and communicate with other analytical approaches. To some degree these sectional divisions overlap. Riemann's spatial conception of tone relations, manifest in the now-canonical Tonnetz, are clearly related to aspects of harmonic relations and voice-leading, yet the structures of the two kinds of musical objects, the structures of their relational systems, and the psychological/cognitive distinctions that attend their perception (i.e., the perception of distance or relatedness in the two systems) justify their separate treatment. Similarly, issues of form impinge both on temporal and harmonic aspects of Riemann's work, and consequently aspects of form are discussed in multiple sections.

Theoretical and analytical essays in the volume are interspersed with annotated translations of a number of works and essays by Riemann that had not previously been available in English. The translation of these key documents—many of which known to the largely Anglophone neo-Riemannian community only through secondary sources—we believe, will provide a fuller picture of Riemann and his ideas, and may well provide further impetus to future developments in neo-Riemannian theory. For all their quirkiness, Riemann's multifaceted theoretical writings, we believe, have much else to offer that may be of interest to contemporary analytical discourse. The essays assembled in this volume are designed both to provide an overview and to guide future research in this direction.

Throughout the volume, certain music-theoretical terminology has been left untranslated: *Klang, Harmonieschritt, Tonvorstellungen*, and the like. For readers new to Riemann's ideas and to nineteenth-century German dualism, a glossary has been included to define key terms and provide a way into the individual essays, which explore the terms and concepts in greater detail.

The essays in this volume look both backward and forward: forward, in summarizing and exploring trends that have emerged over the last twenty-five years with the view to providing impetus for further projects; and backward, in examining the source concepts from which these ideas have emerged, not only to provide them with a historical background, but also to make familiar other aspects of Riemann's work that have not yet received the critical attention they deserve and that may well lead to further areas of investigation. The emphasis on reconnecting neo-Riemannian ideas with their source concepts is designed, on the one hand, to familiarize readers who know Riemann's theories only through neo-Riemannian accounts with the original ideas, and on the other, to expand the realms of inquiry of neo-Riemannian theory through cross-pollination with ideas that are as yet underexplored.

At this stage in the development of neo-Riemannian theory, given that many of its particular analytical technologies have been fairly thoroughly explored, it seems that there is a possibility for new issues to take center stage: How can the question of tonality best be answered? To what extent is the neo-Riemannian approach engaged in canonizing a new repertoire of chromatic music? How does such a repertoire interact with the tonal/atonal divisions that the Schenkerian and pitch-class set paradigms had promoted? And more broadly, what is the nature of musical experience in a neo-Riemannian framework? The essays in this volume are designed to foster engagement with such wider-reaching questions and to lead to ever new ones, further expanding the resources that Riemann's ideas have given to musictheoretical discourse.

#### NOTES

1. Michael Arntz, *Hugo Riemann (1849–1919): Leben, Werk und Wirkung* (Cologne: Allegro, 1999); Tatjana Böhme-Mehner and Klaus Mehner eds., *Hugo Riemann (1849–1919): Musikwissenschaftler mit Universalanspruch* (Cologne: Böhlau Verlag, 2001); Alexander Rehding, *Hugo Riemann and the Birth of Modern Musical Thought* (Cambridge: Cambridge University Press, 2003).

2. See, for example, Lewin's "A Formal Theory of Generalized Tonal Functions," *Journal of Music Theory* 26.1 (1982), 23–60, often considered the article that initiated the neo-Riemannian enterprise; also Brian Hyer's dissertation, "Tonal Intuitions in *Tristan und Isolde*," (Ph.D. diss., Yale University, 1989).

3. A seminal article on the topic is Richard Cohn's "Neo-Riemannian Operations, Parsimonious Trichords, and Their *Tonnetz* Representations," *Journal of Music Theory* 41.1 (1997), 1–66.

4. For a more extended history of neo-Riemannian theory, see Richard Cohn, "An Introduction to Neo-Riemannian Theory: A Survey and Historical Perspective," *Journal of Music Theory* 42.2 (1998), 167–180.

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# NEO-RIEMANNIAN MUSIC THEORIES

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### PART I

# INTELLECTUAL CONTEXTS

It is something of a truism that the ideas that make up the body of Riemannian theoretical thinking did not spring up in a historical vacuum. Riemannians and neo-Riemannians have long been familiar with certain figures from nineteenth-century music theory, and indeed have raised many a figure out of historical obscurity. It would perhaps be overstating the case to say that theorists such as Ottokar Hostinsky, Carl Weitzmann, and Arthur von Oettingen are now household names, but they are doubtless much better known now, in the context of neo-Riemannian theories, than they would have been only a few years ago. And yet, these names are merely dots in the rich intellectual landscape that was central European music theory in the nineteenth and twentieth centuries. In examining the cultural and historical contexts that inspired and shaped Riemann's ideas, this section also aims to expand the circle of ideas and names associated with Riemannian theories so as to present a fuller and richer picture of that landscape.

Ludwig Holtmeier leads the exploration by tracing the reception of Riemann's ideas and examining their gradual transformations in the hands of his contemporaries and successors. By placing Riemann's legacy in the wider context of music-theoretical traditions, Holtmeier shows that, contrary to common belief, there was in fact a middle ground between Viennese scale-degree theory and Riemannian function theory, between voice-leading approaches and *Klang*-based approaches.

Names such as Georg Capellen, Rudolf Louis, and Johannes Schreyer are seldom encountered even in the history of music theory, but Holtmeier shows how this generation of theorists, epitomized in Louis's "Munich school," is the missing link between the two great music-theoretical centers, Vienna and Leipzig.

Benjamin Steege presents an introduction and translation of Riemann's "The Nature of Harmony," Riemann's 1882 account of his intellectual and theoretical and forebears. Steege's translation makes readily accessible an important document in Riemann's own theoretical evolution—written at a moment when an incipient psychological perspective was beginning to supplant Riemann's earlier acoustical and physiological perspective. Just as Riemann tries to place his own theoretical program within (or at the logical conclusion of) a historical trajectory, Steege's introduction locates the work within the broader historical and intellectual discourse of nineteenth-century physics, physiology, and psychology, underscoring the implicit and explicit polemics with Helmholtz and others that course through its pages.

Brian Hyer takes another look at a concept that appears to be sufficiently familiar, perhaps even overly so: tonal function. In particular, Hyer examines the mathematical and philosophical understandings of function, most notably in the writings of Gottlob Frege. By taking this concept out of its usual sphere of influence, into the fields of epistemology and mathematics, which are its natural habitat, Hyer points out the strengths and limitations of this important Riemannian idea.

Finally, Matthew Gelbart and Alexander Rehding turn to an aspect of Riemann's theoretical writings that has rarely been explored: his late "theory of folk musical tonality," with which he sets out to cover pretonal and nontonal repertoires. With this "universal" theory, Riemann ventures into areas as diverse as Greek tetrachordal theory, Chinese pentatonicism, and Scottish folk song—areas that are traditionally the domain of comparative musicology, the precursor of ethnomusicology. Among Riemann's many theoretical systems, this sketch is distinguished by proposing a model based on melodic structure, not on harmony. Yet, as Gelbart and Rehding show, a certain number of Riemann's fundamental convictions also make their way into this new area of inquiry.

### CHAPTER 1

# THE RECEPTION OF HUGO RIEMANN'S MUSIC THEORY

### LUDWIG HOLTMEIER

One day a young, particularly enthusiastic student, to whom I gradually began to explain such problems, asked me: Have we erected a monument to the ingenious architect of this glorious logical harmonic system? That will happen some day, I replied, but as always, only after he will have passed on to the ancestors.<sup>1</sup>

If we are to believe Michael Arntz's biography, we would have to imagine Hugo Riemann as a kindly, avuncular figure, who worked tirelessly to put food on the family table, an unworldly scientist who lived only for his research<sup>2</sup>—a lovably quirky figure, something from a novel by Jean Paul. Not everything in this image, however, corresponds to reality.<sup>3</sup> For example, his unparalleled productivity, which caused astonishment among his contemporaries and which makes it difficult even today to gain a unified sense of his theory, suggests that Riemann cannot have been purely concerned with his ideas. Rather, it implies that he had a considerable interest in power and influence, in implementing his ideas societally and, above all, institutionally. Bernhard Ziehn's criticism is not merely "exceptionally harsh" but also to the point:<sup>4</sup> "no sooner would anyone have the audacity to wish that the slightest detail of [Riemann's] ideas were a little different, or—banish the thought!—point out to the most famous music teacher of all times some of his intellectual somersaults, than *Herr Doctor* would assault that unfortunate person with his quick quill as though he had committed patricide.... He demanded absolute submission."<sup>5</sup>

Riemann was extremely sensitive to criticism, and he bore a grudge. This feature may have been more damaging to him personally and to the dissemination of his

theory than many others. Not only his enemies, who were at the receiving end, but also his supporters, propagandists, and even his closest friends suffered under this trait. Emil Ergo, an enthusiastic Belgian acolyte of Riemann, loyal to the master to the point of self-denial,6 worked hard to further develop the ideas of his "friend Riemann."7 But Ergo pointed out, not without justification, that if Riemann had been true to his theory, he should have described the Tristan chord as a secondary dominant, and not a functional subdominant. ("Riemann definitely saw some things too quickly and too indistinctly."8) Ergo also criticized Riemann's theory of phrasing in a public forum and made suggestions for improvement.9 In response, Riemann retreated into resentful silence.<sup>10</sup> Another faithful disciple, Johannes Schreyer, who had further developed features of Riemann's functional harmonic theory, suffered a similar fate.11 Like most of Riemann's supporters, he had distanced himself from dualism: "Even though we owe much enlightenment and stimulus to Riemann's writings, I cannot convince myself of the necessity to notate the minor harmony as under-Klang, as he requires."12 Schreyer's "monistic" revision of Klangschlüssel notation found no favor with Riemann.<sup>13</sup> As he communicated in a letter of 1903 to Schreyer, he had "no esteem for attempts at mediation such as yours."<sup>14</sup> As a consequence, the relationship between the two cooled down considerably.

What shines through underneath Riemann's thin skin is considerable ambition: his extreme sensitivity betrays a striving for power, influence, and recognition. It is hard to overlook how much time and energy Riemann spent on propaganda for his ideas. His subsequent concentration on music-historical research should not obscure the fact that it was above all on the practical disciplines of harmony and phrasing that he intended to leave his mark. He was not primarily interested in playing a role in the small, closed academic world of science and research, but he was eager to exert a lasting influence on music history writ large-on practicing musicians and how they thought in and about music.<sup>15</sup> He propagated the ever-same ideas in forever new guises: tutors, simplified tutors, catechisms, introductions, compendia, handbooks, practical editions are tirelessly tossed out on the market as though new ideas would succeed simply by virtue of their volume.<sup>16</sup> The prefaces of his pedagogical works leave no doubt about his ultimate mission: that his theory be granted admission to the "higher pedagogical institutions,"17 that his Handbuch der Harmonielehre succeed in replacing the harmony textbook that had been his reference point right from the beginning-Ernst Friedrich Richter's Harmonielehre, "a book spread throughout the whole civilized world."18 Riemann's constant complaints about lacking reception, slow sales, about resistance, "insurmountable obstacles," "silent disregard,"19 which can be found in all the prefaces to his pedagogical works, offer a glimpse into his frustration over never having achieved a genuinely popular harmony tutor. His vehement and unjust response to the theory of harmony by Louis and Thuille can, not least, be explained as a premonition on Riemann's part that it was their work that was destined to assume the mantle of Richter's Harmonielehre.<sup>20</sup>

The essential tool of Riemann's "propaganda" was his *Musiklexikon*, as Arntz has pointed out.<sup>21</sup> Not only did it serve Riemann to promulgate his ideas but also to reward or punish his henchmen. Anyone who was with Riemann was met with a

benevolent reception. Traces of Riemann's worldwide network are inscribed in the Lexikon. His acolytes disseminated, as translators and publishers, Riemann's ideas throughout the world:<sup>22</sup> Julius Engel, Peter Ivanovich Jürgenson, and Nikolai Kashkin in Russia, Emil Ergo in Belgium and the Netherlands, Michel Calvocoressi and Georges Humbert in France and Switzerland, Giacomo Settaccioli in Italy, Heinrich Bewerunge and John Shedlock in England and Ireland, John Comfort Fillmore in America, Henryk Bissing Schytte in Denmark, and Jan Urbánek in the Czech lands.<sup>23</sup> After Riemann's death, in the late twenties, central pedagogical works by Riemann would also appear in Spanish, the last important language of the "civilized world" still missing, and would in this way enter into all of Latin America.<sup>24</sup> Hugo Riemann was a music-theoretical entrepreneur, as there had been few before or after him. It is useful to bear this in mind, especially as Riemann not only did not have a monument erected in his memory-despite the fervent hope expressed by Emil Ergo initially-but rather his entire pedagogical opus fell into oblivion, while paradoxically the theory of function rose to fame as the paradigm of harmony teaching at many conservatoires, universities, and music schools in central Europe. The fact that he became a historical figure after 1945, without much relevance for contemporary practice or research, is a separate story with its own reasons, as we shall discuss later. Many have warned against overestimating Riemann's influence.<sup>25</sup> It would be equally misguided, however, to underestimate him.

## **RIEMANN'S LEGACY**

The extent of Riemann's influence on applied (or "practical") music theory is deceptive.<sup>26</sup> This is primarily because of the dearth of any direct, "pure" continuation of Riemann's theories. In contrast to, say, Simon Sechter or Heinrich Schenker, Riemann did not succeed in forming a school. One crucial reason for this was Riemann's universalist approach, his attempt to develop a theory, "which would turn the long-desired union of musicology and practical music pedagogy into reality."<sup>27</sup> Two areas of the reception of Riemann's music theory relevant for practical music theory can be discerned: (1) the theory of phrasing, and (2) the theory of harmony, which can in turn be subdivided into theories of (a) practical harmony and (b) dualistic derivation.

The theory of phrasing, an essential part of Riemann's theoretical system, cannot be dealt with here. During Riemann's lifetime it occupied a central position in music-theoretical discourse, which, however, it gradually lost beginning as early as the 1910s. Only a few of Riemann's successors took it up, while it has disappeared completely from "modern" theories of function and the general music-theoretical discussion.<sup>28</sup> It is on the field of practical harmony that Riemann's theory had its most lasting impact.

In the above division into ideal types, the "theory of dualistic derivation" is synonymous with the notion of "science" (or rather, its more inclusive German correlate, *Wissenschaft*). In this form of derivation, Riemann takes up the Leipzig tradition of dualism.<sup>29</sup> The most far-reaching part is not only its integration into his theory of the imaginations of tone (*Lehre von den Tonvorstellungen*),<sup>30</sup> but also his attempt to transfer "scientific" dualism to his practical teaching, in line with his holistic method: the old theoretical notions of the upper and lower *Klänge* are, for the first time, *consistently* integrated into a practical theory of composition.<sup>31</sup>

The main stream of Riemann reception—and by this I mean his practical harmony tutors, which were widely disseminated—did *not* follow Riemann in his dualistic ideas. Almost all of Riemann's successors settled on a "monistic" variant of the theory of functions.<sup>32</sup> The term "monism" appears to have been coined by the music theorist Georg Capellen, who spearheaded the criticisms of dualism.<sup>33</sup> In his 1901 article, "Die Unmöglichkeit und Überflüssigkeit der dualistischen Molltheorie Riemanns" ("The impossibility and redundancy of Riemann's dualistic theory of minor") Capellen, like many others, attacked Riemann's system where it seemed least protected—namely, in the problem of the "root" of the minor chord.

Capellen reproaches Riemann for theoretical inconsistencies: "Just like the other dualists, [Riemann had] not had the guts to think through the identity of the first scale degree and the root in minor consistently and to take it to the next level."<sup>34</sup> Riemann maintained a distinction, Capellen argued, between the generator of the minor chord, its "principal tone" (Hauptton), that is, the tone from which the lower sonority is formed, and the "root" (Grundton), corresponding to classical fundamental bass theory. It is the old problem of dualism: while the generator of the major triad is also perceived as its root, the generator of the minor triad is heard, due to "the normal perception of chordal weight,"35 as the fifth of the triad, and in Riemann's theory of composition it is consequently treated as such.<sup>36</sup> Riemann could not convincingly rebut Capellen's reproach with his dualistic, "dialectical" explanation, arguing that the criticism was wrongly directed at the level of concrete experience, when it actually belonged in the realm of the abstract idea-in short, that Capellen confused spiritual essence with sensual appearance. In Riemann's reform project, however, Capellen's reproach becomes a real problem, as the dualistic concepts, at least partially, become manifest compositional concepts. Riemann cannot simply withdraw into the safe haven of ideal construction, in which Ernst Kurth later considered dualism-after its demise, so to speak: the idea of dualism, Kurth argues, was in essence a "theory of projection" and as such grows out of a higher theoretical concept-that of analogy. From the perspective of "an approach that is more independent of the physical foundations of music theory," dualism, "as a two-sided projection, can gain a foundation that falls into the realm of psychology." This dual symmetry, he argued, offers "a unified theory of harmony so remarkable and valuable that the basis of tonality by means of chordal projection could still carry justificatory power, even when the foundation was partly converted from the physical (the real existence of undertones) to the abstract realm."37

When Kurth distinguishes between a "sensually perceptible and a formal part of the sonic structure (*Klanggerüst*),"<sup>38</sup> and restricts the relevancy of Riemann's dualism to the latter, however, he returns the theory to the splendid isolation of the abstract idea, from which Riemann's attempt at synthesis was precisely trying to

remove it. The basic synthetic character of Riemann's reform of harmonic theory can also explain why the disciples of the theory of function were not satisfied by Riemann's later "psychologizing" retreat, where he argued that

What distinguishes major from minor comes down to the essence of major consonance being the simplest ratios in the increase in speed of vibration, that of minor consonance, by contrast, being the simplest ratios in the enlargement of the vibrating mass... By this means, the principle of major can succinctly be seen to lie in growing intensity, and the principle of minor in accumulating mass.<sup>39</sup>

With the admission that the undertone series did not exist, the minor chord can no longer be derived as a physical and physiological empirical fact from the theoretical foundations: the traditional level of mediation would yet again have to step between theory and practice, which was precisely what Riemann was trying to overcome.

The synthesis between dualistic theory and compositional practice had been fragile from the beginning, and it was Riemann himself who created the conditions for its later rupture. The gash opened up when he introduced what was to become the hallmark of his theory of functions: the symbolic shorthand labels with which the theory of function operated.<sup>40</sup> When Ary Belinfante criticizes Riemann in 1904 for effectively renouncing the polarity of major and minor,<sup>41</sup> Riemann's defense— "that these names [harmonic functions], far from being coined by me, have been in general use ever since Rameau; that I have retained them with the same justification as [I have] the symbols [for] major, minor, parallel, root"-does not sound very convincing.<sup>42</sup> Why then was the complex, strictly dualistic system of sonority and harmonic root progressions ("schlichter Quintklang/schritt," "Gegenquintklang/ schritt," "Seitenwechselklang/schritt," "schlichter Terzschritt," "Gegenterzschritt," "Terzwechsel," etc.) introduced at all, which marked precisely the idea of a polar cadential progression, and which was no less than the transference of dualistic theory to dualistic chordal relations?<sup>43</sup> With the new taxonomy of harmonic functions, Riemann returns to a traditional practice, which stands unmediated beside his radical dualistic theory. Without quite realizing it, Riemann himself observes that the introduction of the famous function symbols actually marks a surrender and concession to an intransigent and overpowering tradition: "Although one of my personal students once assured me that he no longer troubles himself with the terminology of harmonic root progressions since I introduced function symbols, I know for sure that this student is merely no longer concerned with names and labels, but he is far from considering the dominants in major and minor as equivalent."44 With the introduction of function symbols, the entire system of dualistic progressions and, alongside it, the dualistic understanding of cadential progressions became defunct, even during Riemann's lifetime.<sup>45</sup> The monistic reaction, which further questioned the notion of a dualistic minor model, was nothing but a logical consequence.

Although the preeminent and successful strain of Riemann reception largely developed free from dualism, dualistic theories continued to exist.<sup>46</sup> The Leipzig music theorist and composer Stephan Krehl could be considered the most successful popularizer of orthodox dualism in Riemann's sense.<sup>47</sup> Not least the authority of his

position as professor of theory at the Leipzig conservatory might have contributed to the wide dissemination of some of his theoretical works. Krehl's Formenlehre of 1902–1903 and above all his Allgemeine Musiklehre of 1904 are worth mentioning, both of which appeared in the popular and affordable Leipzig series of Göschen pocketbooks and were reissued numerous times. Despite Krehl's insistence that his Allgemeine Musiklehre gave only "a rough treatment of the material," it quickly moves into deeper waters, addressing the complex questions of dualistic theory and its notation.<sup>48</sup> The unfettered propaganda of dualistic theory ("In the theory of harmony we must first discuss the only logical dualistic interpretation of chords and the terminology established for this purpose,")<sup>49</sup> is probably the reason that Krehl's three-volume Harmonielehre of 1921 and his Tonalitätslehre of 1922, which appears to anticipate the idea of "polarism," had a very limited readership. In fact, Krehl's oeuvre displays some traces of a dualistic parochialism, of a kind we encounter as well in Sigrid Karg-Elert and his students Fritz Reuter and above all Paul Schenk.<sup>50</sup> By 1933, Krehl's approach was already so outmoded that the reissue of his Allgemeine Musiklehre retained his name but actually contained a completely new book by Richard Hernried, in which dualism was merely presented as a historical movement, and in which he claims-paradoxically, but quite correctly, "the most important tool that the teachers of dualism, above all Hugo Riemann, have left us is the taxonomy of harmonic function."51 Henried's edition, albeit theoretically quite sophisticated, was replaced as early as 1940-in the prevailing spirit of the times-by another sturdy Allgemeine Musiklehre by H. J. Moser, which was didactically and ideologically marked by the youth music movement. This version carries Krehl's only in its subtitle and is devoid of the last vestiges of harmonic dualism.<sup>52</sup>

This tendency is representative of the gradual decline of harmonic dualism. It appears that Riemannian ideas lived on predominantly in such esoteric approaches as Hans Kayser's harmonically driven neo-Pythagoreanism.<sup>53</sup> The dualism of overtone and undertone series is here revived from a number-based perspective. It can effortlessly be integrated into Kayser's "matrix of upper partials" (*Teiltonkoordinatensystem*), which he derives from Thimus's "Lambdoma." This kind of numerological, sometimes mystical, afterlife of Riemann's dualism can be observed variously (for instance, in the work of Victor Goldschmidt, Joseph Mathias Hauer, and Othmar Steinbauer). In this way, dualism experienced a radical decline in social prestige and descended from the *belle étage* of German music theory to the gutters of esoteric and sectarian circles.

### Monistic Modes of Reception

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If Riemann's dualistic reform of music theory can be said to have failed, upon what is its influence on practical harmony founded? Three aspects must be considered above all:

- 1. The concept of tone representation (Klangvertretung)
- 2. The concept of the applied or secondary dominant (Zwischendominanten)
- 3. The taxonomy of harmonic function

This sequence should be understood as a hierarchy. The idea of representation has greater promulgation than the idea of secondary dominants, which in turn enjoys wider dissemination than that of function symbols. It is not surprising that the idea of tone representation found broad acceptance, as the basic notion of three cadential principal harmonies and other subordinate harmonies were already common currency in theories of harmony and figured bass of the eighteenth century.54 And Riemann's term "representative," likewise, has a prehistory. Sechter used it, among other things, to declare the triad and the seventh chord, in Rameau's sense, as a form of the fifth scale degree (without root), and sometimes simply to describe a chord above an "intermediate foundation" (Zwischenfundament).<sup>55</sup> One can, however, hardly speak of a systematic theory of tonal representation, neither in Sechter nor in other of Riemann's predecessors.<sup>56</sup> In fact, there is hardly any theory of harmony after Riemann that had not taken up this fundamental idea, which is inextricably related to Riemann's absolute view of cadential progressions.<sup>57</sup> And yet, the theory of representation has also faced criticisms and modifications, not least as the system of Parallelklänge is the last bastion into which dualistic thought has withdrawn.

## Applied Dominants

So self-evident is the principle of applied dominants as a staple of theories of practical harmony that it might seem surprising to see it included in this list. Needless to say, the idea of applied dominants also has its prehistory, but in fact neither the term nor any analytical symbols for the phenomenon existed before Riemann.<sup>58</sup> The notion of the secondary dominant is a central component of the theory of functions and is closely related to Riemann's modern understanding of modulation. To get a sense of its attraction, it is important first to consider the preeminent notion of modulation, from which the theory of function set itself off in the second half of the nineteenth century.

On a trip to Germany, having just become familiar with Riemann's reform efforts in the fields of phrasing and harmony, I stayed with him for a few days in Hamburg (1887). We were talking about Richter's theory of harmony (the vehicle of my initial education in this discipline), and when he said: "there are abominable exercises in this book," I did not quite understand what he meant.<sup>59</sup>

Emil Ergo soon began to understand why Riemann objected to Richter's exercises. It was particularly his notion of modulation, which was antiquated in Riemann's view: "A modulation happens when a harmony foreign to the previous key occurs."

Ex. 1.1. Emil Ergo cites an example from E. F. Richter's influential *Lehrbuch der Harmonie* (p. 90, no. 192), about which Ergo writes, "Let us now compare this with the descriptions of the modulations (!) Richter supplies for this example: 'Measure 3 presents a modulation to D minor, since  $C_{-}^{\sharp}E-G-B_{-}^{\flat}$  no longer belongs to C major but undeniably to D minor. In measure 4 it is doubtful whether the C-major triad, which is foreign to the prevailing key (D minor), belongs to C major or to the following G major, while the modulation to A minor in measure 5 is unmistakable.'"



Ergo, a keen pupil of Riemann, interprets an example of modulation by Richter in the sense of function theory and mocks the interpretation given by the old theory of "figured bass," as shown in example 1.1.

Richter represents a traditional notion of modulation, which had been commonly accepted since the late eighteenth century. Ergo's polemic does not do justice to this old conception of modulation, which is less based on the notion of a sonority than one of the diatonic scale, but Richter himself shows hardly any awareness of the traditions in which he moves in his entirely ahistorical work.<sup>61</sup> The basic condition of the classic concept of modulation is the notion of "relation" (Verwandtschaft). "Relation" denotes a demarcated area of diatonic scales that are related to a central (fundamental) scale: in C major, for instance, related keys (ignoring, for now, the hierarchical relationships between each other) are D minor, E minor, F major, G major, A minor (plus, with restrictions, the flatted seventh scale degree: B<sup>J</sup> major).<sup>62</sup> The classic concept of modulation unfolds against the background of this diatonic "matrix." Within the reach of this matrix, in which one "diverts" into closely related diatonic scales via intersections, as it were, neither the notion of a secondary dominant, nor that of a modulatory pivot chord, are necessary.<sup>63</sup> Consequently, for Richter as well as for Sechter, enharmonicism plays a subsidiary role. Even though representations of harmonic space had fundamentally changed in the second half of the eighteenth century-witness Albrechtsberger's Inganni, Vogler's Summe der Harmonik, or indeed Gottfried Weber's Tonnetz<sup>64</sup>—and a "limitless" harmonic space was available in principle, theorists nonetheless retained an approach to modulation that was modeled on diatonic relations: in leaping from one scale degree to another, as it were, it was merely the diatonic framework of reference that was being altered. It goes without saying that this classic concept of modulation, which furthermore implies the traditional, clear-cut distinction of harmonic progressions in both major and minor modes, was hardly useful in interpreting Liszt's or Wagner's "Romantic

harmony." Premature criticisms of Riemann's system tend to overlook that Riemann started his career as a Wagnerian and aimed, right from the beginning, to construct a harmonic system that would not shy away from Wagner's "Romantic harmony."<sup>65</sup> Contemporary attempts to employ classic scale-degree and fundamental-bass theories<sup>66</sup> in the analysis of "chromatic harmony" mostly led to a diagnosis of derisory amounts of "modulatory" processes and a tremendous welter of figures and symbols below the chords.<sup>67</sup> In the eyes of its supporters, function theory was predestined "to demonstrate how superficial are judgments that assert: 'Wagner is always modulating!'"<sup>68</sup> Applied dominants and Hauptmann's concept of the "major-minor key"<sup>69</sup> allow the theory of functions to interpret harmonically rich progressions within one key without having to invoke modulations. The idea of the applied dominant was the necessary harmonic linking module, so to speak, within a conception of tonality that had distanced itself from a narrow diatonic notion of relations.<sup>70</sup>

Nevertheless, the idea of applied dominants spread slowly. It was only thanks to Ernst Kurth that the concept became common knowledge and was, just like the idea of tone representation, gradually accepted by almost all German and many non-German post-Riemannian harmonic theories.<sup>71</sup> Numerous theories of harmony, which in their author's eyes are based entirely on the theory of scale degrees-among them popular German theory books such as those by Lehmacher/Schröder or Dachs/ Söhner-are in essence more practical theories of function operating with Roman numerals than they are genuine theories of scale degrees or fundamental bass. Applied dominants (also known as "parenthetical dominants" [Klammerdominante], "intermediate fifths" [Zwischenfünf], or indicated by symbols such as [V], V/V, V/II, etc.) have been adopted by many practical theories of scale degrees. Kurth himself avails himself in this way of a function-based theory of scale degrees, which is perhaps best called a theory of functions in the guise of scale degrees. This mixture is typical of Riemann reception in the first half of the twentieth century: the diverse elements of once distinctly divided schools-Viennese fundamental bass/Weber's theory of scale degrees on the one hand, Leipzig dualistic functions on the otherbegin to merge. It is therefore best not to speak of the theory of scale degrees or the theory of harmonic function in the context of Riemann reception.

## The Taxonomy of Functions

When we speak of the theory of functions, we usually mean its symbols. They have become the hallmark of the theory of functions. It is, however, conspicuous that the most interesting of Riemann's adherents and successors—Halm, Louis, Kurth, Eugen Schmitz, Fritz Rögely, and Heinrich van Eycken<sup>72</sup>—did not adopt the taxonomy of functions. The idea of "apparent consonances" (*Scheinkonsonanzen*) was, to be sure, quite attractive for most of them and was developed further in productive ways by Louis above all. A feeling of discontent, however, prevailed with many theorists vis-à-vis Riemann's derivations of relatives and leading-tone changes (*Parallel*- and *Leittonwechselklänge*), the latter of which Grabner would subsequently rename "opposites" (*Gegenklänge*). In this it is not the much-discussed question of hierarchical subordination that is the decisive question but rather the fact that Riemann's theory of function refuses to conceptualize relatives and leading-tone changes as *diatonic* representatives.

It is in the concept of relatives and leading-tone changes that the modern theory of functions, as it is practiced today, carries with it the legacy of dualism, albeit not always consciously so. Dualism had always involved more than the derivation of the minor triad for Riemann. Harmonic dualism, he writes in his Musik-Lexikon, is "the pursuit of the twofold (dual) relation of tones, in the major and the minor senses."73 This definition must be understood in a much broader sense than that which Riemann is prepared to underwrite. Philosophically, Riemann's dualism is actually a monistic principle: everything is derived from this one primordial principle, from this "Ur-eine," the primordial entity, in which the major-minor relation is the governing principle. To this day, theorists of function determine the so-called Stellvertreterklänge (representative sonorities) strictly in a dualistic sense: in minor tonalities Grabner's Gegenklänge lie below the main functions to which they relate, in major above, while in major relatives are below, in major above their main function. Even function theories that otherwise assume strictly anti-Riemannian positions, such as Wilhelm Maler's, which (particularly in the völkisch 1941 version of his Beitrag zur Harmonielehre, adapted to the prevailing National-Socialist ideology) emphasizes that his theory has nothing to do with "unmusical mental gymnastics" and "Hugo Riemann's unworldly construals," rehearse this polar concept without any objections. This is the main practical difference between the theories of functions and all so-called theories of scale degrees. Stellvertreter are not actually diatonic sounds, even if they appear as such at first sight. The derivation of these Stellvertreterklänge from the principal harmonies by replacing the fifth with the sixth (and the root with the seventh, respectively) serve to justify the concept of "apparent consonances" (Scheinkonsonanzen) as dissonances: the argument behind this justification is strictly dualistic-in order to derive the relative in major, for instance, the fifth is replaced with the upper sixth, in minor the under-fifth is replaced with the under-sixth. The exchanged intervals are always absolute: major sixths in parallels, minor in leading-tone changes. This is why the leading-tone change of a subdominant D minor is always D-F-B, and never the diatonic D-F-B. Riemann offers a very simple solution: "Relatives are all those pairs of Klänge that are in the relationship of tonics to their relative keys, which we...derive from the self-same third by adding the upper or the lower fifth."74 He calls the under-E Klang (A minor) the Terzwechselklang or Parallelklang of c<sup>+</sup>. What is meant here is not the relation between scale degrees but rather the major-minor relations between autonomous sonorities. The representative may have its "origin" in the scale, but its dualistic determination is not contingent on it. For practical composition, this concept has important consequences: not only does the theory convey the impression in its concepts that minor was the "opposite" of major, but in the major-minor polarity the

second scale degree in minor becomes the black hole of the theory of function. In the system of major-minor relations, this "scale degree" does not occur.<sup>75</sup> It is primarily for these reasons that the theory of functions gained acceptance only slowly and encountered much resistance. It was only its specific development in National Socialism that led to its monopoly, which allowed Maler's function symbols to reach virtually all institutions of higher education after the Second World War.<sup>76</sup>

## Pedagogical Reform and the Theory of Functions: Vers une analyse fonctionelle

Analysis is the best part of the study of composition.77

The partial eclecticism of post-Riemann theories of function is closely related to the cultural and intellectual movements at the turn of the century. Robert Wason rightly talks about a *fin-de-siècle* "New Empiricism" in his groundbreaking study *Viennese Harmonic Theory.*<sup>78</sup> With the clear task of cultural criticism in mind, the new practical theories of harmony turn against what they perceive as the leaden deserts of nineteenth-century theory. The theories of harmony of that time reveal a much greater resemblance to their eighteenth-century counterparts: they are oriented by the work of art and operate with numerous examples from the repertoire, which had completely disappeared from the theory books of Hauptmann, Richter, Sechter, and Riemann. Schreyer's battle cry that analysis should be in the center of any theory of harmony became the much-commended and oft-quoted catchphrase of music-theoretical discourse.<sup>79</sup> Even Dahlhaus refers to Schreyer's *Harmonielehre*—without discussing it in any detail—as the "first analysis curriculum in the history of music."<sup>80</sup>

This "New Empiricism" is closely related to culture-critical movements, which were diverse and in themselves divided, but which can all be subsumed under the notion of "life reform" and which concerned all areas of cultural and social life without exception: *Lebensphilosophie* (philosophy of life), *Jugendbewegung* (youth movement), *Reformpädagogik* (reform pedagogy), *Lebensreform-Bewegung* (life-reform movement), *Kunsterziehungsbewegung* (art-education movement), *Nietzscheanismus* (Nietzscheanism) are only the best known of these partial areas. While it is difficult to find a common denominator for all without generalizing unduly, one finds in these movements a common critical position, if not indeed a hostility, toward rationalism, an emphasis on experience and spiritual understanding as opposed to theory, on concrete examples as opposed to abstract knowledge.<sup>81</sup>

Almost all of the influential function-based theories of harmony of the twentieth century are connected with the life-reform movement, whether it is the great "reform-pedagogical" theories of harmony of the 1910s of August Halm and Johannes Schreyer, or the "Schopenhauerian" theory of Rudolf Louis, or the "youthmusical" or "*völkisch*" ones of Hermann Grabner and Wilhelm Maler of the 1920s, 1930s and 1940s.<sup>82</sup> A considerable part of the views taken in Ernst Kurth's musictheoretical oeuvre, in which various music-theoretical and life-reforming tendencies of his age converge, can still be considered from the angle of Riemann's legacy. The impact of Kurth's theory, however, exceeds that of its immediate predecessors so much so that it becomes almost nonsensical to speak of succession in this context: Kurth himself becomes the reference point of almost all textbooks of function theory of the 1920s and 1930s.

Felix Diergarten has shown how Riemann's theory of functions was transformed in Johannes Schreyer's holistic theory of harmony, marked by the "art-education movement." Schreyer's theory is the only one among the important functiontheoretical efforts of the 1910s that takes over Riemann's taxonomy of functions. The reasons he cites are almost identical to those used by Grabner almost twenty years later: "It was particularly important to the present author to explain the formula  $T-S^6-D^7-T$  as early as possible and to demonstrate that 1. all progressions used in music are but derivations from these fundamental sonorities and 2. it is possible to analyze with this plain formula the most complex modern compositions."83 Function symbols were used to serve for radical simplification. Grabner later calls the "functional recognition" of a chord the "reduction of a complicated sonic structure to its simplest form." With this, the reform-pedagogical theory of functions takes up an aspect of Riemann's oeuvre, which was situated, as it were, beyond the abysses of the dualistic discussion in theory-musical analysis. Riemann wrote numerous harmonic analyses, worked empirically in the sense of "reform pedagogy," while his harmony tutors disregard analysis almost completely. To link the teaching of harmony with Riemann-style analysis was the openly stated goal:

But while Riemann declares as the goal of his harmony teaching (cf. his *Handbuch der Harmonielehre*, 3rd edition, vii) getting his pupil to "write a four-part composition in the four vocal clefs as well as for transposing instruments in a few minutes, or to realize a chorale with figured bass at the piano in four parts in transposition without reflection," we consider our supreme task the *introduction to an understanding of the masterworks.*<sup>84</sup>

The observation that Roman numerals make it "not quite impossible, but rather cumbersome to analyze whole compositions harmonically," because this required "also accidentals for the scale-degree figure,"<sup>85</sup> is not merely a commonplace of the theory of functions: the economy of function symbols, particularly in the analysis of harmonically complex music, is surely one of its strongest qualities. On the basis of the economy of its basic elements, both Schreyer and Grabner were hoping to be able to begin their teaching of composition immediately with analytical exercises. However, it is important to bear in mind—and this will be discussed later—that in Schreyer, Ergo, and Rögely, function symbols are listed alongside Riemann's *Klangschlüssel*, his shorthand taxonomy for chords (albeit in a monistically modified form), which as the actual "reductive notation" plays an even greater part than the function symbols themselves. In Schreyer's case, the interplay between

*Klangschlüssel* and reductional sketch fulfills the analytical function that later on function symbols alone will take on.

The idea of harmonic reduction is central to Schreyer's theories. The production of a harmonic reduction is central to both the analysis and the teaching of practical composition. A typical compositional exercise in Schreyer, which also aimed to understand a particular compositional style, looked as follows: the vantage point was a concrete work, of which a harmonic reduction had to be sketched. In general, this implied writing a two-part harmonic skeleton. This skeleton then had to be "composed out" by the pupil in three parts, as shown in example 1.2.

Not only is the pronounced connection between contrapuntal and harmonic thinking reminiscent of Schenker, but Schreyer also worked with analytical "levels." Schreyer's analysis of Mozart's much-analyzed "Dissonance" quartet (K. 465) may serve as an example. Schreyer first reproduces the score, followed by two analytical levels; a third level is discussed only in the very concise explanatory text. Schreyer adopts Riemann's maxim "that [in this work] only the correct understanding of the suspensions reveals the harmonic progressions."<sup>86</sup> Reduction B, shown in example 1.3, presents the first layer, in which Schreyer rhythmically dissolves, so to speak, the "stratified" dissonances and puts them in their actual metric position.

The explanatory text adds yet another level of reduction and relates the whole composition to a deeper (chromatic) fauxbourdon texture, shown in example 1.4, which Schreyer—who obviously could not know this rather modern analytical term—describes as a "succession of sixth chords (in the sense of figured-bass terminology)."<sup>87</sup> Example 1.5 shows the "final" reductional sketch, which *interprets* this opening in harmonic terms.

The principle of Schreyer's reductive notation can clearly be recognized in the example: the small notes signify that these are (hierarchically subordinate) dissonances that do not belong to the actual harmony. He simplifies the complex structure into a clear (in essence three-part) skeletal structure of diatonic "progressions" (*Züge*). He is careful to bring out the relevant relation of downward progression, which lies at a deeper level, from G to B in measures 6–13 and of the same 'canonic' and overlaid progression in measures 12–16. A structural element like this is completely disregarded in Riemann's motivic-thematic analytical approach. Schreyer's final reduction (in C), working out the harmonic "background," by no means makes the previous reductions redundant: analysis is the way from one analytical level to the next, and the interplay between them.

This analysis, an exemplar of Schreyer's approach, is explicitly directed against Riemann's model, particularly as promoted in *Große Kompositionslehre*. Schreyer juxtaposes his complex theory of harmonic levels with Riemann's spelling out of vertical sonic elements. For Riemann, the opening is "in C minor, the second [phrase] in B<sup>J</sup> minor; both merely circumscribe the simple formula  $^{\circ}T-D$ ."<sup>88</sup>

Riemann's harmonic analysis of the first for measures of the quartet is as shown in example 1.6. Example 1.7 presents the example in staff notation using Grabner/ Maler's more contemporary function symbols. Whereas for Schreyer, many of the chords are merely "apparent harmonies" (*Scheinharmonien*), *Klänge* that emerge on Ex. 1.2. Schreyer's analytical method. The fugal theme from Bach's two-part fugue in C minor (a) is turned into a skeletal harmonic sketch (b), which is then in turn composed out in three parts (c).



Ex. 1.3. "Reduction B" from Johannes Schreyer's *Harmonielehre* dissolves the stratified dissonances from the opening of Mozart's "Dissonance" Quartet.



Ex. 1.4. The next reductive level in Schreyer's Harmonielehre leaves a fauxbourdon texture.



Ex. 1.5. The final level, "Reduction C" of Schreyer's *Harmonielehre* adds an interpretive layer.

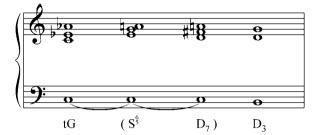


Ex. 1.6. Riemann's harmonic interpretation of the opening of Mozart's "Dissonance" quartet.

$$\mathbb{F} | \cdots (\mathbf{S}^{\mathrm{VII}} \mathbf{D})| \mathbf{D} | \cdots$$

Ex. 1.7. Schreyer's alternative interpretation of the same passage.

1



the basis of melodic processes, or on the basis of a (temporal) disjuncture between melodic and harmonic identity, Riemann's analysis can be guided only by the structures as they really sound, which leads to the harmonic interpretation of a temporary added sixth chord in minor, in which the apparent dominant G major appears as though it were a G minor altered into major. It should be added, in Riemann's defense, that this insistence on real *Klänge* or on the potential of "local harmonies" also constitutes an essential and future-oriented element of music theory.<sup>89</sup> At any rate, it would be unthinkable for Riemann to take apart the harmonies contrapuntally, as Schreyer does as early as his first level of reduction.

With the final reduction, however, Schreyer's interpretation is still unfinished: having arrived at the deepest structural level, he argues that Riemann's vantage point itself, the assumption that the movement began in C minor, as well as his idea of a "descent of keys," was wrong. The "motley succession of harmonies," which Riemann's analysis produces, would be out of style: it is "entirely un-Mozartian,"90 as Schreyer argues. The whole introduction, he argues instead, is in C major and is nothing but a nonsounding composed-out pedal point (which Rudolf Louis would call "idealized pedal") on the dominant: "[The introduction] should be understood in the sense of the dominant of C major, as a bold pedal on G, which however follows a strictly logical development."91 It is easily to overlook, on the basis of Schreyer's critique, that the principle of reduction was once inscribed into the very idea of the theory of functions. It is no exaggeration to consider the practice of relating complex harmonic and metric structures back to a basic skeleton as one of its most central original ideas. In some ways, one could conclude that Schreyer argues against the late Riemann by using arguments of the early Riemann, for all Schreyer does is to productively continue Riemann's early, reductive efforts from his Hamburg years.

Example 1.8 shows Riemann's reduction of J. S. Bach's Fugue in A minor from the *Well-Tempered Clavier*.<sup>92</sup> Riemann chose it "because it almost never presents the

chords directly but always masked by scalar movement."<sup>93</sup> Riemann indicates in detail the function of the separate melodic tones: neighbor notes, passing notes, consonant skips, incomplete neighbors (*verlassene Wechselnote*), échappée (*springender Durchgang*), apparent passing note (*fingierter Durchgang*), syncopation, prepared dissonance, anticipation, and so forth. Schreyer's thinking was particularly affected by Riemann's usage of the *Klangschlüssel* (which, for Riemann, was of course a strictly dualistic concept), indicated below the bass note. In this example, we can see that in early Riemann an important aspect ovf the *Klangschlüssel* was its capacity to interpret even longer passages with independent voice-leading as the unfolding of a single underlying harmony. And within this "unfolded" *Klang*, "local" passing harmonies can occur.

In the "harmonic skeleton" found at the end of Riemann's analysis in example 1.9, these "local" *Klänge* have completely disappeared. As contrapuntal voice-leading phenomena, they are merely secondary. Compared with the later, mature Riemannian theory, the contrast is stark: for the thirty-three-year-old theorist "there was no difference between harmony and counterpoint."<sup>94</sup> Chordal relations, he goes on to argue, are the essential core of counterpoint.

Like the young Riemann, Schreyer too turns against "this fragmented approach to art." It is possible, he argued, to "prove historically that the separation of harmony and counterpoint, in strict and free forms,"<sup>95</sup> was the chief culprit in the promulgation of a method that had not advanced in 150 years and had caused a perplexing rift between "theory and practice."<sup>96</sup>

Schreyer radicalized Riemann's idea of *Klangschlüssel* notation. Example 1.10a shows a neighbor-note figure, a soprano clausula, which Schreyer places at the beginning of his *Harmonielehre*.<sup>97</sup> It is in this linear movement that Schreyer identifies the germ cell of all harmonic progressions. Example 1.10b shows further how Schreyer integrates the idea of the neighbor note into the concept of *Klangschlüssel*.<sup>98</sup> All these examples move within the boundaries outlined by Riemann. In Example 1.10c, however, the passage shown under (f) is barely a harmonic progression that Riemann would have recognized as the unfolding of a *Klang*.<sup>99</sup>

Schreyer's commentary accompanying these examples indicates to what extent the original significance of Riemann's concepts has been transformed in Schreyer's hands. The notion of the "representative" (*Stellvertreter*), as well as that of the apparent consonance (*Scheinkonsonanz*), is associated with a different meaning. He introduces a concept for such *Klänge* that later on denotes even further reaching harmonic processes: *Scheinharmonie*, or "apparent harmony." Coined in analogy to Riemann's concept of *Scheinkonsonanz*, it indicates *Klänge* that assume, within a specific structural context, a different significance from the expected one.

The harmonic reduction of Felix Mendelssohn's *Song without Words* op. 52, no. 2, shown in example 1.11a, is a good example of how Schreyer translates Riemann's *Klangschlüssel* into graphic analytical representation. All the pitches that are not a component of the *Klang* indicated by the *Klangschlüssel* are conceived as melodic representatives, so-called *Einstellungen* (modifications). They are indicated by means of grace notes, which Schreyer calls "vicariate" (*Vikariat*).

Ex. 1.8. Riemann's melodic analysis of the opening of Bach's Fugue in A minor. Riemann explains that W indicates neighbor note, D passing note, A consonant skip, W incomplete neighbor, fD apparent passing note, S syncopation (prepared dissonance), rad anticipation. He points out, under NB, that "the D is most curious here: if it is not actually a D<sup>#</sup>, with D following only in the next measure (in which case we would have 1 1/2 measures of b<sup>+</sup> [in German: h<sup>+</sup>] and °b [°h] would become a suspension b<sup>6</sup><sub>4</sub>), then the D is a kind of anticipation from the following chord (e<sup>7</sup>), which should therefore be understood in the sense of b<sup>+</sup> as 3<sup>></sup> (flatted third)."



With detailed graphic elaborations that build on a Riemannesque harmonic skeleton, Schreyer achieves a fine-tuned functional hierarchy. The reduction in example 1.11b interprets measures 22–28 as a dominant pedal on F. But this interpretation, Schreyer argues, caused "more problems to the ear" than the version shown in example 1.11b.<sup>100</sup> It is worth underlining that Schreyer is interested not in promoting the one or the other interpretation as the only correct one, but

## Ex. 1.8. Continued



rather in showing that there are two interlocking harmonic levels: the dominant pedal is modified by a superimposed subdominant pedal. In particular, the concept of the "parenthesis," which occupies a central position in Schreyer's analytical method, shows most clearly how much further Schreyer developed Riemann's "harmonic skeleton." The chordal progression in square brackets (measures 16–17) does not, for Schreyer, constitute a progression of independent *Klänge*, on account of its "episodic character,"<sup>101</sup> but rather is a "parenthetical" composing-out of a tonic *Klang*.



Ex. 1.9. The harmonic skeleton of Bach's A minor fugue, in Riemann's analysis.



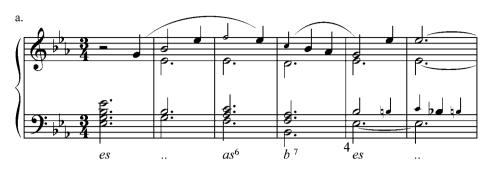




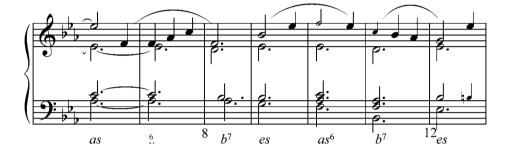


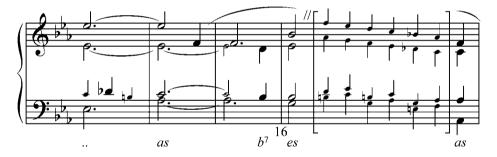
Ex. 1.10. Schreyer speculates that the melody originated in (a) the combination of a tone with its diatonic neighbor. This, Schreyer contends, leads us straight into the relationship between consonance and dissonance. In (b) and (c) this principle is worked into a variety of increasingly complex four-part harmonic textures.





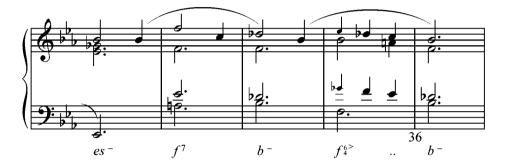
Ex. 1.11. (a) Schreyer produces a harmonic reduction of Mendelssohn's *Song without Words* no. 20 and (b) an alternative interpretation of measures 22–28.

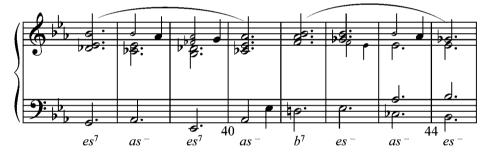


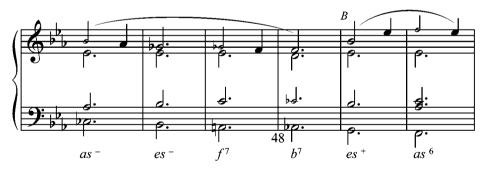












## Ex. 1.11. Continued









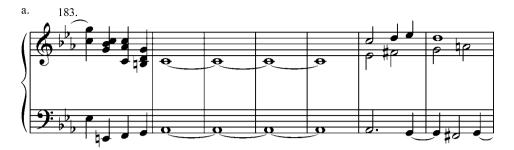
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Schreyer elaborates this concept using an example from the transition to the finale of Beethoven's Fifth Symphony, which he considers a "parenthesis writ large."102 Schreyer works down from the surface to the deepest level in four sketches, shown in example 1.12, outlining the process of reduction. The first sketch (numbered 183) adheres fairly closely to Beethoven's original musical text, except that each quarter note corresponds to one whole measure of the original-that is, one measure of the sketch corresponds to four measures in Beethoven. Schreyer's first stage of reduction almost always follow an idealized three-part texture, with the top part indicating Beethoven's melodic lines. In the subsequent sketches, the "harmonic quintessence" (reached at 186 in example 1.12d) is worked out ever more clearly, "by jettisoning all redundant incidental elements (especially the many tendrilous suspensions."103 The second sketch (184) is already a condensed version of the harmonic activities, and bears a certain resemblance to an eighteenth-century thorough-bass "skeleton" (Albrechtsberger): both harmonic and melodic repetitions have been eliminated in this sketch. The semitonal encircling figure  $A \vdash G - F \#$ -G-A<sup>1</sup> comes to the fore, which is accompanied by a voice exchange of the middle parts (F#-G-A-G-F#). The most important aspect of this sketch is the reduction of the syncopated rhythms of the first sketch to a simple rhythmic form. By this means, he underlines the function of G as a pure passing tone—or rather, a pure passing harmony-and, consequently, the passage up to the dominant pedal G can be explained as unfoldings of a single harmony. This sketch, moreover, emphasizes the scalar structure of the upper voice. The third sketch (185), meanwhile, reduces the entire transition further to a basic two-part texture. The small note head C in the putative third inner part merely serves to illustrate that the whole melodic progression of these fifty measures are essentially nothing but the melodic unfolding of a soprano clausula. The final sketch presents the final resolution: the dominant pedal is reduced to the embellished quarter note of the fourth beat. This embellishment, however, is nothing but a "vicariate" in Schreyer's theory, a contrapuntal modification of the underlying Klangschlüssel-based harmony. It is in this way that the entire transition can ultimately be reduced to a simple cadential combination of a bass and soprano clausula.

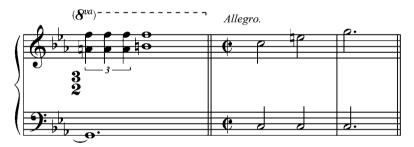
Just how far-reaching the consequences of Schreyer's concept of parentheses are can be seen in his analyses of Liszt, Wagner, and Chopin. For the "parenthetical" composing-out of a *Klang* also allows its enharmonic reinterpretation. The reduction of a passage from Liszt's *Valse impromptu*, shown in example 1.13, is for Schreyer a pedal point that has been extended by means of "parenthesis."<sup>104</sup> In this parenthetical composed-out form, it has been reinterpreted enharmonically into the third of the  $D^7$  chord. Even though this harmonic turn "reaches the limits of tonal understanding" "the pedal sharply displays the tonal harmonies." Both dominants, including the six-five chord on G<sup>#</sup>, should be understood "as suspensions to *T*."<sup>105</sup>

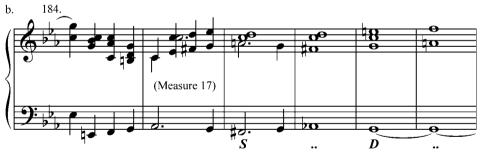
Schreyer's *Lehrbuch der Harmonie*, especially in the second edition of 1905, is doubtless one of the most important and most independent documents of German music theory of the early twentieth century. It is astonishing and regrettable that in

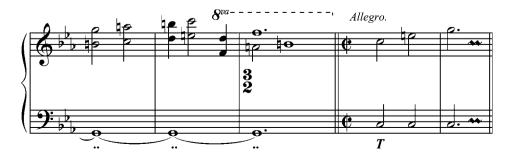
Ex. 1.12a-d. Schreyer analyzes the last movement of Beethoven's Fifth symphony in four stages of reduction.











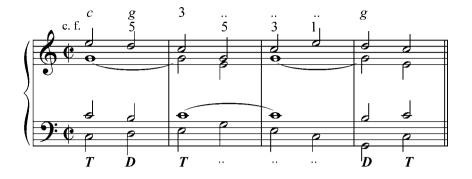


the subsequent evolution of the theory of function these reductive aspects are completely lost: the later tendency to add heaps of figured-bass annotations above the function symbols are actually a contradiction in terms. Riemann's own theories, as became clear apropos of his Mozart analysis, tend toward total verticalization. Later function theorists such as Grabner, Maler, and Distler would finally succumb to this tendency. By contrast, elements in which analytical thinking that would aim to a melodic interpretation of harmonic events are rarely found in post-Riemannian theories.<sup>106</sup>

Example 1.14, from the third edition of Riemann's *Handbuch*, is reminiscent of what Sechter called "voice exchange" (*Stimmtausch*): "For the duration of one and the same fundamental chord, the voices can swap their parts."<sup>107</sup> The sonorities of

Ex. 1.13. Schreyer's harmonic reduction of a passage from Liszt's Valse impromptu.





Ex. 1.14. Riemann's version of a voice exchange, from his Handbuch der Harmonielehre.

the second and third measures are not interpreted as full-fledged vertical events, in the sense of autonomous functions, but rather as linear-melodic ones. It is a hallmark of Sechter's theories, and those of his successors, that the concept of the passing (or neighbor) note captures not merely a melodic dimension but also has a harmonic dimension, which becomes a central element of his theory of harmony: counterpoint and harmony converge in the concept of the passing note. One could even claim that the whole of Schenker's theory is the result of setting this idea of the passing note as an absolute. Robert Wason has impressively described this moment in Viennese music theory. Just how important it also is in Schreyer's theory has been emphasized by Diergarten in the harmonic reduction of Liszt's first *Consolation*.<sup>108</sup>

Schreyer, however, is not the only theorist of functions who has spent a lot of time thinking about the contrapuntal interpretation of harmonic processes. Emil Ergo's considerations concerning his analysis of the *Tannhäuser* overture even led further than what Carl Mayrberger, who expanded Sechter's concept of the passing note considerably, hoped to capture in his concept of the "passing chord":<sup>109</sup> in analyzing harmonic progressions, Ergo argues, one has to sharply "distinguish between appearance and essence."<sup>110</sup>

Examples 1.15 and 1.16 show two of Ergo's function-based interpretations of the opening of the overture. The version of example 1.16, marked (a), in which every chord of the triplet figure in the second measure receives its own harmonic label, corresponds, according to Ergo, to traditional Riemannian interpretation. If we took, however, Riemann's definition from his 1894 *Vereinfachte Harmonielehre* at face value, "that the actual carriers of harmonic effect are the downbeats,"<sup>111</sup> and consistently applied this idea to harmonic theory, we would have to introduce a notion of "ornamental chords" or "passing chords."<sup>112</sup> Ergo demonstrates this by means of an analysis of the theme from the finale of Beethoven's Fifth Symphony, shown in example 1.17, in which he argues that the dominants on weak beats are nothing but ornamental chords (b). The first four measures in their entirety are an







Ex. 1.16. Ergo juxtaposes two alternative functional interpretations of the *Tannhäuser* overture.

a) T ... | Tp 
$$\overline{T}$$
 S  $\overline{T}$  | ... S T | Sp |  $pp$  ... 7 | D7 | T  $\overline{Tp}$  T |  $\overset{*}{D}$   $\overset{5}{...}$   
b) T ... | Tp T  $\_\_$  | ... S T | Sp |  $pp$  ... 7 | D7 | T  $\_\_$  |  $\overset{*}{D}$   $\overset{5}{...}$ 

Ex. 1.17. Ergo analyzes the theme from the last movement of Beethoven's Fifth Symphony.



unfolding of the tonic (a) "although the whole harmony of  $D^7$  is always clearly represented by the whole orchestra."<sup>113</sup>

But Ergo goes further than that. Not only should the second chord of the triplet group from *Tannhäuser*, the "swiftly passing, 'unaccented' *S*-chord," be interpreted in the sense of an embellishing chord, but also the tonic six-four starting the group was no independent element but only an apparent harmony. The whole measure could also be represented as shown in example 1.18.<sup>114</sup>



Ex. 1.18. Ergo's alternative interpretations of the triplet motive from the *Tannhäuser* Overture.

Ex. 1.19. Ergo's synoptic view of the opening of the Tannhäuser Overture.



If one continues this principle, then measures 2 and 3 show nothing but the harmonic embellishment of the relative minor of the tonic (*Tonikaparallele*). Ergo works out this radical function-theoretical reduction so that finally the harmonic analysis of the opening of the overture looks as shown in example 1.19.

Given our current knowledge of the sources, it is impossible to say whether Schreyer's and Ergo's reduction techniques go back *directly* to ideas taken from Viennese fundamental-bass theories.<sup>115</sup> Nor can the question be answered whether Schreyer's theories of harmony could in any way have influenced Schenker in turn. Ergo was a profound connoisseur of the German and French traditions. However, Sechter's work is never mentioned in his writings on Wagner analysis. It is possible, though, that Viennese harmonic thought could have been mediated, albeit unconsciously, by the popular *Harmonielehre* of Louis/Thuille. Nor did Schreyer ever mention Sechter. It is more likely that Schreyer and Ergo would have continued some of Riemann's ideas on passing notes from his early *Neue Schule der Melodik* (1883) and his sporadic comments on the passing note in *Handbuch der Harmonielehre*. What can be said with certainty, however, is that the most successful and most important theory of harmony of the first half of the twentieth century brought together the traditions of Vienna and Leipzig—the *Harmonielehre* of Rudolf Louis and Ludwig Thuille.

## Synthesis: Rudolf Louis

Just before Louis/Thuille's theory of harmony was published, a long announcement appeared in the monthly *Süddeutsche Monatshefte*. This text is a significantly expanded version of the preface. In it, Rudolf Louis explains his aim and the special

approach of his study. He explains that he takes a "strictly empirical standpoint," his theory is orientated by analysis and the experience of the work of art:<sup>116</sup> "For harmony, as we understand it, the starting point is analysis, as faithful and exhaustive as possible, and uninfluenced by any theoretical prejudice, of that which the musician of our time and our culture actually hears in musical sounds and the connections between them."117 Louis is trying to set himself apart from what he considers "dilettantish" analytical attempts of reform pedagogy of his time. The aspirations for "systematic" penetration-or, simply put, for theory-remain valid, he claimed, even if "any theorizing is a problematic undertaking," since there is no "theory that does full justice to reality." This is "precluded due to the nature of the relationship between subject and object: for the peculiar power of our spirit resides in precisely the fact that it is able to think the particular in the general, and diversity within unity, while everything-even the least significant particular-has its essence in being unique and incomparable, something that, strictly speaking, immediately ceases to be that which it is once we subsume it under a general term."<sup>118</sup> Thus his theory of harmony was meant to be the opposite of those music-theoretical works that dominated the nineteenth century:

A few more or less correct observations give rise to a thought, and from this thought a theory is then spun out "deductively" without paying much attention to the nature of the object itself. The thought is spoken "in Hegelian," and is left to its own devices and its own motion.... In this way speculative theory comes about.... Thanks to its regulatory architectonics, its clean symmetry and the smooth parallelism of its parts, it becomes the more compelling the more it resists the temptation to do justice to the facts, and the more it satisfies itself with the erection of a fantasy building.<sup>119</sup>

The exemplar of this mode of thought for him is Moritz Hauptmann: "the way in which he constructs harmony and meter along the lines of the triple-jump scheme of Hegel's dialectical method will forever remain a deterrent example, showing into what wilderness even a theorist who is intimately familiar with his object can get entangled if he is captured by the suggestive force of a pre-formed opinion."<sup>120</sup>

Louis harbors "great admiration and sincere gratitude" for Riemann. He is the "most brilliant representative" of his subject, "a German Fétis." But then he adds criticism.

[Riemann] would doubtless have been the most suitable authority to make the certain results of a purely theoretical harmony available for musical teaching in a fruitful way. Indeed, all his later publications on harmony have been dedicated to this very purpose. If these publications...now meet with relatively little success with real musicians, we have to assume that the cause for this failure must be sought exclusively in the highly speculative tendencies of Riemann's thinking.<sup>121</sup>

Louis notes an "unfortunate passion of mental construction, a predilection for premature generalization and analogizing, a pre-eminence of subjective factors in his theorizing, which in the final analysis has its cause in a—please excuse the harsh expression—lack of respect for the facts."<sup>122</sup> The conception of minor in dualism has "something seductive for speculative minds," but "for the unassuming musician it is unacceptable, indeed, it is basically intolerable.... The conception of minor sonorities is a phantasmagoria."<sup>123</sup>

Louis does no less than to formulate a manifesto of music-theoretical "New Empiricism": "The theory of harmony," he already emphasized in his doctoral dissertation (in philosophy), "is not a science.... Its principles are, to speak with Kant, not constitutive, but only regulative."<sup>124</sup> As a Realdialektiker,<sup>125</sup> he is convinced that-simplifying somewhat-rational thinking is, so to speak, an incidental product of a more fundamental "drive-guided" dynamic of the will. Any thinking, and particularly thinking about music, he argues, is subjected to a "psychic" dynamic. No discussion of music may lose contact with this psychic basis: speaking about music is for Louis always speaking about humankind. Its psychological tendency reveals Louis's theory of harmony as the direct predecessor of Kurth. Without exception, all Kurthian themes can be found at least touched on in Louis. Louis's theory, however, is much less radical in its phenomenological tendency; its ambition is more theoretical. For the "dynamic of the will" is merely the Schopenhauerian side of "real-dialectical" thinking. For Realdialektik believes-hence the name-that contradictions and oppositions of being and thought cannot be led toward any Hegelian synthesis. The complexity of Louis's argumentation is based on this particular dialectical model: as a subject-centered theory of hearing and experiencing, it never does violence to the objects, the phenomena, but always considers them in their own rational logic and dynamic. The contradiction of subject and object is itself forever endured again and again: its only solution is "balance."126

Louis's criticism had found Riemann's weak spot. And what happened, happened as it had to. Riemann immediately recognized that his claim to universal hegemony was seriously challenged.<sup>127</sup> His review of the book, which appeared almost concurrently with Louis's publication in Süddeutsche Monatshefte, was "dualistic," as Louis observed sarcastically. Riemann noted, "swiftly and succinctly," that the book was "one of the most interesting publications in the field of music theory." It had "cleared out" old mistakes but had avoided "pouring out the baby with the bathwater." Riemann praised the "foundation of carefully chosen examples from the latest compositions by Richard Wagner, Franz Liszt, Anton Bruckner, Richard Strauss, Max Schillings, Ernst Böhe, Emanuel Chabrier, Ludwig Thuille, etc." Further, he extolled the "reduction of the entire essence of harmony to the principle of tonality and the three tonal functions," and the "theory of tonal representation."128 But all of a sudden, the tone changed to irony. It would "doubtless be considered a particular advantage of the book that it preserves the good old figured bass and, only where this fails, it draws on Gottfried Weber's scale degree labels for chords, which have now been tried and tested for almost a hundred years."129 Finally, the review changes into a vehement attack, which even moves the prior praise into a very different light: Louis/Thuille's theory of harmony is so excellent, Riemann argues, because it is entirely written "on the basis of my views, andexcept for a few irrelevant details-replicates what I have posited." The "core of the theory" is the "theory of tonal functions of harmony, which Louis/Thuille's book

repeats in such breadth that it is not quite understandable why they would not also make use of the convenient shorthand symbols T for tonic, D for dominant and S for subdominant."<sup>130</sup> Even the rules of voice-leading, deduced from the theory of tonal functions, Louis allegedly took from Riemann. In short, Riemann accuses Louis of plagiarism and of intellectual theft: "Given the great dependence of the book on my works, I would have expected to be referred to in the preface."<sup>131</sup> Louis's attitude is not "fair," he argues, and closes with the statement: "I shall leave it to other expert critics to determine whether I have gone too far in emphasizing the dependence of this book on my ideas or not."<sup>132</sup>

It is obvious that Riemann's review was the result of "a wholly abnormal state of anger and embitterment" and can be "fully explained psychologically," as Louis puts it in his response.<sup>133</sup> But is the reproach justified in any way? It is not a coincidence, nor is it a concession to the market, that Louis does not adopt Riemann's function symbols. Although he recognized (and utilized) the potential that the musical space of the Tonnetz opened up, in his view the principle of dualism did, as we saw above, too much violence to the diatonic foundations of harmony. Louis tries to refine the idea of the autonomy of Klänge-as stacked-up thirds on the diatonic scale degrees, as derived in Sechter's fundamental-bass theory-in light of the theory of tonal representation. For Louis, representatives are not generally "apparent consonances," as they are for Riemann. For Riemann, any chord rooted on the second scale degree in major is a dissonance, which appears only as a "physical consonance."<sup>134</sup> For Louis, by contrast, representatives may have the character of apparent consonances (that is, actual dissonances); in many situations, however, they are autonomous sonorities, which bear only an "idealized" relation to the principal function. To hone Riemann's theory of representation, he links it ingeniously with the "linear" theory of changing notes, suspensions and passing notes taken from the Viennese fundamental-bass tradition with which Louis, as a second-generation student of Bruckner's,135 was intimately familiar.<sup>136</sup> For this purpose, he replaces the concept of the "apparent consonance" with that of the "conceptual dissonance" (Auffassungsdissonanz). Conceptual dissonances are "chords that are always consonant outside of the context in which they appear, but that can occasionally be used in such a way that they are dissonant with respect to the understanding of the broader harmonic context."137 In a manner of speaking, Louis turns Riemann's concept phenomenologically upside down: "appearance" is the effect for Riemann, which obscures the true (theoretical) essence of the Klang, while for Louis it is the (context-free) structure, which blocks the effect of the Klang: "apparent consonances" sound consonant but are dissonant; "conceptual dissonances" sound dissonant but look consonant. For Louis, the conflict is no longer between structural essence and sonic appearance but occurs only on the level of perception: the effect of sounds is defined as a conflict of (context-free) sonic autonomy and each harmonic contextualization.<sup>138</sup> The fundamental ambition of Louis's theory of harmony is to mediate between both. "Sonic autonomy" (Klangautonomie) represents (in the sense of an ideal type) the "vertical" Riemannian heritage, while contextualization represents the "linear" Sechterian legacy. In this light, the notion of conceptual dissonance is virtually identical to Sechter's concept

of the "artistified composition" (*gekünstelter Satz*).<sup>139</sup> Louis returns to the same examples as Sechter (bordering on citation) to introduce his concept, using the "*gekünstelter Quartsextakkord*" and of the "*gekünstelter Sextakkord*"<sup>140</sup> (meaning cadential double-suspension six-four, and suspended sixth chords, respectively), that is to say: chords that are actually the product of dissonant linear voice-leading procedures and only "look" consonant. As chords that are emancipated from real voice-leading contexts, they turn into Louis's conceptual dissonances: "The clearest manifestation of the subdominant significance of the triad of the second scale degree is in its second inversion, as a sixth chord.... The chord gains a certain resemblance to a conceptually dissonant sixth chord in which the sixth precedes the fifth of the subdominant as a suspension, or follows it as a passing tone."<sup>141</sup>

The contrapuntal interpretation of harmonic procedures is Louis's most central concern:

It should not be forgotten that even in musical creation the most diverse requirements can arise and can come into conflict with one another. That which, from a purely harmonic viewpoint, would be pure nonsense can be possible if it appears somewhat melodically-contrapuntally motivated, and vice versa: voice leading that is melodically requisite (for instance a resolved leading tone) can be evaded without harm if a harmonic advantage can be gained by this irregular progression (such as the completion of the chord, which might only be attainable in this way) to compensate for the melodic awkwardness.<sup>142</sup>

Here we encounter an aspect for which there is only little room in Riemann's theory of functions. Louis develops the Viennese theory of passing tones to a degree of differentiation comparable to Schreyer's analytical reductive technique that is today surpassed only by Schenker's theories. When Riemann casually praises the "clearing of the view for the distinction between principal forms and accidental subsidiary forms, as they arise from figurative changing notes,"<sup>143</sup> this goes to show only how little meaning this fundamental aspect of Louis's theory holds for him.

In the second part of the theory of harmony, *Chromatik und Enharmonik*, Louis transfers the concept of the passing tone of Viennese fundamental-bass theory to the modern (chromatic) harmony of his age.<sup>144</sup> Using an example of Max Schillings, shown in example 1.20, Louis explains a phenomenon that he calls "free suspension" (*freie Vorhaltsbildung*).<sup>145</sup> Louis argues that the example shows "nothing but four triads, on E, C, F, and D," in which the entry of the C-major and F-major chords is delayed by a "chromatic suspension." We see "two six-four-two chords, derived through free suspensions, which would be completely wrongly understood if they were explained as inversions of actual seventh chords (EP-G-B-DP and AP-C-E-GP)."<sup>146</sup>

As passing phenomena, the chromatic "chords" are subordinate to the central *Klänge* and belong to a different level of the structure. Louis coined the term "intermediate harmony" (*Zwischenharmonie*) to describe this situation. In example 1.20, we encounter "passing chords" characterized by stepwise (or semitonal) motion.<sup>147</sup>

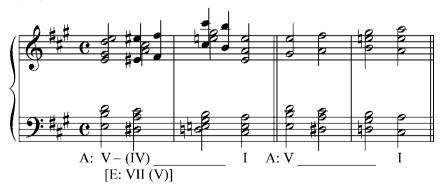


Ex. 1.20. Max Schillings' *Meergruß* as an example of what Rudolf Louis calls "free suspension."

Louis further refines the concept of "intermediate harmony," as shown in example 1.21. In that example, he argues, we do not find a "raised subdominant," but only a "passing motion on the same continued foundation E" within a harmony. What is unusual here is the "leap of the top voice from F# to C#," for the concept of passing motion implies "that all parts move stepwise."<sup>148</sup> Louis then goes on to discuss the example in detail and introduces the concept of the "interpolated chord" (*einge-schobener Accord*)<sup>149</sup> as a special case of the intermediate harmony, "as it were, an intermediate harmony in parentheses."<sup>150</sup> Louis's definition of this term suggests that he was familiar with Johannes Schreyer's writings and his concept of the "parenthesis": the concept signifies a chord, Louis explained, that arises "when, due to passing motion, harmonic structures appear that would also be intelligible as independent chords. In such cases the passing tones concerned may as well be continued as though they were constituents (chordal tones) of those harmonies imagined to be independent."<sup>151</sup>

The final interpretation of the effect of this phenomenon clearly shows the traces of the transference of Riemann's notion of the apparent consonance to the concept of passing motion:

Ex. 1.21. Louis uses Max Schillings' *Ingwelde* to demonstrate his concept of intermediate harmony. The first half of the example analyzes the original; the second half shows the underlying schema.



In the above example F# is the dissonant passing note with reference to the foundation E, but it is a consonant constituent (third) of the passing chord  $D^{\#}$ -F#-A#-C#. The dissonance of the F#...only exists conceptually. This F# therefore has the same kind of freedom that we have allowed any merely conceptual dissonance.... We could make this allowance because in any such apparent constructs this latter conceptualization (in the sense of the "accidental" chord), even though the harmonic context suggests that it is not essential, always plays into our perception in the second place, and resonates more or less strongly.<sup>152</sup>

In this way, in the connection between the concept of apparent consonance, derived from the theory of functions, and that of passing motion from Viennese fundamental-bass theory, Louis develops his idea of "intermediate harmonies." In this, the "conceptual dissonance" is a phenomenal dimension, while "passing motion" is essentially a structural term; in Louis's explanation above, the mention of "harmonic context" and "perception" respectively indicates this difference. "Accidental chord," "changing-note chord," "idealized pedal point," "continued voice," "passing chords," "interpolated chords," "intermediate chords," "free suspensions," and so forth—any of these terms represents a contrapuntal or voice-leading interpretation of harmonic procedures.

As a logical consequence of this kind of thinking, Louis (like his contemporaries Schreyer, Halm, Schmitz, Rögely, and Eycken) displays considerable reticence vis-à-vis Riemann's concept of the applied dominant. In his conception of tonality, Louis remains loyal to Sechter's diatonic approach. The idea that any chromatic structure, no matter how complex, can be related to a diatonic scaffold, is persistently discernible in his harmonic interpretations. Louis is not amenable to the notion that the inner tension of *Klänge* (based on dominant character or leading tones) would triumph one-sidedly over identification by means of "root position." When Louis considers bass motion a more essential criterion for function than the morphology of chords (or chordal tension), he reveals himself as following the tradition of fundamental-bass teaching—for him, bass motion constitutes the token of a hierarchical understanding of chords: a raised fourth scale degree is a derivative form, and therefore structurally subordinate to its diatonic alternate, even if the *Klang* built on it constitutes the focus of our musical perception.

But even in Louis's understanding of chromaticism, the idea of scale degree is mixed in with elements of dualistic and function-theoretical ideas of tonality. The reason that Louis does not fail with regard to chromatic harmony, unlike his predecessors of the fundamental-bass theory, is related to the fact that he gives up the strict separation of major and minor modes that is prevalent in the fundamental-bass tradition. Louis continues, it is true, to maintain the diatonic foundation of the scale, but the derivation of the scale is "dualistic": "First of all, for us, the more recent generation of composers, who do not derive the key from the scale, but from its constituent principal triadic harmonies, the concept of diatonicism itself is vastly expanded in every possible sense."<sup>153</sup> In this way, Louis distinguishes between five tonal "genders" in which major and minor modes are mixed: the two major forms,

pure major and minor-major (including the minor subdominant), as well as three minor forms, pure minor (including the minor dominant), major-minor ("normal minor," with the major dominant), and Dorian minor (with the major subdominant). Diatonicism itself has become chromatic.

No further explanation is necessary to understand that Riemann's reproaches are groundless. Louis's indication concerning the significance of the second part of his *Harmonielehre* has been affirmed by subsequent developments, which has confirmed it as perhaps the most important contribution to the discussion of chromaticism and enharmonicism in the first half of the twentieth century.<sup>154</sup> In Louis/ Thuille's theory of harmony, the two predominant traditions of theoretical harmony converge in an exemplary fashion—and result in fully independent views. Rudolf Louis's "Munich" theory of harmony was in its time the culmination of the "Viennese" fundamental bass tradition as well as the "Leipzig" theory of function.

## Epilogue

In the first half of the twentieth century, few music theorists were as popular, beyond the narrow disciplinary confines, as Ernst Kurth. And it was thanks to Kurth that many of Riemann's central theoretical ideas gained considerable popularity: almost all important later developments of Riemannian concepts did not refer back to Riemann's writings directly but took a detour via Kurth. But for its popularization, Riemann's theory of function paid a price: as Hermann Erpf pointed out in his Studien zur Harmonie- und Klangtechnik der neueren Musik-one of the last musictheoretical works of the twentieth century that makes a serious effort to productively continue the theory of functions-Kurth "is reluctant to use precise, well-defined terms because he is anxious to avoid a detrimental particularization of the phenomenon,"155 which highly specific terminology can cause. In his efforts to compensate for this, Erpf went on to argue, Kurth was constantly in danger "of moving away, particularly in his most subtle descriptions of musical connections, from the individual concrete situation, with the view to making them fit into other contexts as well." This would lead to a situation in which he returned to talking about "'music in general,' but not the individual musical passage."<sup>156</sup> Kurth's work was characterized, paradoxically, on the one hand by an experiential analytical prose and on the other by a "naturalistic" and "psychologistic" music-theoretical system with strong metaphysical leanings. The strange coexistence of these two irreconcilable aspects side by side is the heavy burden that Riemann's legacy had to bear among the following generations.

Even Erpf, who so sharply analyzed the weaknesses of Kurth's system, gets caught in these contradictions. The only type of music theory that still has any justification for its existence in the 1930s, he argued, is a "historical-descriptive approach": "As far as concrete music theory is concerned, 'music in general' is not up for debate at present." Rather, "the only task of the discipline of music theory is to" turn to "a certain, given music."<sup>157</sup> Its purpose, he continued, is to "identify the characteristics of musical structure of a given historical style, purely from the given situation, without any desire for a speculative reason." What should take the place of a unified, overriding theory of tonality—to which Riemann had adhered—is a historical, detailed, "comparative theory of the structural features of stylistic attitudes."<sup>158</sup>

Consequently, Erpf does not write a Harmonielehre but a monograph on contemporary harmony, which—as Erpf argues convincingly—"has no autonomous rules but is, for better or worse, contingent on, built on, or opposed to the functional hearing of classical music."159 The methods and analytical processes, however, of Erpf's "comparative theory of structural features" remain opaque: the nebulous idea of the "pure given situations," of "immediate cognition," of "that which can be experienced in the real sounding world" are considered, with next to no explanation, as equivalent to Riemannian categories. In a "theory of hearing, it does not matter whether these givens are 'founded in nature,'" Erpf argues, and yet in his writings the triad, the major-minor polarity, and the relation between the tonic and its dominants turn into anthropological facts. In large parts, Erpf's book reads like a large-scale rebuttal of his own perceptive introduction. Its more than 200 pages constitute a conceptual battlefield, which is virtually unparalleled even in the overconceptualized world of function theory. Erpf is not being unduly modest when he claims that he was the first "to consistently work through" Riemann's "demand to consider all tones of functional progressions as root, third or fifth of a major or minor triad."160 With this work, any kind of autonomous, interval-based concept of dissonance disappears from functional thinking and is replaced by a welter of independent, partly highly complex, categories of Klänge. Where Erpf fails is with his actual stated ambition: the conceptual clarity that he found wanting in Kurth's music theory does not shine forth in his oeuvre.

Erpf's attempts to develop the theory of function further were not continued.<sup>161</sup> The legacy of the theory of functions was taken up predominantly by Hermann Grabner and his pupil Wilhelm Maler. Grabner simplified symbols and terminology of the theory of functions and adopted from Kurth, whose faithful supporter he was until the rise of National Socialism, a conception of applied dominants. Grabner developed the basic foundations of the modern theory of functions, which determines the practical theory of harmony and harmonic analysis at many higher institutions, conservatories, and musicology departments in Germany up to the present day.<sup>162</sup>

Both Maler and Grabner were formed, both aesthetically and politically, by the youth music movement. Grabner is a typical representative of the "older generation," which became radically politicized by the experience of the First World War. Maler was typical of the younger generation. Both stood on the safe grounds of the German music-theoretical tradition but pursued primarily pedagogical aims. They were particularly concerned with a progressive musical pedagogy, which—as August Halm promoted—focused on the analysis of musical works right from the start.